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World Congress of **Perinatal Medicine**

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ABSTRACT BOOK

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ABSTRACT BOOK

SPEAKERS

Abstracts

S1 - PITFALLS IN DIAGNOSIS AND TREATMENT FOR ADHERENT PLACENTA

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Definition
Patients with adherent placenta (AP) have many pitfalls in obstetrics. Adherent Placenta, including placenta accreta, placenta increta and percreta, occurs as a result of placental villi penetrating the myometrium through a defect in the decidua basalis. Adherent placenta cases consist of placenta accreta ~75-78%, placenta accreta ~15-18% and placentae percreta ~5-7%. The incidence of Adherent Placenta (AP) was found 1 in 172 in 2016 and tends to increase continuously in parallel to cesarean section.

Pitfalls in Adherent Placenta
The patients with adherent placenta carry many life-threatening risks. Sudden massive hemorrhage, patient neglect, patient being away from the operation center or transferred in the critical situation, difficulty in transport, inadequate surgical team and medical facilities, inadequate blood and blood products support and undiagnosed cases are the main traps in the adherent placenta.

Diagnosis
The accurate diagnosis of adherent placenta depends on the following conditions: Determination of risk factors, the experience of the sonographer who examined the patient and the quality of the device used, such as 2D, 3D or real time 3D (4D) sonography. In addition, examination methods such as TVS, TAS or Color Doppler sonography are important in the diagnosis. The diagnosis of adherent placenta can be made by transvaginal sonography after detection of gestational sac at the beginning of pregnancy and definitive diagnosis can be made until 12 week of gestation. Recurrent cesarean section, myomectomy, endometrial damage, uterine artery embolization, maternal age, multiparity and uterine surgery are major risk factors for adherent placenta.

What to do in case of emergency?
Great vessel access, fluid replacement should be started, blood and blood products must be provided. If there is massive vaginal bleeding, balloon tamponade should be applied. If the facilities are insufficient, surgery should not be performed and patient should be transferred under optimal conditions possible. If AP is not diagnosed before cesarean section, the surgeon should request help from an experienced surgeon immediately. Relaparotomy should not be performed by the same surgeon without the help of an experienced surgeon.

Treatment (Surgical Approach)
AP is a potentially life-threatening obstetric condition that requires a multidisciplinary approach to be managed. If the patients with AP are followed and treated by experienced surgeons in multidisciplinary tertiary centers, the maternal morbidity and mortality can be reduced. AP surgery is performed in two ways such as radical and conservative (complete and partial). These patients should be operated by an experienced team in appropriate centers.

Our Recommendations:

• Adherent placenta should be diagnosed in the first trimester.
• All patients who have undergone uterine surgery should be evaluated for adherent placenta.
• AP patients should be examined at least once by an experienced specialist.
• AP patients should not be away from the operation center.
• Operations should be done in appropriate centers.
• Operations should be performed by an experienced team.
• Complete conservative surgery should be the first option in all patients.

S2 - PRENATAL AND POSTNATAL CONSEQUENCES OF FETAL STRESS

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Fetal development and growth are influenced by the intrauterine environment. A large number of factors can alter the intrauterine environment and lead to fetal stress. Maternal undernutrition or placental insufficiency and intrauterine growth restriction, maternal emotional stress or stressful life events, as well as fetal pain may trigger the stress response of the fetus. The neuroendocrine stress axis operates in the fetus from midgestation and includes the production and secretion of the corticotropin releasing hormone, adrenocorticotropic hormone and cortisol. Fetal glucocorticoid overexposure affects neurodevelopment, as well as the development of many organs and organ systems, and has lifelong consequences. In response to an adverse intrauterine conditions and prenatal stress, the fetus is able to adapt its physiology to promote survival. However, this adaptation can result in permanent changes in tissue and organ structure and function as well as metabolic changes. It has been shown that the underlying etiology of some of the most common diseases of the modern society, such as hypertension, obesity, diabetes and coronary heart disease, has been traced in intrauterine environment. Further, there is experimental evidence that increased maternal care and environmental enrichment can compensate for prenatal stress-induced effects. Recent data have also indicated gender differences in vulnerability to prenatal stress. Finally, stress-free intrauterine environment is crucial for normal prenatal and postnatal growth and development, as well as good health later in life.

S3 - FETAL CRANIUM AND FACE AT 13 WEEKS SCAN

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Designates the description of the embryonic anatomy, the normal anatomic relations and the development of abnormalities as visualized by ultrasound
To confirm the presence of normal anatomy or to make the diagnosis of an anomaly, we need knowledge of the normal embryonic development, including the appearance of the normal embryo.
Embryo = to grow (Greek) up to 9 weeks
Fetus =off spring in Latin from 9 weeks there after
The anterior part of the neural tube expands to form the brain
The neural tube goes on to form all parts of the brain
The structural organization of the brain: the barin begins as a hollow tube and remains hollow
5 regions of the brain are formed during development
The cavities of the brain are the ventricles
At the Eighth week (7weeks0d-7wks-6d)
Embryo external form :
The embryonic body appears as a triangle in the sagittal section.
The embryonic body is slender in the coronal plane. The limbs are short, paddle-shaped outgrowths
CNS:
The relatively broad and shallow rhombencephalic cavity is always visible from 7 weeks onwards. It then has a well-defined rhombic shape in the cranial pole of the embryo.
At the Ninth week (8wks0d-8wks6d)
CRL=15-22mm
CNS:The brain cavities are easily seen as large 'holes' in the embryonic head.
No falx cerebri or choriod plexus at least in the first half
In sagittal planes the forebrain vesicles (telencephalic ,diencephalic, metencephalic) are seen.
Limbs: both upper and lower buds are clearly seen at this stage
At the Tenth week (9wks0d-9wks6d)
Brain: CNS
The hall mark of the 10th week is the Falx and the echogenic choroid plexus
Mid sagittal plane depicts tortous ventricular system
Telencephalic vesicle leading to Diencephalon followed by the cephalic flexure between the Diencephalon and the meten cephalon (cerebellum) then the myelencephalon (medulla oblongata and finally the rhombencephalon (hindbrain
At the 12$^{th\ week}$ (11wk0d-11wk-6d)on words till the 14th week (13wk0d-13wk-6d)
CRL= 54-87mm .The ventricular system is obvious, cerebellum, cisterna magna (the posterior fossa) are seen. At this time the vermis is not completely closed. The complete development of the cerebellum will be completed at 17 weeks gestation
What is the clinical application?
Cavities appearing in the brain are mirror image to the embryological development of the CNS and allowed us to better understand sequential stages in development
We can jude on cranium intactness, proper cleavage cleavage of the forebrain with the appearance of the falx as well as looking at the development of the posterior fossa to diagnose open spina bifida
Check list for the cranium should include:

Intact cranium
Falx cerebrai
Choroid plexus filling the ventricles: butterfly appearance
How comment on the posterior fossa
Double line in tilted axial plane
Intracranial translucency in mid sagittal view
What are the cranial anomalies that coud be diagnosed at this age
Anencephaly
Holoprosencephaly
What are the potentials for the diagnosis of open spina bifida based on the cranial sequel of open spina bifuda
In all cases of OSB
1-a thickening of the brain stem, a shortening of the distance between brain stem and occipital bone, and an increase in the ratio of brain stem diameter to BSOB distance to greater than 1 are observed.
2-When the tilted axial plane is used and the "single line" sign is observed, this represents the sonographic cluster of early first trimester diagnosis
of OSB
face at 13 week scan

1- Retronasal traiangle
2- Mandibular gap
3- Maxillary gap

Conclusion
Sonoembryology paved the way for more understanding of the embryological stages of the fetal organs including the CNS.Brain vesicles and ventricles embryological stages of development can be appreciated like mirror images in early TVS.It helped a lot in better understanding and following up this important stage of evolution to the full sized brain
By 11-13 weeks we are able now to document integrity of the cranium as well as proper cleavage of the fore brain .This enabled us to diagnosis anomalies involving these parts e.g. anencephaly and holoprosencephaly
The dynamic growth of the brain limits the full diagnosis of abnormalities involving these areas specially the posterior fossa. However we are now able to highly suspect the presence of OSB by many related U/S signs .The future of U/S is still have its fascinating aspect in showing more and more of the secrets of the early scan and 13 weeks scan

S4 - IS THERE A PLACE FOR BIOLOGICAL THERAPY IN FETAL MEDICINE?

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Keywords:
Stem cells, platelet rich plasma, perinatal disease, fetal health

Major advances have been made in the understanding of the connection between the mothers' health and fetal disease pathogenesis. The changes etiologically and pathophysiologically responsible for the perinatal mortality and morbidity can often be initiated in the preimplantation period, in relation between the embryo - the endometrium. The detection of disturbances of endometrium in which specific immune components have a central role has opened a possibility for application of biological targeted therapy. The aim of such treatment is to modify early the complications in the fetal environment that could later lead to a perinatal disease. The use of new biotechnological achievements based on autologous sources such as platelet-rich plasma and bone marrow derived stem cells, provide range of therapeutic strategies for endometrium therapy. Platelets contain a significant amount of growth factors that have positive effects on local tissue repair and endometrial receptivity, growth and thickness. Another source of secreting factors used in patients with poor endometrial growth, aimed to improve lining and endometrial vascularity for implantation are bone marrow stem cells. Preparing the proper environment for the fetus to grow in, could help prevent the number of perinatal diseases. Biological therapy has found new applications in fetal therapy as well as in the treatment and prevention of mother disorders. The isolation of the stem cells from amniotic fluid provides the possibility of developing direct fetal therapy in different fetal disorders (neurological disorders, the **intrauterine growth restriction**). Development of biological autologous fibrine tissue adhesives enables the treatment of the premature rupture of the amniotic sac. Also, blood loss created as a consequence of disturbed placental adherence can be solved without operative intervention using biological autologous fibrine adhesives. Furthermore, the remote complications related to the change of pelvic floor, as a consequence of childbirth (**vaginal** and **uterine prolapse**, the urinary incontinence) can be prevented by the peripartal local application of growth factors and/or stem cells. Development of biological subcellular therapies further increases the possibility of application in the fetal period.

S5 - TROMBOPHILIA IN MOTHERS AS A RISK FACTOR OF NEONATAL THROMBOSIS

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Objectives

Neonates are the pediatric population at highest risk for development of thrombosis (VTE), and the incidence of the neonatal thrombosis is increasing. Our aim to indicate the association between thrombophilia (genetic and acquired) in mothers and neonatal thrombosis

Methods

We observed 26 cases of neonatal thrombosis. In each case, we examined the mother for hereditary and acquired thrombophilia (FV Leiden, Prothrombin gene (G20210A), MTHFR (C677T), PAI-1 polymorphism and circulation of APA (LA, Cardiolipin Antibodies, Beta-2 Glycoprotein 1 Antibodies, Prothrombin Antibodies) and neonates for genetic thrombophilia. As a control we examined 50 pregnant women with uncomplicated current pregnancy for hereditary and acquired thrombophilia and 50 theirs neonates for hereditary thrombophilia.

Results

Neonatal thrombosis of the following localizations was detected: DVT (15), umbilical cord thrombosis (3), renal vein thrombosis (1), Catheter-associated thrombosis (4), ischemic stroke (1), fetal thrombotic vasculopathy (2).

There were no significant associations between prothrombin gene G2021A and Factor V Leiden mutation in two groups. Strongly significantly higher odds for neonatal thrombosis are present in patients with PAI, MTHFR gene mutation (heterozygote and homozygote pattern) and circulation of antiphospholipid antibodies. Higher odds are present for Protein S deficiency.

Table 1. Thrombophilia in mothers (genetic and acquired) and neonates (genetic only)

Factor	Mothers (n=26)		Neonates (n=26)		Control Mothers (n=50)		Control Neonates (n=50)	
FV Leiden homozyg	1	3,85%	1	3,85%	1	2,00%	1	2,00%
FV Leiden heterozyg	1	3,85%	2	7,69%	2	4,00%	1	2,00%
Prothrombin homozyg	0	0,00%	0	0,00%	0	0,00%	0	0,00%
Prothrombin heterozyg	1	3,85%	1	3,85%	2	4,00%	1	2,00%
MTHFR homozyg	7	26,92%	5	19,23%	5	10,00%	4	8,00%
MTHFR heterozyg	14	53,85%	13	50,00%	8	16,00%	7	14,00%
PAI-1	17	65,38%	16	61,54%	10	20,00%	11	22,00%
Multigenic	**10**	**38,46%**	**9**	**34,62%**	**6**	**12,00%**	**5**	**10,00%**
Protein S deficiency	2	7,69%	1	3,85%	1	2,00%	0	0,00%
Protein C deficiency	1	3,85%	0	0,00%	0	0,00%	0	0,00%
Antithrombin deficiency	0	0,00%	0	0,00%	0	0,00%	0	0,00%
LA	3	11,54%			0	0,00%		
Cardiolopin AB	5	19,23%			2	4,00%		
B2Gp1a AB	9	34,62%			4	8,00%		
Prothrombin AB	7	26,92%			5	10,00%		
Combined thrombophilia	**8**	**30,77%**			**3**	**6,00%**		

Conclusion

This case-controlled study demonstrated significantly higher prevalence of genetic and acquired thrombophilia in women and neonates with thrombosis compared with women with normal pregnancies. Furthermore, strongly significantly associations between PAI and MTHFR mutations and neonatal thrombosis are demonstrated. The association between neonatal thrombosis and FV Leiden and Prothrombin gene G20210A mutations is controversial. Our study showed a high prevalence of multigenic (38,5%) and combined thrombophilia (30,8%) in thrombosis group compared with 12% and 6% in the control group.

Fetal thrombotic vasculopathy is a disorder characterized by thrombosis of the fetal vessels and/or vessels of the fetal surface of the placenta leading to vascular obliteration and hypoperfusion. In our study both cases of FTV was associated with combined thrombophilia and septic complication. FTV associated with high incidence of hypoxic-ischemic brain injury and antenatal fetal death or early neonatal death – severe perinatal outcomes. FTV should be considered as one of the possible causes of renal and other venous thrombosis in newborns.

Thus, pregnant women with genetic or acquired thrombophilia belong to a high-risk group for the neonatal thrombosis. Our study included a small number of patients, to evaluate a more accurate relationship

required to perform randomized controlled trials and to determine potential benefits of administration of LMWH in order to provide prophylaxis of neonatal thrombosis in risk groups with genetic and acquired thrombophilia.

All patients with fetal growth restriction and severe fetal hypoxia (including cases of diagnosed maternal thrombophilia) should be excluded and screening of newborns for thrombosis and thrombophilia is recommended.

S6 - DUCTUS VENOSUS AGENESIS AND FETAL MALFORMATIONS: WHAT CAN WE EXPECT? – A SYSTEMATIC REVIEW OF THE LITERATURE

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Objectives
The ductus venosus agenesis (DVA) is a rare condition with a variable prognosis that relies partly on the presence of associated conditions. The purpose of our study was to analyze the literature regarding the postnatal outcome of fetuses with DVA associated with fetal malformations, in order to discuss the best management options for couples.

Data sources
We performed a systematic review of the literature of MEDLINE and SCOPUS electronic databases in a 25-year period from 1992 to September 2017.
Results: We found 340 cases of DVA associated with fetal abnormalities. The most common chromosomal abnormalities were: monosomy X (12/48, 25%), trisomy 21
(11/48, 22.9%) and trisomy 18 (6/48, 12.5%). From the 340 cases with DVA, in 31 cases the umbilical venous shunt type was not reported. Of the fetuses, 60.8% (188/309) had an extrahepatic umbilical venous drainage while 39.2% (121/309) presented an intrahepatic connection. The DVA was associated in 71 cases (23.0%) with cardiac abnormalities, in 82 cases (26.5%) with extracardiac abnormalities and in 85 cases (27.5%) with both cardiac and extracardiac abnormalities.

Conclusion
DVA associated with both cardiac and extracardiac malformations may confer a poorer fetal outcome, a clinically relevant fact that should clarify what can be expected from this entity and help prenatal counseling.

S7 - ROLE OF VITAMIN D IN PRETERM BIRTH

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Abstract
Vitamin D is a pleiotropic secosteroid hormone important for health and disease prevention. Vitamin D has potent effects on immune responses and influences both the innate and adaptive arms of the immune system. Immune adaptations are vital for successful pregnancy outcome and vitamin D likely acts to promote implantation due to its role in inflammatory pathways and immune function. Adequate vitamin D intake is essential for maternal and fetal health during pregnancy.

Since vitamin D has immunomodulatory and anti-inflammatory effects, such as the regulation of production and function of cytokines and neutrophil degranulation products that is important and relevant to prevent microbial invasion one may expect a protective effect on preterm birth risk. The precise mechanisms associated with vitamin D-mediated antibacterial and/or antiviral activity in the placenta have yet to be fully defined.

Vitamin D deficiency is a major public health problem worldwide in all age groups. Severe deficiency seems to be most common in countries with sun exposure all year around (the Middle East, South Asia, and Southeast Asia). In Jakarta, Indonesia, among 234 first trimester pregnant women, 99.6% have deficient vitamin D status.

A recent study in 81 Indonesian women could not show a significant difference of 25(OH)D3 maternal serum and umbilical cord level between term and preterm births. However, there are moderate correlation of 25(OH)D3 in maternal serum and umbilical cord. Whereas in a Cochrane Review from three trials involving 477 women suggest that vitamin D supplementation during pregnancy reduces the risk preterm birth compared to no intervention or placebo (8.9% versus 15.5%; RR 0.36; 95% CI 0.14 to 0.93, moderate quality).

In conclusion, the available data indicates that vitamin D deficiency is a global public health problem, particularly in those from the Middle East and Asia. New studies have provided more evidence on the role of Vitamin D in preterm birth. However, the precise mechanisms of vitamin D to prevent preterm birth and the vitamin D requirements and optimal timing of supplementation are still unclear. Practice guideline and more researches are needed.

S8 - CAESAREAN SECTION AN EPEDMIC OF OUR TIME; STRATEGIES TO REVERSE THE TREND

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The human birth process has evolved over the years from being completely natural to a process in which interventions were introduced. The interventions ranges from induction of labour to to artificially initiate the labour process, augmentation to improve the efficiency of the process to instrumental and assisted deliveries. The climax of interventions in the human birth process is caesarean section[C-section].

Caesarean is section is indicated in maternal, fetal interests and sometimes in the interest of both. The relative safety of the process and changing life styles have driven the rates of C-section to an unprecedented high levels. From as high as 50% of deliveries in Brazil, 46% in China, 32% in the US, 38% in Cyprus, 33% in Australia and 27% in Nigerian tertiary hospitals. Caesarean section however is associated with immediate and remote maternal and fetal complications including morbidity and mortality for the mother and infant. This has generated a global concern by international bodies such as the World Health Organization[WHO] and Professional societies and it has also lead to an outcry and calls for a reversal for the escalating rise in the rates.

There are various measures both old and new that can be put in place to address unacceptable high caesarean rates. General measures include education, improving nutrition, vaccination against diseases and addressing harmful life styles. Procedures such as; Induction of labour, Augmentation of labour, Active management of labour, Trial of labour, Vaginal Birth after C-section, External cephalic version and Assisted breech delivery. Assisted vaginal instrumental delivery and Destructive vaginal operation which are now being abandoned can if reintroduce reduce caesarean section rates. Today in a quest to reduce C-section rates globally new ideas are introduced; " Keeping up the pressure" by subjecting decisions to C-section to rigorous screening and review before the final approval for the procedure has been used with good result. This has the potential of reducing C-section rates. "Fee equalization" between C-section and vaginal delivery is another veritable instrument in the efforts to reducing C-section rates. The fear of litigation is one of the major factors driving C-section rates, some health facilities have introduced " Patient Compensations Funds" to offset the cost of litigations and encourage physicians to decide on method of delivery based on their genuine clinical judgment not based on fear and attendant possible litigation.

Adopting some the methods, procedures and approaches will potentially reduce the current C-section rates and reduce some of the maternal, fetal and infant complications of the procedure. The need for further efforts aimed at creating new ideas to address the issue should be a continuous one and in the long run achieve an acceptable C-section rates globally as advocated by WHO and other international bodies.

S9 - FETAL OVERGROWTH: POSSIBLE GENETIC IMPLICATIONS

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Fetal growth anomalies can be correlated to genetic sindromes. The sooner fetal growth anomalies are manifested, the major is the correlation to genetically determined syndromes. In fact, the most common Trisomies (13, 18, 21) are caracterized by anomalous Crown-Rump Length (CRL) values as early as the first trimester.

The choice which growth curve to employ can be of fundamental importance for diagnosing fetal growth anomalies. Many studies have focused their efforts on establishing a more efficient growth curve; currently, the Hadlock algorithm is the most sensible and the growth curves suggested by the intergrowth study are those best devised methodologically and with a major number of cases available.

Further accessory parameters such as the measurement of the fetal soft tissue (midhomuerus, shoulder, abdominall wall, thigh, peribuccal area) could be useful. Additionally, correct evaluation of the amniotic fluid and the fetal flussimetry (diabetes, hypertension, etc.) is mandatory to exclude obstetrical pathologies.

Fetal overgrowth is an indication to look for further associated anomalies. Increased Abdominal Circumference (AC) could suggest visceromegaly rather than an increase of adipose tissue. Visceromegaly is characteristic of a number of genetic syndromes and is manifested in the 3rd trimester of pregnancy. When detected, the Beckwith-Wiedemann syndrome should be suspected. This syndrome is mainly associated with macroglossia as well as omphalocele often hard to diagnose due to its small dimensions. The Perlman syndrome should also be taken into account, although it is associated to major fetal anomalies often diagnosed in the second trimester (facial dysmorphia, macrocephaly, fetal ascites).

Fetal macrosomia associated to macrocephaly and increased fronto-occipital diameter should lead us to suspect a Sotos syndrome which is often tricky to diagnose during prenatal life because it is associated to other major fetal anomalies only in 3% of all cases.

The Golabi syndrome, at the expense of an AC increase, is associated with a shorter femur length. A number of cardiopathies or diaphragmatic hernia can be present as well and this may be useful for its identification but they are not always observed.

S10 - CSF DIVERSION FOR HYDROCEPHALUS IN INFANTS THAT UNDERWENT PRENATAL REPAIR OF MYELOMENINGOCELE

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Introduction
The classic treatment of hydrocephalus (HCP) has been diverting CSF by means of a shunt, typically a ventriculo peritoneal shunt. For children with myelomeningocele (MMC), at least 50% of shunts will fail during the first years of life. Endoscopic third ventriculostomy (ETV) has been an alternative treatment for many children with hydrocephalus with overall success rates between 50-60%. The surgery consists of creating an ostomy through the floor of the third ventricle into the prepontine cistern with an endoscope, thereby allowing CSF to bypass the obstruction into the subarachnoid space for normal absorption. Specifically for MMC, the success rates of ETV have been around 35-75%.

In the past decade much attention has been focused on the addition of a complete choroid plexus cauterization (CPC) to the ETV.

Objectives
To understand the value of ETV or ETV/CPC in treating HCP in infants that underwent prenatal repair of MMC.

Methods
A literature review of contemporary relevant articles was performed.

Discussion
It has been reported that ETV/CPC has a significant better success rate than ETV alone. A recent large series of ETV/CPCs showed an overall success rate of 59% and 84% for 19 of those patients that had MMC. ETV/CPC seems to have better success rates when performed after the age of 6 months, when the Choroid plexus is widely cauterized, and when the starting ventricular size is on the small side. Only one study has reported on having performed ETVs on babies that were operated in utero for their MMC. ETV success rate on 24 patients was 45.8%.

Conclusions
ETV/CPC is a good alternative for the treatment of HCP in children with MMC with recent evidence of having better success rates than with shunting. It remains to be seen whether that success rate can be mirrored in infants that underwent prenatal repair of MMC.

S11 - ULTRASOUND IN ASSESSMENT OF INTRAPARTUM INJURES

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Objective
During pregnancy the uterus shows dynamic activity related to plasma concentrations of mediators that influence myometrial contractility, namely oxytocin and prostaglandins and their receptor.

Morphological and functional properties of the scar on the uterus in everyday practice are largely a subjective estimate, based on palpation, bimanual inspection and ultrasonic thickness measurement and assessment of scarring. In 1875 Bandl was introduced into clinical practice the term the lower uterine segment (LUS). In 1905 Aschoff described the upper border of the LUS and the corpus as the ostium internum anatomicum and below the cervix as the ostium internum histologicum.

Material and methods. The rate of attempted vaginal birth after previous cesarean delivery has decreased, while the success rate of such births increased. We conducted a prospective study of 108 pregnant women. Analyzed were: shape scar thickness (thickening), continuity, border scar out, echoing the structure of the lower uterine segment and scar volume.

Criteria for inclusion in the study:
Pregnant women who have previously given birth by Caesarean section once with an unlimited number of vaginal deliveries.
* Pregnant women who had hysterotomy by low transverse section.
* Pregnant women whose presentation of fetus was head position and in fetuses up to 2500g of body weight. Single fetus pregnancies without fetal anomalies. Gestational age older than 35 weeks.
By ultrasound examination of uterine scar were analyzed:form of scarring,thickness (thickening)., continuity.

Results
The study showed that scar thickness of 3.5 mm or more, the homogeneity of the scar, scar triangular shape, qualitatively richer perfusion, and scar volume verified by 3D technique up to10 cm are attributes of the quality of the scar.

Conclusion
Based on the obtained results we conclude that ultrasound evaluation of the quality of the scar has practical application in the decision on the mode of delivery in women who had previously given birth by Caesarean section. The rate of spontaneous labor after previous cesarean section is decreasing. Color Doppler is the "gold standard" in assessing the quality of the scar after a previous cesarean section and ability for spontaneous labor.

The thickness of the scar after a previous cesarean section, or "cut off" is 3.5 mm and more. The homogeneity of the scar is an attribute that contributes to the quality of the scar. Triangular shape of the scar in the assessment of scar quality. Qualitatively richer the quality of perfusion around scar in assessing the value of the scar Volume scar verified 3D is a new technique in the evaluation of the most important attribute of quality of the scar and his "cut off" is up to 9 cm.
Key words: lower uterine segment, ultrasound, intrapartum injures, cesarean section.

S12 - FAMILY PLANNING, PREGNANCY AND DELIVERY IN MULTIPLE SCLEROSIS – IS IT SAFE?

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Relapsing-remitting multiple sclerosis is an autoimmune-mediated neurodegenerative central nervous system disease affecting young adults with increased incidence among women during their reproductive years. Neither multiple sclerosis itself nor treatments with immunomodulatory drugs reduce fertility, but women with the disease nevertheless have fewer children than other women. Family planning in patients with multiple sclerosis is influenced by the patient neurological disability and disease related symptoms. The disabling effects of the disease may make it physically hard to carry a pregnancy. Muscle weakness and coordination problems may increase the likelihood for falls, fatigue and impairment in urinary bladder control may worsen, and decreased sensation in the lower body that may interfere with the process of labour. Therefore, pregnancy in multiple sclerosis has been a matter of controversy for many years and in the past women diagnosed with the disease were discouraged from conceiving. Moreover, in the postpartum period, patients with multiple sclerosis experience accelerated disease activity with the appearance of a new relapse. During pregnancy as the immune system is suppressed, disease activity and the frequency of acute relapses decrease with a 70% reduction in relapse risk in the third trimester of pregnancy. However, in the immediate postpartum period when the immune system is over-activated, a corresponding rebound increase in relapse risk occurs in the first three months postpartum. In relation to labor outcomes maternal multiple sclerosis was not associated with assisted vaginal delivery or caesarean section as compared to healthy population. The effect of childbirth on long-term disability progression will be discussed.

S13 - MEDICAL AND ETHICAL ISSUES AT THE LIMITS OF VIALBILITY

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With a dramatic improvement in survival of infants bom between 23 and 26 week of gestation, survival is no longer a "medical miracle" but a reality that needs to be evaluated with all of its long term potential implications for parents and for society at large. Unfortunately, at the lowest limits of viability, survival is often associated with significant short and long term complications. Hence, it is of paramount importance that extensive consultation between parents sand physicians take place prior to delivery. This is possible in the majority of situations. Such consultation can avoid ethical and medico-legal problems. The field of bioethics throughout history has been characterized by occasional tensions between lay persons and physicians relating to decision making. Bioethics is not only under the influence of medicine but is it is also affected by other changing forces such as public opinion, political ideologies, religious beliefs, cultural background and economic conditions. The legal implications of poor communication between parents and physicians cannot be understated. Parental decisions for full medical intervention can widely vary between 23 and 26 weeks of gestation. It is also evident that the physician's personal beliefs can seriously impact on parental decision. Data presented to the parents on survival and potential complications should reflect local epidemiological information and not general statistics. The prevailing view is that decisions at the limits of viability, when outcome is uncertain or ambiguous, should be the prerogative ofthe parents. On the other hand, the physician's responsibility is to protect the life of the infant when unreasonable demands are made by the parents and which do no serve the best interest of the infant. In the final analysis, effective communication between obstetrics, neonatology and parents can prevent conficts and suffering.

S14 - EPIDEMIOLOGY OF MULTIPLE PREGNANCIES IN TURKEY: PROBLEMS AND SOLUTIONS?

Güngören A.

Multiple pregnancies are among the conditions that significantly increase maternal and perinatal morbidity and mortality. Unfortunately, inadequaterecordingsystem in developing countries leads to insufficient evaluation of data.

In the USA, twins consist of 2-4% of all births, an increase of 76% from 1980 to 2009. Rates differ in different countries of theWorld such as 8/1000 in India, South Asia, 9-16 / 1000 in Latin America and USA, >17 / 1000 in Africa. The highest rate is in Nigeria and the lowest is in Japan. It has increased from 11.7 / 1000 to 19/1000 in European countries in the 2000s. The most comprehensive study on this subject in our country was published by Yayla et al, posted in 2008, according to this study, multiple pregnancy rate was 1.94% and twins' contribution was 1.86%. In another study which is still in the publication stage, Özçil MD and Güngören A found that the twin rate was 1.79% when they evaluated multiple pregnancies admitted to their institutions in 2011-2017.

Two main reasonsforthe increase in multiple pregnancies are advanced maternal age and advanced reproductive techniques (ART). In many countries today, babies born with ART account for 1-4% of all newborns.

Multiple pregnancies are associated with maternal and fetal risks, whether spontaneous or assisted reproductive techniques occur. Maternal risks include anemia, preeclampsia, gestational diabetes, myocardial infarction, heart failure, stroke, venous thromboembolism, pulmonary edema, cesarean section, hysterectomy. Fetal risks include IUGR, preterm labor, selective fetal growth retardation, TTTS, umbilical cord injuries, fetal death. Neonatal risks include respiratory distress syndrome, necrotizing enterocolitis and intraventricular hemorrhages due to prematurity.

The most important way to reduce morbidity and mortality in multiple pregnanciesis early diagnosis and records from the beginning of pregnancy. In addition, single embryo transfer in the use of assisted reproductive techniques, the use of a standard pregnancy report card, communication between institutions and physicians through the computer system, proper collection of data within a national data diagnosis to be established and monitoring of risky twins in perinatology centers will reduce the negative outcomes to an acceptable level.

S15 - WHY CONSIDER BLOOD TRANSFUSION IN PREGNANT / POSTPARTUM WOMEN?

Shander A.

During pregnancy, The WHO defines anemia as a hemoglobin (Hb) concentration < 11.0 g/dL in the first and third trimesters and Hb < 10.5 g/dL in the second trimester. Multiple factors may lead to anemia during this period, namely nutritional deficiencies, hemolysis and abnormal hemoglobin synthesis, blood loss, defective iron absorption and metabolism and chronic conditions. Iron-deficiency (ID) is the most common cause of anemia in pregnancy. The spectrum of ID ranges from iron depletion, to deficient erythropoiesis and to iron deficient anemia. The prevalence of ID can be 2 - 2.5 times that of iron deficiency anemia (IDA). The risk factors related to IDA include teenage pregnancy, high parity, multiple pregnancies and reduced inter-pregnancy intervals. Iron deficiency anemia has been linked to negative maternal-fetal outcomes. For mothers, these include reduced working and intellectual capacity, increased susceptibility to infection, higher risk of post-partum anemia and depression. The perinatal outcomes include premature delivery, small for gestational age infants, a highest risk of anemia and poor physical and mental growth during infancy.[1]

Therefore, the diagnosis of IDA and its treatment has a positive impact. Moreover, current guidelines recommend a daily iron supplementation of at least 60 mg of elemental iron after the 16th - 20th week of gestation or sooner if there are any risk factors. The treatment of IDA depends on the severity of the anemia. In mild cases, the primary treatment includes oral iron therapy. In more moderate to severe cases, intravenous iron may be used as parenteral iron that results in a faster increase in Hb levels. If a critical value of Hg is achieved, blood transfusion might be considered depending on the clinical situation. [1]
Postpartum anemia (PPA) is defined as an Hb <10 g/dL within 24-48 h after delivery, although it has also been recommended that PPA be defined as a Hb <11 g/dL at 1 week postpartum and <12 g/dL at 8 weeks. The prevalence of PPA 48 h after delivery is approximately 50% in Europe and 50-80% in developing countries. PPA should be considered severe if Hb is <7 g/dL16. Anemia during the third trimester of pregnancy and PPH are independent risk factors for PPA. Thus, parturient' Hb should be determined when labor starts, unless a recent Hb is available and there are no risk factors for PPH. PPA can be aggravated by altered iron homeostasis and reduced erythropoietin secretion and action in women with a higher postpartum inflammatory response (e.g. caesarean section). Therefore, every effort should be made to correct anemia prior to delivery and women with anemia or at high risk of hemorrhage should be advised only to deliver in hospital where a clear multidisciplinary, multimodal protocol for management of major obstetric hemorrhage is in place. [2]

Postpartum hemorrhage is the most frequent cause of maternal mortality and morbidity worldwide. In high-resource countries, the number of women who require blood transfusions as a result of postpartum hemorrhage ranges from 2 to 30 per 1000 deliveries, and the figure continues to rise. [3] Although blood transfusions are considered as safe, adverse transfusion reactions (TRs) and transfusion-transmitted infections do occur. The spectrum of symptoms ranges from mild, such as febrile or urticarial reactions, to severe; in some cases, reactions can be life-threatening. Deaths linked to TRs have been reported at a rate of 1 per every 100 000 transfused units. This study found the incidence of TRs among women who received a postpartum transfusion of RBCs, plasma, or platelets to be 79 per 100 000 (0.8%), a doubled risk (OR, 2.0) compared with nonpregnant women as shown in the figure below. [3]
Administration of RBC should be carried out cautiously and restrictively and there is no clear hemoglobin cut-off value as to when RBC transfusion is required. A hemoglobin level below 60 g/l seems a reasonable

cutoff below which RBC administration should be considered but not necessarily performed, provided that there is no active bleeding. However, in the case of active and severe bleeding, a hemodynamically unstable patient could benefit from a RBC transfusion, irrespective of hemoglobin level. [4]

Figure
Rate (%) of transfusion reactions in relation to the number of transfused RBC units in pregnant and nonpregnant women.

(Figure published in Thurn L, Wikman A, Westgren M, Lindqvist PG. Incidence and risk factors of transfusion reactions in postpartum blood transfusions. Blood Adv. 2019 Aug 13;3(15):2298-2306)

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S16 - 3D/4D ULTRASOUND IN EVALUATION OF INFERTILE WOMEN

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Recent advances in three-dimensional ultrasound (3D US) have made accurate non-invasive measurements of the follicular, ovarian, and endometrial volumes feasible. Storage capacities, reconstruction of the volume images, and simultaneous viewing of all three orthogonal planes are main advantages of this method in the field of infertility. 3D US is useful in patients scheduled for serial ovarian monitoring in whom planar reformatted sections allow more accurate and objective volumetric assessment of the leading follicles, which are not always spherical. Ovarian volume measurements by 3D US contribute to accurate diagnosis of polycystic ovarian syndrome and prediction of the response to stimulation and estimation of the risk of ovarian hyperstimulation. Transvaginal ultrasound directed follicular aspiration and embryo transfer under 3D US guidance may improve the operator's spatial evaluation and allows precise follicular and/or catheter tip location during the course of interventional procedures. The use of 3D color/power Doppler US after injection of saline solution and/or echo enhancing contrast medium produces high diagnostic accuracy for visualization of the uterine cavity and Fallopian tubes. By providing multiple tomographic sections of the uterine cavity, uterine causes of infertility such as congenital uterine anomalies, submucous leiomyoma, and/or adhesions become easily visible. Quantification of the endometrial volume by 3D US in combination with blood flow studies contributes to assessment of the endometrial receptivity and may have the potential to predict pregnancy rates in assisted reproductive techniques.

Recent introduction of the 3D power Doppler assessment of ovarian reserve might help in better identification of good responders to gonadotropin therapy.

S17 - WHAT DID WE LEARN ABOUT STRUCTURE AND FUNCTION OF FETAL BRAIN?

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Fetal behavior refers to the fetal activities observed or recorded with ultrasonographic equipment. Behavior can be spontaneous, generated by the fetus itself, or elicited in response to external stimulus such as vibroacoustic stimulation. Analysis of the fetal dynamics in comparison with morphological studies has led to the conclusion that fetal behavioral patterns directly reflect developmental and maturational processes of the fetal central nervous system (CNS). In addition, there is a carryover effect of movements from prenatal to postnatal life. There were no movements observed in fetal life that were not present in neonatal life. Furthermore, prenatal-neonatal continuity exists even in subtle, fine movements such as facial mimics. Altered quality of fetal movements might reveal the structural or functional impairment of the fetal central nervous system. Improvement of four dimensional (4D) technology enabled introduction of Kurjak Antenatal Neurological Test (KANET), scoring test for the assessment of the fetal behavior. Our preliminary results have confirmed the usefulness of this test in fetal behavior assessment. The KANET test has potential to detect and discriminate normal from borderline and abnormal fetal behavior in normal and in high-risk pregnancies, which means that it could become a valuable diagnostic tool for fetal neurological assessment. Over 100 fetuses from pregnancies with threatened preterm labor have been studied using KANET in our multicentric program. Recently study with the largest number of fetuses (620 fetuses) where prenatal KANET test has been applied was published. Among the fetuses with abnormal KANET score, most frequently presented were fetuses from the threatened preterm delivery group. Preterm labor accounts for 75% of perinatal mortality and over 50% of perinatal morbidity. Although preterm survives, they are at increased risk of neurodevelopmental impairment. It has been shown that fetal behavior differs in preterm than term infants. Further, fetal behavior differs in neurologically compromised compared to normal fetuses. There are developmental differences between fetuses threatening to deliver early and other high risk fetuses. Preterm infants are at higher risk for cerebral palsy due to prematurity, intrauterine growth restriction, infection or multiple pregnancy. Pediatricians know that they need to wait until the age of 6 months postnatally to diagnose a severe CP and at least 24 months or even longer for a minor non-disabling CP. KANET test and behavioral assessment give new hope in the attempt of early diagnosis of cerebral palsy and provide identification of fetuses at neurological risk from pregnancies with threatened preterm labor.

S18 - ASSESSMENT OF MOTORIC AND COGNITIVE FUNCTION OF FETAL BRAIN BY 4D SONOGRAPHY

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One of the greatest challenges of obstetrical ultrasonography is the better understanding of fetal neurological function. Neurological problems, such as cerebral palsy, are poorly understood and often falsely attributed to intrapartum events, while for the majority of cerebral palsy cases it has been proven that the causative pathway starts long before delivery. Although several attempts have been made to define normal and abnormal fetal neurological function, and to develop a method to assess the integrity of the fetal nervous system, most are still without satisfactory sensitivity.

Fetal behavioral patterns directly reflect the developmental and maturational processes of the fetal central nervous system. It has been suggested that the assessment of fetal behavior during different periods of gestation may provide valuable information about normal and abnormal brain development, and contribute to the early diagnosis of various structural or functional neurological abnormalities. The introduction of three and four dimensional ultrasound (3D and 4D) allowed real time assessment of fetal behavior. Details of the fetal face, and especially movements of mouth, eyes (facial expressions) and fingers, have been made possible with the introduction of 4D ultrasound. KANET is the first method that attempted to use 4D ultrasound to assess and combine parameters of fetal behavior and form a scoring system that can assess the fetus in a comprehensive and systematic approach, in the same way that neonatologists perform a neurological assessment in newborns during the first days of their life in order to determine their neurological status. KANET appears to be able to identify functional characteristics of the fetus that predict normal and abnormal neurological development and hopefully future results of ongoing prospective multicentric studies will provide more information on fetal neurology in the next few years. Such information will be of great value in counseling mothers of high risk pregnancies, for example in cases with a previous child with cerebral palsy, as well as providing valuable evidence for cases of litigation.

S19 - MOST COMMON MISTAKES IN RECURRENT MISCARRIAGES IN TURKEY?

Ekin A.

Common mistakes related to recurrent pregnancy losses (RPLs) in Turkey could be evaluated under the headings of definition, diagnostic tests and management. A diagnosis of RPL could be considered after the loss of two or more clinical pregnancies prior to 24 gestational weeks. The proven causes are diverse, such as cytogenetic abnormality, uterine anomalies, antiphospholipid antibody and endocrine abnormalities. However, the cause of RPL remains unexplained in approximately 50% of couples. It is not suggested to screen for hereditary thrombophilia unless in the context of research, or in women with additional risk factors for thrombophilia. While deregulated maternal immune tolerance could plausibly contribute, as yet, there are no pathognomonic diagnostic criteria for reproducibly identifying a distinct immunological entity. No causal link between infectious agents and RPL has been established, and it is not recommended to test or empirically treat asymptomatic women with RPL. Treatment of possible causes like surgical treatment for uterine septum, submucosal myom, endometrial polyp and severe intrauterine adhesions, cervical cerclage or sonographic surveillance for cervical incompetence, thyroxin supplementation for subclinical or overt hypothyroidism, low dose aspirin and heparin for antiphosphospholipid syndrome and dopamine agonist for hyperprolactinemia should be given. For women with hereditary thrombophilia and a history of RPL, use of antithrombotic prophylaxis is not suggested unless if indicated for venous tromboembolism prevention. Based on current available evidence, preimplantation genetic diagnosis offers no significant benefit over expectant clinical management in terms of live birth, miscarriage, or time to first successful live births. It has also been shown that patients presenting no abnormality on various tests may achieve a good rate of live births without special treatment. Furthermore, recent literature revealed that supplementation with progestogen therapy probably reduces the rate of miscarriage in subsequent pregnancies.

S20 - INTRODUCTION TO POSTPARTUM BLOOD MANAGEMENT FOR OBSTETRICIANS

Froessler B.

Post-partum anaemia is very common, affecting 50% of women in the developed world and up to 80 % in developing countries.(1) Women are affected in many ways. In the immediate post-partum period anaemia will lead to a higher Red Blood Cell (RBC) transfusion rate. After hospital discharge anaemia often lingers due to underlying iron deficiency (ID) for months, causing fatigue, depression and cognitive dysfunction.(2, 3) These symptoms will also affect the infant, as the mothers' ability to parent adequately is impaired.

Prevention of postpartum anaemia is an important goal and must start in the antenatal period. Ferritin screening will allow identification and appropriate management of ID.(4)

Iron therapy will replenish iron stores and iron replete, non-anaemic pregnant women will usually enter labour well prepared. Maternal health education, oral iron, lactoferrin and intravenous iron (IVI) are valuable elements of antenatal management.(5-7)

As postpartum haemorrhage (PPH) is on the rise worldwide an obstetric Patient Blood Management (PBM) approach will offer valuable tools to minimize blood loss and treat anaemia.(8) The high risk parturient has to be identified, discussed and delivery should ideally occur in well-equipped obstetric units. In case of a PPH, obstetric measures, cell salvage, viscoelastic testing and antifibrinolytic drugs, such as tranexamic acid, will assist the clinician to preserve the patient's own blood to improve outcome. Collaboration and communication between the obstetric and anaesthetic team is crucial.(9)

Postpartum anaemia is frequently corrected with RBC transfusion. Well described risks of blood products and the ability of young, generally healthy women to tolerate anaemia should encourage clinicians to adopt restrictive transfusion practice.(10) ID in the postpartum setting is common, worsened by peri-partum blood loss and often overlooked. IVI offers an attractive treatment option with superior outcomes compared to oral iron and RBC transfusion.(11, 12) Postpartum anaemia and iron deficiency are preventable and treatable should they occur. Clinical teams caring for peri-partum women should be aware of treatment bundles to assure the best possible outcome for mother and child.

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S21 - THE METHOD OF CHOICE FOR PREDICTION AND EARLY DIAGNOSIS IN TURKEY

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Pre-eclampsia (PE) is a pregnancy-specific disorder that affects 2 to 5% of all pregnancies worldwide. It is one of the major causes of maternal and perinatal morbidity and mortality. Yearly about 76000 women and 500000 babies die each year from this multisystem disorder. Women in low-resource countries are at a greater risk of developing PE compared with those in high-resource countries.

The traditional preeclampsia screening is based on identifying the risk factors from maternal demographic characteristics and medical history (maternal factors). However, recommended method can identify only 35% of all preeclampsia and approximately 40% of preterm-preeclampsia, at false positive rate of 10%. An alternative approach to screening for PE, which allows estimation of individual patient-specific risks of PE requiring delivery before a specified gestation, is to use Bayes theorem by combining the priori risk from maternal characteristics and medical history with the results of various combinations of biophysical and biochemical measurements. In the last decade, extensive research studies have been focusing on the identification of four potentially useful biomarkers at 11–13 weeks of gestation: mean arterial pressure, uterine artery pulsatility index, serum pregnancy-associated plasma protein A, and serum placental growth factor. The detection rates of preterm PE and term PE were 75% and 38%, respectively, at false-positive rate of 10%.

In this presentation we aimed to study the prediction models of PE and to discuss which model is more convenient for Turkish population considering the circumstances in our daily practice.

S22 - PRENATAL INTERVENTION IN CASE OF MITRAL VALVE DYSPLASIA SYNDROME

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Objective
To assess the intrauterine course and outcome of fetal cardiac intervention (FCI) in fetuses with mitral valve dysplasia syndrome (MVDS).

Methods
All fetuses with a prenatal diagnosis of MVDS were retrospectively collected in one tertiary centre for fetal medicine over a period of 10 years. Video recordings, pre and postnatal charts were reviewed for cardiac and extracardiac anomalies, intrauterine course and postnatal outcome.

Results
19 fetuses with MVDS were diagnosed in the study period. All of these had aortic stenosis with severe mitral regurgitation, marked left atrium dilatation and a highly obstructive or intact ventricular septum. In 5 cases FCI was not considered as the parents either opted for expectative management or for termination. In the remaining 14 fetuses, 21 FCI were performed: 14 balloon valvuloplasties, 2 atrioseptostomies and 5 fetal atrial stent insertions. Intrauterine fetal demise (IUFD) during intervention occurred in 4 fetuses, late IUFD several days after intervention in one fetus and 2 terminations of pregnancy were performed due to progressive hydrops. Among the 7 live births, 3 died in the neonatal period. The remaining 4 received single ventricle palliation, two following fetal aortic valvuloplasty and two after fetal atrial stent insertion. Aortic and tricuspid valve diameters were significantly different in survivors with single-ventricular-repair than in non-survivors.

Conclusion
MVDS has a high overall mortality even in cases undergoing intrauterine intervention. Parameters that accurately predict the intrauterine and postnatal outcome have yet to be defined.

S23 - FETAL ENDOTRACHEAL INTUBATION (FETI) - AN ALTERNATIVE FOR EX-UTERO INTRAPARTUM TREATMENT (EXIT)

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Fetal cervical teratomas are rare congenital tumors that consist of different types of tissue that can originate from all three germ cell layers. The vast majority are histologically benign, but the significant size they can achieve is life-threatening because of an upper airway obstruction with subsequent perinatal mortality and morbidity. They may also contribute to pulmonary insufficiency and chondromalacia due to mass size in utero and underdevelopment of the fetal lung. Also associated with polyhydramnios and premature labor, they represent a serious pregnancy complication. Currently, the common method for securing a suitable airway in neonates is the method of ex-utero intrapartum treatment (EXIT) which is associated with a significant risk for the maternal and neonatal morbidity.

For the first time, Cruz-Martinez et al. published a new method of fetal endoscopic tracheal intubation for the maintenance of the postnatal airway in large fetal cervical neck masses.

This procedure consists of a percutaneous fetal tracheoscopy under maternal epidural anesthesia using an exchange catheter covering the fetoscope that allows a conduit to introduce an intrauterine orotracheal cannula under ultrasound guidance. We report on our experience with three cases of FETI in patients with giant cervical teratomas.

S24 - INTERVENTION FOR PUV: BALLOONING OR SHUNTING?

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Objectives
The objective of our study was to determine the feasibility of vesicoamniotic shunting (VAS) in the first trimester with the Somatex® intrauterine shunt as well as rates of complications, shunt dislocations and neonatal outcome.

Methods
Retrospective cohort study of all VAS before 14 weeks at two tertiary fetal medicine centres from 2015-2018 using a Somatex® intrauterine shunt. All patients with a first trimester diagnosis of megacystis with a longitudinal bladder diameter > 15 mm were offered VAS, irrespective of fetal sex. All patients that opted for VAS after counseling by prentanal medicine specialists, neonatologists and pediatric nephrologists were included in the study. Charts were reviewed for complications, obstetric and neonatal outcomes.

Results
14 VAS were performed during the study period in ten male and four female fetuses at a median GA of 13.3 (12.4 to 13.9) weeks. There were four terminations of pregnancy (TOP) in the second trimester due to associated malformations and two IUFD. Overall there were 4 dislocations (28.6%); three intraabdominal shunt dislocations at 25-30 weeks and one early dislocation.

Eight neonates were born alive at a median GA of 35.5 weeks. There was one neonatal death due to pulmonary hypoplasia. Kidney function was normal at birth in the 7 neonates surviving the neonatal period. After exclusion of TOP perinatal survival was 70%, and 87.5% if only live-born children were considered.

Conclusions
VAS in the first trimester is feasible with the Somatex® Intrauterine shunt. Dislocation rates are lower than previously described with other shunts. Neonatal survival rates are high due to a reduction in pulmonary hypoplasia, but there is a considerable rate of complex additional malformations.

S25 - NON-INVASIVE VENTILATION OF THE NEONATE

Moretti C.

Nasal Intermittent Positive Pressure Ventilation (NIPPV) or Nasal Intermittent Mandatory Ventilation (NIMV) are non-invasive modes of ventilation generated by ventilators that provide NCPAP plus superimposed ventilator mandatory breaths and are identified as SNIPPV/SNIMV when the ventilator pressure waves are synchronized with the spontaneous efforts of the patient. These techniques are being increasingly used in preterm infants with respiratory failure and several trials seems to demonstrate that NIPPV and SNIPPV are more effective than NCPAP in reducing extubation failure (1-3) and also as primary mode of ventilation (4). Their effects include a higher mean airway pressure (MAP), a washout of the anatomical dead space in the upper airways and a stimulatory effect on the respiratory drive. With SNIPPV the benefits are more consistent due to the positive effects of synchronized mechanical breaths in reducing thoraco-abdominal asynchrony, inspiratory effort (5), breathing frequency and work of breathing (WOB) and at the same time in increasing tidal volume (Vt) and minute volume (Ve) (6), gas exchange (7) and respiratory drive (8).

Different modes of synchronization have been reported. SNIPPV was initially performed by a capsule (Graseby capsule) placed on the baby's abdomen which detects the increase of the pressure due to the contraction of the diaphragm, but this device has several disadvantages. Although it is a relatively simple device, accuracy is limited by position and fixation, movement is often misinterpreted as breathing and at higher spontaneous breath rates its response is less consistent. Neurally adjusted ventilatory assist (NAVA), which uses electrical activity of the diaphragm (Edi) to trigger the ventilator, has been developed more recently. However, it has the disadvantage of being invasive and costly, as a dedicated electrode-equipped catheter to detect Edi is required and to date there are few data on clinical outcomes.

To overcome all these disadvantages our team decided to create a ventilator expressly developed to perform flow-SNIPPV (Giulia®; GINEVRI srl, Albano Laziale, Rome, Italy). The flow-sensor, a simpler differential pressure transducer, is interposed between the nasal prongs and the Y piece (1, 2). Using this device we were able to demonstrate that flow-SNIPPV is more effective than conventional NCPAP in improving ventilation and in decreasing extubation failure in preterm infants who had been ventilated for respiratory distress syndrome (RDS) (6, 9). Later we used flow-SNIPPV as the primary mode of ventilation, after surfactant replacement, reducing the need for mechanical ventilation and favorably affecting short-term morbidities of treated premature infants (10). More recently we have also successfully applied flow-SNIPPV in the treatment of apnea of prematurity (AOP) (8). This technique has also been successfully used as rescue therapy for infants failing on NCPAP (11).

Moreover, the modern concept of "precision medicine" aims for the improvement of efficacy of flow-SNIPPV also with continual enhancements in comfort and another main goal to further improve this technique was the development of very light and comfortable nasal prongs that have similar characteristics to the HHFNC and with the flow-sensor placed far away from the infant's head, at the level of the Y-piece. Preliminary bench and clinical studies to test this new interface confirmed the efficacy of this new lighter and more comfortable device (12).

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S26 - FIRST TRIMESTER FETAL GROWTH IN IVF AND OVODONATION

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Objectives
Maternal features such as age, maternal diseases and BMI play a less important role in determining changes in fetal size and growth in the first trimester (i.e. Crown-Rump Length [CRL]). it is generally assumed that early fetal growth remains uniform during the first trimester but that babies conceived by ART have a generally smaller birth weight.

The objective of this study is to determine whether there are differences in CRL in fetuses conceived via homologous versus heterologous oocyte/embryo donation and also to determine whether the changes reported in fetal size and growth after Assisted Reproductive Techniques (ARTs) can be attributed to maternal characteristics such as age, immunological nature of the pregnancy (semi-allograft vs allograft) and/or other factors.

Methods
This is a retrospective cohort study of consecutive pregnancies obtained by IVF patients who underwent first trimester scan at a single tertiary referral center .

Pregnancies were dated according to the date of oocyte aspiration. CRL was always evaluated by standard methods, by a single operator during the first-trimester ultrasound screening (11th-13th week of gestation). For the purposes of the study, CRL and nuchal translucency were corrected for gestational age and converted in percentiles according to published reference ranges.

789 fetuses conceived with IVF were included in the analysis: 643 (81.5%) from homologous gametes (Group 1) and 143 (18.5%) from oocyte/embryo donation (Group 2). Abnormal karyotypes, fetal structural anomalies and monochorionic twin pregnancies were excluded.

Recorded data regarding maternal and ultrasound parameters (maternal and paternal age, maternal BMI, parity, ethnicity, late embryo transfer, oocyte age, CRL centile and nuchal translucency >95th centile) were compared between the two groups. Multivariate analysis was performed in order to assess the role of maternal factors and oocyte age in early fetal growth.

Results
In Group 1 CRL centiles were significantly smaller than in Group 2 ($p<2.2e-16$). Maternal age was significantly increased in Groups 2 ($p<2.02e-14$), while oocyte age was significantly lower ($p<2.2e-16$). No significant correlation was found at multiple linear mixed-effects models analysis between CRL centile and oocyte age ($p=0.206$).

there was no significant correlation between CRL percentile and oocyte age ($p=0.206$).
A significant inverse correlation was found at multiple linear regression analysis between CRL and maternal BMI ($p=0.0206$; B= -0.655, 95%Cl=-1.193, -0.117).

Conclusions

Our study shows that there is a significant difference between the CRL value of embryos derived from homologous gametes of subfertile couples and those obtained by oocytes/embryo donation from young donors.

In ART pregnancies the CRL median percentile is significantly lower if conceived by homologous oocytes compared with those conceived by oocyte/embryo donation.

The difference in CRL values does not depend on oocyte age, as was initially assumed in our hypothesis. A possible role of subfertile couple conditions on early fetal growth is supposable.

S27 - DILEMMA OF THYROID IN PREGNANCY IN TURKEY: HOW FAKE? HOW REAL?

Esinler D.

Thyroid hormones have unique effects on growth and maturation of thyroid-dependent tissues. They are critical for early fetal brain development, somatic growth and bone maturation.

Fetal thyroid is not functional until 18-20 weeks and maternal T4 is especially important in first half of pregnancy. To meet increased demands of pregnancy there are altered changes in thyroid physiology that are reflected in thyroid function tests.

Iodine requirements increase in pregnancy due to increased hormone production and increased renal clearance. Iodine deficiency is a global health problem. Severe iodine deficiency results in irreversible brain damage in fetus. WHO recommends 250 mcg iodine during pregnancy and lactation. For women in USA ATA recommends 150 mcg daily iodine supplementation to achieve this level. There is growing evidence on effects of mild iodine deficiency on fetal neurocognitive development. Median urinary iodine concentration (UIC) is used to determine iodine status of population. According to 2007 WHO report Turkey is iodine sufficient based on median UIC of school aged children. In 2017 Iodine Global Network data, pregnant women in Turkey are iodine deficient. Randomized controlled studies are needed before routine iodine supplemantation of pregnant women in our country.

Hypothyroidism can have adverse effects on pregnancy outcomes depending on degree of biochemical abnormalities. Overt hyperthyroidism is unusual in pregnancy (%0,3-0,5). It is associated with increased risk of preeclampsia, abrubtion, preterm delivery, cesarean delivery and neurocognitive abnormalities in child. Subclinical hypothyroidism is more common in pregnancy (% 2-2,5). Risk of pregnancy complications are lower. Association of subclinical hypothyroidism in pregnancy and neurocognitive abnormalities is controversial. It is also uncertain if levothyroxine treatment improves perinatal outcomes and neurocognitive development in child.

The universal screening of asymptomatic women for thyroid dysfunction in first trimester is controversial because of insufficient evidence on benefit of treatment.In prospective trials universal screening compared with targeted screening did not improve perinatal outcomes.

Overt hyperthyroidism is uncommon in pregnancy (%0,3-0,4). Graves disease and Hcg mediated hyperthyroism are most common etiologies. Pregnancy complicated by overt hyperthyroidism is associated with increased rates of spontaneous abortion, preeclampsia, stillbirth, preterm labor, low birthweight.

S28 - 3D/4D ULTRASOUND EVALUATION OF ISOLATED FETAL LIMB DEFECTS

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Introduction
Fetal abnormalities that affect isolated limb segments or bones are rare and can be detected only by a thorough ultrasound examination of all four limbs.

For the detection of limb malformations 3D/4D ultrasound offers the ability to assess the fetal limbs in several display modes: multiplanar mode, tomographic ultrasound imaging mode (TUI), surface mode and transparency mode. 4D ultrasound allows spatial visualization of the fetus in real-time. This enables the operator to observe not only the fetal surface but also the skeleton during fetal movements.

Material and Results
Within the past 20 years different limb defects were detected prenatally in 154 fetuses: amelia, phocomelia, ectromelia, peromelia, hemimelia/radial aplasia, apodia, sirenomelia, split hand/split foot, polydactyly, syndactyly, clinodactyly, camptodactyly/overlapping fingers, missing middle phalanx digit V, club foot and isolated joint contractures (AMC).

Comparing 2D and 3D ultrasound results in these 154 fetuses, 3D/4D ultrasound provided diagnostic advantage in 136 of these cases (= 88.3 %). This advantage is due to the fact that the volume with the stored limb segment can be manipulated in all directions which enable an optimal demonstration of the defect.

Summary
3D/4D ultrasound with its different display modes does not only enable a precise demonstration of isolated limb defects of the fetus but can also provide more convincing evidence of normal fetal limb structures than 2D sonograms.

S29 - STANDARDIZATION OF ULTRASOUND USE IN OBSTETRICS IN TURKEY

Avcı E.

Routine ultrasound examination is generally carried out in the 2nd trimester, even though routine scanning is proposed increasingly during the 1st trimester, especially in high-resource society.

The basic aim of an obstetric ultrasound scan is to assure accurate data which will ease the delivery of optimized antenatal care with the best feasible outcomes for mother and fetus. In the 1st trimester, it is crucial to corroborate viability, determine gestational age and the number of fetuses accurately and in the presence of a multiple gestation, define chorionicity and amnionicity. Thereby, standard first trimester ultrasound scan has to provide these data.

The ultrasound examination can also provide a possibility to discover gross fetal anomalies and, in health systems that suggest first-trimester aneuploidy screening, measure the nuchal translucency thickness (NT), towards the end of the first trimester

Three important targets while scanning twins at 10-14 weeks are: 1. Dating; in pregnancies conceived spontaneously, the larger of the two CRLs should be used to determine gestational age. 2. Labeling; Site (left/right, upper/lower), Cord insertion relative to the placental edges and 3. Chorionicity; Membrane thickness at the site of insertion of the amniotic membrane into the placenta (Lambda vs. T-sign)

Routine Mid-trimester Fetal Ultrasound Scan
The basic aim of an obstetric standard mid-trimester ultrasound scan is to supply accurate diagnostic data for the delivery of optimized antenatal care with the best possible outcomes for mother and fetus. The method is used to determine gestational age and fetal measurements for the timely detection of growth abnormalities later in pregnancy. Further aims are to catch congenital anomalies and multiple pregnancies. Notwithstanding many anomalies can be detected, it is accepted that some may be missed, even with sonographic equipment in the best of hands, or that they may develop later in pregnancy.

The two overview and twenty planes approach was proposed to provide minimum requirements for a basic fetal anatomical survey. A logical and time efficient examination of the whole fetus can be done by this method and standardisation strengthens the physcians' confidence. On the other hand, examining the fetus precisely is more important than the sequence in which it is evaluated. The role of standard mid trimester ultrasonographic examination is to differentiate between the range of normal and abnormal fetus.

Ventricular Septal Defect (VSD)
VSD is an opening in the ventricular septum, giving rise to a hemodynamic communication between the left and right ventricles. VSDs are common congenital heart diseases. Isolated VSDs account for 30% of children born with congenital heart defects and are associated with other cardiac anomalies approximately 30% of cases. Postnatal echocardiographic assessment reports the prevalence of VSD to be as high as 50 per 1,000 live births.

In general, VSDs are classified according to their anatomic pozitions on the septum. Four anatomic types of VSDs are found: inlet, outlet, perimembranous, and muscular. Perimembranous VSDs are the most

common in neonatal series, whereas muscular VSDs are most common in prenatal series.

A large perimembranous VSD extending to the outlet septum and associated with malposition of great vessels (Fallot, DORV) is frequently referred to as a malalignment VSD. Malalignment VSD is actually not a VSD, it is a conotruncal malformation

Visualisation of the interventricular septum; The interventricular septum is examined during the routine visualization of the 4- and 5- chamber views. Nevertheless, a realiable appraisal is obtained by a perpendicular insonation of the septum.

Inlet VSD is displayed in the 4 chamber view. The communication is situated below the level of atrioventricular valves. It may be an isolated finding but part of an AV septal defect or other large defects related with ventricular or outflow tract abnormalities.

Muscular VSD can be displayed in the 4- or 5 chamber plane. Only large defects (>2mm) are seen on gray scale as most are very small and only showed with color Doppler. A usual localization is the apical region near the moderator band attachment. Muscular VSDs are best displayed with color Doppler
Perimembranous VSD can be displayed in the five chamber view and the defect is found just below the aortic valve annulus. They shoud be verified by the color Doppler

Relevant cardiac anomalies are frequent and are usually diagnosed before the diagnosis of the VSD. When a seemingly isolated large (>2mm) VSD is discerned in midgestation, careful solicitude should be given to the outflow tracts given a high association of VSD with conotruncal anomalies.
VSDs are frequently associated with miscellaneous cardiac abnormalities, as they are compulsory in some and rarely or frequently found in others. Furthermore, VSD can also occur with almost all syndromes. The presence of other signs can lead to the underlying syndrome. Typically it is present in Tr 21,18 & 13 & rarely in Di George Syndrome & others. Inlet and perimembranous VSDs are the types more commonly found in Tr21 & other syndromes. Muscular VSD are generally isolated accidental findings, however in the presence of additional extracardiac findings the risk for a syndrome increases.
The long-term outcome of fetuses with VSD depens on the size and location of the defect and the associated cardiac and extracardiac anomalies

S30 - FETAL INFECTION: A SCREENING DİLEMMA

Yapar Eyi E.G.

In pregnancy, infection, invasion and multiplying of microorganisms in the body is a common complication as the women may be more susceptible to the effects of infection due to the natural suppression of the humoral and especially T-mediated immune system. Epidemiological reports estimate that 7.7 million perinatal deaths occur annually worldwide, including 4.3 million that take place after 28 weeks of gestation, while the remaining in the first weeks of neonatal life. Though vaccination programmes have reduced the number of congenital rubella and hepatitis B and varicella, fetal infections are still well-described causes of stillbirths and major disabilities and may account for up to half of all perinatal deaths globally.

An infectious disease may be caused by the viruses, bacteria, parasites, chlamydia, fungi and rickettsiae. Certain infections may cause problems for the developing fetus and may endanger the health of the mother. The "TORCH" acrony typically included TOxoplasmosis, rubella, cytomegalovirus (CMV), herpes simplex viruses type 1 and 2 when it was first suggested in 1971. Traditionally these agents have been reported to have common characteristics, including causing an unrecognized illness in infected mother, vertical transmission to the fetus, developing several disruptive insult during early pregnancy leading to abnormal development of a fetal organ that had the potential for normal development in the affected fetus, and in some instances maternal therapy may not ameliorate fetal prognosis. However the letter "O" in "TO"changed to "others" because various infectious agents were detected to cause severe congenital fetal anomalies, with the most important being treponema pallidum. Hepatitis B virus, hepatitis C virus, human immunodeficiency virus and other viruses, including varicella, parvovirus B19 and the emerging agent Zika virus were also added to the "others". Many infections have been linked to preterm delivery and low birth weight and associated immediate morbidity of both the mother and the fetus.

In most antenatal care programmes, women are offered routine screening for asymptomatic bacteriuria syphilis, hepatitis B and HIV, whereas those are not offered routine screening for bacterial vaginosis, CMV and hepatitis C virus and group B streptococcus: because there is insufficient evidence to support their clinical values and cost effectiveness. Though a nationally mandated screening and treatment program has been reported to decrease the rates and severity of CMV and toxoplasma related congenital infections in some countries such as France, Italy, Austria, "no congenital infection screening strategy for CMV and toxoplasmosis "have been carried out in the low risk antenatal care protocol in other countries as the risks of screening may outweigh the potential benefits. For those, screening in neonatal period may be necessary especially for CMV infection, resulting in a broad range of disabilities, including sensorineural hearing loss, visual impairment and motor and cognitive defects, in addition to hepatosplenomegaly, thrombocytopenia, jaundice, and even fetal aortic arch thrombosis. In order to solve the dilemma of screening for fetal infections, perinatal health reporting is a realistic goal. Morbidity registries for monitoring child health information as well as of data collected in neonatal intensive care units should be highlighted.

S31 - WHAT IS GENETIC COUNSELING AND BY WHOM?

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Genetic counseling can be described as the process of collecting the medical history and information pertinent to an individual's current or future genetic disease risk, informing the persons and their families regarding their risks, assisting and guiding them for appropriate genetic test selection and for possible risk reducing steps.

Risk of having a genetic disease or being a carrier can usually be calculated in many known monogenic conditions. Sometimes, a hereditary pattern may be difficult to recognize from a family history (pedigree) due to small family size, adoptions, environmental factors, incomplete penetrance and preventive strategies used in other family members (i.e. mastectomy in BRCA mutations, colonoscopy).

Referral to a genetic counselor or to a clinical geneticist is utilized by almost all clinical fields of medicine. The majority of referrals are from pediatrics, oncology, cardiology and obstetrics services. With continuously advancing technology in genetics and ever-increasing number of available tests, interpreting and counseling for the obtained genomic data per individual becomes more and more challenging. Accomplishing this in an even more limited time is another problem in pregnant cases and for their fetuses. In this respect, it is becoming extremely difficult to stay up to date and informed for an already busy clinician. Genetic counseling emerges as a separate expertise at this point; it is a strong need if not an obligation in many centers.

In obstetrics, genetic counseling comes with additional characteristics in terms of time limit and/or advantages of fetal imaging techniques. Other than routine antenatal screening for aneuploidies, familial hereditary conditions and certain findings on fetal ultrasonography may prompt a referral for a genetic consultation. Primary care physician, obstetrician, maternal –fetal medicine specialist, clinical geneticist and genetic counselor, all may be a part of the prenatal care team depending on the expected severity of the condition. Also, artificial intelligence-based programs are already taking their place in genetic counseling in this ever expanding genomic and genetic data flood.

S32 - PREMATURE PLACENTAL AGING AND PERINATAL OUTCOMES

Huertas E.

Placental aging is a physiological phenomenon. The placenta ages as the pregnancy progresses. However, there are placentas that show signs of aging earlier than others. What are the consequences of early placental aging?

To answer this question, we reviewed one of the first papers on placental maturation, wrote by Dr. Granumm in 1979 who proposed a practical classification of placental maturity based on its ultrasound appearance, with the aim of correlating it with pulmonary maturity. Today it is known that the degree of placental maturity does not correlate with pulmonary maturity but also that not all placentas at the end have to be mature because only around 18% of the placentas between 37 and 40 weeks are grade 3 (mature) . Most importantly, we realized that we can find mature placentas before 36 weeks and if it is between 28 and 32 weeks it is associated with adverse perinatal outcomes such as preterm birth, low birth weight, low Apgar score and neonatal death. For this reason, we propose a new classification of placental maturity in only two groups: immature and mature. If we find a mature placenta between 28 and 34 weeks, it should be evaluated by Doppler ultrasound every 2 weeks and culmination of pregnancy must be indicated between 37 and 38 weeks to avoid adverse outcomes. The delivery route will be according to obstetric indication. We should not ignore or minimize the finding of preterm placental aging but neither scare the patient or indicate caesarean section before term.

S33 - EUROPEAN CONSENSUS GUIDELINES ON THE MANAGEMENT OF RESPIRATORY DISTRESS SYNDROME – 2019 UPDATE

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As management of respiratory distress syndrome (RDS) advances, clinicians must continually revise their current practice. We report the fourth update of "European Guidelines for the Management of RDS" by a European panel of experienced neonatologists and an expert perinatal obstetrician based on available literature up to the end of 2018.

Since 2006, a panel of neonatologists from many European countries have met 3-yearly to review the most recent literature and develop consensus recommendations for optimal management of preterm babies.

The Guidelines have been translated into several languages including Chinese, and although primarily intended for use in Europe, they contain recommendations that potentially could be used anywhere provided clinicians have access to all the resources and experience needed to provide modern neonatal intensive care.

Respiratory distress syndrome (RDS) remains a significant problem for preterm babies.Although primarily a disorder of surfactant deficiency resulting in pulmonary insufficiency from soon after birth, the classical clinical description of RDS has changed as treatments have evolved over the years. Radiographic appearances of "ground glass with air bronchograms" are rarely seen today due to early surfactant therapy and early continuous positive airway pressure (CPAP).

Of the 8,156 babies from Europe for whom data were submitted to the Vermont Oxford Network during 2017, RDS was coded for about 80% of babies born at 28 weeks' gestation increasing to 90% at 24 weeks' gestation . Surfactant was given to 55% of very low birth weight (VLBW) infants, 27% in the delivery room and 29% beyond 2 h of age, suggesting that prophylactic surfactant is still being used. Chronic lung disease (or BPD) was coded for 18% of VLBW infants in Europe.

Although management has evolved over the years resulting in improved survival for the smallest infants, respiratory morbidity is still high.

The recommendations are classified according to the GRADE system to reflect the authors' views on the strength of evidence supporting each of the recommendations
The 2019 Guideline is divided into the following broad areas: Prenatal care,oxygen use,non-Invasive support,mechanical ventilation,surfactant replacement,general supportive Care.

S34 - THE CRUX OF PREMATURITY PREVENTION

Saling E.

Prematurity is still a major global health and financial problem, not only in the field of obstetrics and perinatal medicine, but also for the society as a whole. About 15 million babies are born preterm worldwide each year – that is more than 10 % of all newborns. Globally, prematurity is the leading cause of death in children under the age of 5 years. Every year, about 1 million children die due to complications of preterm births.

Recently, progress has been made in this area mainly by progesterone therapy for particular indications. However, according to the World Health Organization, in almost all countries with reliable data, preterm birth rates are increasing.

The first mechanism of disease responsible for preterm labor and delivery for which a causal link was well-established is ascending infection. Infections are responsible for at least up to 40 % of preterm births, particularly in the industrialized countries. Unfortunately, not enough attention is paid to infections as a cause of preterm births on a broad scale, which is a regrettable problem. Since about half of all preterm births happen in women without evident risk factors, and more than 50 % of the women concerned do not encounter any symptoms, systematic screening for vaginal infections and alteration in the vaginal microbiota in pregnancy is important from our point of view. This is done best, when all pregnant women themselves practice self-care by measuring their vaginal pH twice a week. We are aware, that more research needs to be done in this area. However, it would be inappropriate to neglect the already existing observational studies with their partially considerable positive results, only because they have not yet been proven by randomized trials. We also wonder why those who insist on randomized trials do not make efforts to perform them themselves.

Another crux of prematurity prevention concerns cases of recurrent late abortion and early prematurity. The most efficient measure from our point of view for preventing ascending infections, is to perform an Early Total Cervix Occlusion (ETCO). This is a minor surgical procedure, done at about 12 gestational weeks, which creates a total barrier within the cervical canal. Unfortunately, ETCO is sometimes confused with cerclage. This happened even in the current German guideline on premature births!

The principle difference between cerclage and ETCO is, that the cerclage only tightens the cervical canal, and so hardly can prevent ascending infections convincingly. In contrast, the ETCO completely closes the cervical canal, thus reliably preventing ascension of any microorganisms.

ETCO is now widespread in German speaking countries, and has good success rates. For unknown reasons, it is still rarely performed abroad, where for the same indication usually the cerclage is common.
ETCO also has been shown to be efficient in reducing prematurity rates in multiple pregnancies, even when there were no additional risk factors.The general scientific situation on an international level is rather curious here, because there are no rational reasons for ignoring ETCO. It seems that medicine is sometimes more exposed to fashion trends than to objective science.

S35 - REDUCING NEONATAL MORTALITY: TURKISH EXPERIENCE

Koç E.

Neonatal mortality is an important public health issue showing the developmental status of a country. Major factors playing role in decrease of neonatal mortality are; perinatal and neonatal health policies, increased widespread of health services, usage of health services more effectively, increased number of antenatal visits and increased health attended birth.
The neonatal period is the most vulnerable time for a child. Among children under 5 year of age, .47% of deaths were newborns in 2017 (WHO). Globally, 2.5 million children died in the first month of life in 2017.
Turkey is an upper-middle-income country of 82.8 million people in 81 provinces, at different stages of socioeconomic development and it is like a bridge between Asia and Europe. Turkey has undergone rapid economic growth in the last decade, and although socioeconomic differences exist within the country it has the demographic benefit of a young and growing population. Infant mortality is about 9.1 per 1000 live births and neonatal mortality is 5.8 per 1000 live births (2017).

Basic programs implented for reducing maternal and newborn mortality in Turkey are;

1. Centralisation
2. Organisation
3. Education
4. Staffing
5. Equipment/drugs

For centralisation, 29 health regions were established in 2009. Perinatal centers including level III NICUs and the other disciplines were planned for every region. For neonatal transport, there are a total of 2735 stations in Turkey. Education of mothers on the basic issues related to babies were provided by the "Conscious Mother, Healthy Baby Programme". Breastfeeding was encouraged by establishing 'baby friendly hospitals'. Currently, all hospitals where deliveries are made have staff who attended Neonatal Resuscitaton Program'. The number of NICU beds has reached to almost 12 thousand, 8000 of them are level III NICU beds.
Turkish Neonatal Society also aims to increase the knowledge and experience of health professionals and to ensure that the health services offered to newborn babies in our country are of standard and high quality. The newborn mortality rate in Turkey could decrease further with attention to the major causes of infant death, which are largely preventable.

S36 - CFDNA AND OTHERS: WHICH MODEL FOR TURKEY?

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Prenatal screening for trisomy 21 (Down syndrome), trisomy 18, trisomy 13, and sex chromosome aneuploidies can be performed using next-generation sequencing of cell-free DNA (cfDNA) in the maternal circulation. Circulating cfDNA is derived from both the mother and the fetal-placenta unit.
The advantages of this test include simplicity of the screening process (blood sampling in the patient) and the high test quality when screening for trisomy 21, 18, and 13 (detection rate about 99%; false positive rate <0.1%). The detection rate for Turner syndrome and other gonosomal aneuploidies is about 96–100% for a false positive rate of 0.003–0.14%.For the sex chromosome trisomies 47,XXX; 47,XXY; and 47,XYY the DR and FPR were 93.0 and 0.14 percent, respectively.Use of cfDNA screening in twin pregnancies is controversial because of limited data on test performance. Many of the commercial test offerings cannot identify twin pregnancies, or can only identify dizygotic twins cfDNA is still considered a screening test due to infrequent false-positive and false-negative results. An invasive procedure (eg, amniocentesis or chorionic villus sampling) and subsequent karyotyping is considered the gold standard diagnostic test .A wide range of cfDNA failure rates have been reported (0 to 10 percent or more, with a consensus estimate of approximately 2.0 percent)

The most common reasons for test failure include less than a specified absolute amount of total and/or fetal/placental DNA, fetal fraction below an acceptable level (eg, <4 percent), and insufficient numbers of fragments sequenced and/or aligned. Another reason for a test failure, depending on the laboratory method used, is long stretches of homozygosity (fragments in which identical gene sequences are discovered originating from the maternally and paternally derived chromosomes). Examples include uniparental disomy (inheritance of both chromosomes from one parent) or parental consanguinity. Even if all quality control parameters are met, some laboratories identify results as "borderline" and will not make a positive or negative screening call. In such instances, a "borderline" test should be considered a screen positive and not a test failure.

First trimester fetal evaluation is not just a screen for the common trisomies.Rather, it is just one portion of a fetal assessment for chromosomal abnormalities overall, fetal structural anomalies, and genetic as well as non-genetic syndromes.The performance of cfDNA in screening for certain types of aneuploidy is better than any other currently available test, it still has some significant limitations such as a limited scope, high costs, and a relatively high test failure rate. Therefore, the best result can be achieved if these screening tests are combined. For now, the best approach appears to be a contingent type of screening policy where combined screening is done as the first step. This is followed by the cfDNA analysis in those women with a borderline risk result based on the initial screen.

S37 - CHANGES IN THE TREND OF C-SECTIONS IN 20 YEARS?

Fındık F.M.

C-section is a surgical intervention to prevent or treat life threatening maternal or perinatal complications. The origin of c-sections and when it was first applied is not exactly known. It is known to be in both eastern and western cultures. In ancient times, however, it is known that c-sections was to take the baby from a dead or dying mother for various reasons. Application to save the life of the mother goes back to 19th century.

Although cesarean rates vary between 0.4-40% among countries in the world, it has been observed that rates have increased gradually in the last 30 years.

Since 1985, WHO has predicted an ideal cesarean rate of 10-15%. In cases where c-section is not necessary, there is no evidence showing the benefits of cesarean to a mother or a child. As in with any surgeries, c-sections has short and long term risks, and it has ongoing health effects for the mother, child and future pregnancies after the delivery.

What Was The Situation In The World?
In 1900, the average c-section worldwide was 6.7%. The lowest rate was in Africa with 2.9% and in Asia with 4.4%. The highest rate was in Latin America with 22.8%. In 2014, the average c-section in the world increased to 19.1%. When the continents were examined, Africa had the lowest rate with 7.4% and Latin America had the highest rate with 42.2%.

While c-section rate was 22.7% in the USA in 2000, it went up to 32% in 2015. It is noteworthy that in the mid-1990s, with the increase in normal vaginal delivery after c-section rates, cesarean rates decreased slightly.

At the same period, the mean c-section was 19.1% in European countries according to WHO data. In 2001, Italy had the highest cesarean rate with 35.3%, followed by Malta with 23.5% and Spain with 22.4%. Turkey did not have relevant data during this period.

In the latest data for 2014, the average c-section in Europe was 26.8%. The highest rate was in Turkey with 50.8%. This is followed by Bulgaria, Hungary and Italy.

What Is The Situation In Turkey?
In Turkey cesarean rate is increased from 7% to 48% between 1993 and 2004. In 2016, this ratio was 53.1%.
According to a study conducted by Suleyman Demirel University previous c-sections, fetal distress and maternal desire were the main 3 reason for c-section. Meanwhile in Erzurum, the first three reasons were previous c-section, breech presentation and fetal distress.
According to a study conducted by our clinic between 1983-2002, most common indications were previous c-sections (25.7%), fetal distress (14.3%). During this period, the cesarean rate was 31.5%.
While our cesarean rate was 78.4% in 2018, the most frequent indication was previous c-sections with 63.2% and p. Previa (5.9%), preeklampsia and severe preeklampsia (5.3%).
Why not deliver all the babies by c-section.

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S38 - PHYSICIANS AS TARGETS: COPING WITH LITIGATION AND VIOLENCE

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This presentation identifies ethical challenges of targeting physicians with litigation and violence and proposes professionally responsible responses. This approach is based on professional ethics in obstetrics and gynecology, which was introduced into the history of medical ethics in the eighteenth century. Professional ethics in medicine has two key components, based on the ethical principles of beneficence and justice. First, every obstetrician-gynecologist has the professional responsibility to adhere to processes designed to ensure patient safety and quality of care. Second, every leader in obstetrics and gynecology has the professional responsibility to create an organizational culture of professionalism that provides oversight of processes of patient safety and quality of care. These two components support the introduction of an organizational culture committed to patient safety as the professionally responsible means to reduce the risk of professional liability. FIGO has recently addressed criminalization of professional liability. The ethical principle of justice precludes criminal proceedings or threats of criminal proceedings when there is no prima facie evidence that the criteria for a crime have been met. The ethical principle of justice also precludes issue of an arrest warrant, arrest itself, or confiscation of travel documents, when there is no prima facie evidence that the criteria for a crime have been met. On the basis of these two ethical considerations FIGO has made recommendations. Obstetrician-gynecologists should commit to patient safety and quality. On this basis, obstetrician-gynecologists should advocate for reform of criminal law: to prevent prosecutorial abuses; to mandate pretrial review; to prohibit arrest warrants, confiscation of documents, etc., in absence of evidence; and to support civil proceedings in response to groundless criminal and civil accusations. The response threats of violence and violence itself should be guided by the professional virtue of courage, which calls for obstetrician-gynecologists to stand their ground but not do so recklessly. To implement the professional virtue of courage this presentation offers recommendations about risk of violence against physicians who provide termination of pregnancy, threats of violence against physicians' families, and limits on placing physicians in conflict areas. The FIGO statement recommendations on professionally responsible management of threats of violence are reviewed.

S39 - CLINICAL IMPLICATIONS OF THE ETHICAL CONCEPT OF THE FETUS AS A PATIENT

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This presentation explains the ethical concept of the fetus as a patient and its clinical implications. This concept is an essential component of professional ethics in obstetrics and gynecology, which is based on the ethical concept of medicine as a profession. A human being becomes a patient when that individual is presented to a physician and there exist forms of clinical management that are reliably predicted to result in net clinical benefit for that individual. The capacity to consent is not part of this concept and is therefore not required in order for an individual to become a patient. The viable fetus is a patient when a pregnant woman presents to a physician or other healthcare professional. Viability is a function of both the developmental stage of the fetus and obstetric and neonatal clinical management, including neonatal intensive care. The previable fetus is a patient when the pregnant woman confers this moral status on her fetus(es). When evidence of fetal and neonatal benefit is clear, the obstetrician should recommend clinical management for which there is an evidence base of fetal or neonatal benefit. This is known as directive counseling. When the evidence is unclear, the medically reasonable alternatives should be presented to the pregnant woman and she should be supported in evaluating them and deciding on a course of clinical management. This is known as shared decision making. The roles of directive counseling and shared decision making in the informed consent process for cesarean delivery are explained. A general clinical implication follows: clinical judgment about cesarean delivery should not be binomial. The obstetrician should base clinical judgment and decision making with pregnant patients on the continuum of very strong indications for cesarean, very weak indications for cesarean delivery, and disputed indications for cesarean delivery.

S40 - PLANNED HOME BIRTH IN THE U.S. IS UNSAFE

Chervenak F.A., McCullough L.B., Grunebaum A., Brent R.L. Levene M.I., Arabin B.

Recently, the number of planned home births in the United States had been increasing. Currently, the rate has plateaued. In the U.S. planned home birth occurs a woman's home in the community. Births in birthing centers attached to a hospital do not count as planned home births. We present evidence from the largest, most reliable dataset of births in the U.S. These data show that there is an increased absolute and relative risk of perinatal mortality and serious morbidity from planned home birth when compared to planned hospital birth attended by a nurse-midwife. We assess this increased risk on the basis of the professional responsibility model of perinatal medicine. This model requires that ethical obligations to the pregnant, fetal, and neonatal patient be identified. When increased absolute and relative risk of childbirth can be reduced consistent with these ethical obligations, it becomes ethically obligatory to do so. In response to women who express an interest in planned home birth, obstetricians should implement this ethical obligation by explaining the increased absolute and relative risks of perinatal mortality and serious morbidity, explaining that these risks cannot be eliminated because the transportation time to the hospital cannot be eliminated, recommending against planned home birth, and recommending planned hospital birth. Obstetricians have the professional responsibility to improve the safety of planned hospital birth and avoid unnecessary procedures. Obstetricians also have the professional responsibility to create as homelike a patient experience in the hospital as practicable.

S41 - ANTIMICROBIAL STEWARDSHIP IN THE NICU

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Antimicrobials are the most commonly prescribed drugs in the Neonatal Intensive Care Unit (NICU) but are quite often used inappropriately with various short and long-term side-effects. Antimicrobial Stewardship (AMS) includes all the coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration. AMS aims to achieve optimal clinical outcomes related to antimicrobial use, minimize toxicity and other adverse events, reduce the costs of health care for infections, and limit the selection for antimicrobial resistant strains.

The various strategies for the AMS that have been used in NICUs are:

1. Persuasive (prescriber audit with intervention and feedback).
2. Restrictive (formulary restriction and preauthorization, guidelines, policies).
3. Structural (rapid diagnostic tests for inflammatory markers or identification of infectious diseases agents, discussion with infectious diseases physician).

Specific interventions may lead to more rational use of antimicrobials in NICUs such as the following:
1. Diagnosis of neonatal sepsis using biomarkers (CRP, procalcitonin) and optimising the blood volume collected for blood cultures. The probability of isolation of a pathogen increases as the blood volume increases (1-2 ml).
2. Choice of empirical antimicrobial treatment which should be based on the epidemiological and microbiological data of each NICU. At both local and national level continuous epidemiological surveillance of responsible pathogens and their antimicrobial resistant patterns are of paramount importance.
3. Reassessment of the initial antimicrobial treatment when culture results are available and de-escalation to narrow spectrum and less toxic antimicrobials is strongly recommended
4. Dosage and monitoring of antimicrobial levels: Due to the particularities of pharmacokinetics and toxicity of gentamicin, including reduced renal function and longer half-lives, it is necessary to administer higher doses at longer intervals to achieve similar levels with older children. Monitoring of therapeutic levels of gentamicin and vancomycin is necessary. In addition, evidence is emerging in both children and neonates that vancomycin can be infused continuously to obtain therapeutic levels while maintaining patient safety. Continuous infusion is associated with faster time to achieve target drug concentrations, lower daily dose and reduced therapy costs than intermittent dose. Loading dose appears also to be associated with better outcomes. With regards to carbapenems, extended infusion of meropenem for resistant GNs has the potential for improved efficacy and safety of eradicating infections and improving clinical outcomes due to optimal Pharmacokinetics/ Pharmacodynamics (PK/PD). However, moving to continuous infusions may not yet be appropriate and generalized, as continuous infusions have been associated with lower CSF concentrations for the same total daily dose.
7. Development of AMS teams consisting of infectious diseases specialists, microbiologists, pharmacists, infection control nurses and representatives of the NICUs.
8. Continuous evaluate of antimicrobial stewardship interventions in order to ensure their uneventful and sustained application.
In conclusion, judicious use of antimicrobials in NICUs is vital for the protection of this vulnerable population. AMS in NICUs has unique challenges and various AMS strategies can be adopted with favourable outcomes.

S42 - MANAGEMENT OF THE IUGR FETUS

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The fetal growth depends on several factors, which can be divided into maternal, placental and fetal. It is of paramount importance to identify the growth restricted fetus. Following the introduction of ultrasound in clinical practice it became possible to accurately estimate the fetal weight, which after the gestational age, is the most important factor that influences the perinatal outcome. Although several definitions have been used, the most common definition of IUGR refers to a weight below the 10th centile for the gestational age. Approximately 8% of pregnancies are classified as IUGR based on fetal biometry which is compared to the expected curves of growth. Following the identification of a growth restricted fetus the challenge to the clinician is to look for any underlying cause for this complication and to follow-up the fetus appropriately. Moreover, to deliver the fetus early enough so as to minimize the consequences from the prematurity and not too late to avoid a permanent damage to the fetus from intrauterine hypoxemia. Following the diagnosis of fetal growth restriction a detailed anatomic fetal survey is essential as approximately 10% of growth restricted fetuses have congenital abnormalities.

Serial ultrasound scans initially at two-week intervals and as pregnancy advances even more frequently, are necessary in order to monitor fetal growth. Moreover fetal biophysical profile and amniotic fluid volume assessment are needed. Several studies have shown that there is a relationship between fetal hypoxemia and decreased fetal biophysical parameters. Umbilical artery Doppler is the most important arterial fetal Doppler for the discrimination and the management of the growth restricted fetus. Normal umbilical artery Doppler is reassuring; while absent or reverse end diastolic flow indicate close fetal assessment and delivery. Middle cerebral artery Doppler velocimetry can help us to detect the well-known "brain sparing" effect where there is redistribution of the fetal blood to the brain so as to prevent the fetal brain from hypoxia. Cardiotocography (CTG) is also used for the management of such cases as reduced variability or unprovoked decelerations are associated with increased perinatal mortality and morbidity. Abnormal pulsations in the ductus venosus indicate imminent delivery while umbilical vein pulsations are a poor prognostic sign related to chronic intra-uterine hypoxemia. The first parameters that become abnormal in a growth restricted fetus are the amniotic fluid and the umbilical artery Doppler, followed by the middle cerebral artery and finally by changes in the venous Doppler simultaneously with abnormal CTG tracings. According to Baschat et al when a fetus develops intrauterine growth restriction before the 33th week of gestation, gestational age was the most significant determinant for total survival. If the Doppler assessment of the umbilical artery reveals a reverse or absent end-diastolic flow before the 32nd week of gestation, delivery should be planned when the DV Doppler becomes abnormal, when pulsations are present in Umbilical Vein, or if the fetus reaches the 30-32th week. For term SGA fetuses presenting abnormal MCA Doppler assessment, delivery should be planned not later than the 37th week of gestation.

S43 - BENEFITS AND CRITICISMS OF CELL-FREE DNA ANALYSIS FOR ANEUPLOIDIES

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Cell-free fetal DNA analysis is currently one of the most convincing prenatal screening tests for Trisomy 21, Trisomy 18 and Trisomy 13. Its detection rate of sensibility for aneuploidies is 99%, 96% and 90% respectively.

This screening test is superior to the traditional combined test using Ultrasound Fetal Nuchal Translucency (NT) measurement and Biochemistry dosages of PAPP-A and free-Beta, with a detection rate of aneuploidies about 95%.

The commercial pressure of companies has influenced notably the worldwide diffusion of cell-free fetal DNA testing, especially in private medical centers and where performing invasive prenatal procedures such as Chorionic Villous Sampling is not available.

The advantage of this screening is the high sensibility rate but only for Trisomy 21 and sex aneuploidies. The disadvantage is that the outcome and the follow-up are performed by the companies and that it is not well applied on women with obesity, in cases of vanishing twin, in the cases when the fetal fraction of DNA is lower than 4 mg, in cases of maternal chromosomal abnormalities and in the presence of placenta and fetal mosaicism. It is also important to underline that no result is provided following the test in 2-5%. Another important disadvantage of this is that most women do this screening without pre- and post-councelling and they think that it is just another simple blood sampling; if the screening results are reassuring they feel altogether safe about the pregnancy and that the fetus is completely healthy.

Other controversial aspects are the screening in multiples, cases of maternal tumor as well as the economic burden of the cost. One other critical issue of cell-free DNA testing is that it is not as informative as the combined screening which offers further information regarding other fetal abnormalities in 40% of pregnancies, such as cardiac, scheletal, genetic and many others.

The un-controlled diffusion of the cell-free DNA test is beginning to raise many controversial issues in maternal-fetal and perinatal centres as well as in pregnant women.

S44 - CVS OR AMNIO IN THE ERA OF NIPT

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In the modern era of prenatal screening tests for aneuploidies the use of combined test - Ultrasound Fetal Nuchal Translucency measurement and Biochemistry and the more recent Non Invasive Prenatal Test (NIPT) or cell-free fetal DNA in maternal blood - has determined a decrease of invasive prenatal procedures such as Chorionic Villous Sampling (CVS) usually performed at 11 weeks and Amniocentesis at 16 weeks.

This is mostly due to the fact that pregnant women feel reassured by the result from the prenatal screening test and therefore opt for non-invasive testing. Other causes are the notable commercial pressure exerted by the companies who offer these tests as well as the fact that not all obstetricians are able to perform invasive diagnostic testing and, above all, CVS.

Currently, there is an inversion of the percentage of the pregnant women who prefer CVS rather than Amniocentesis because, as patients at a higher risk for aneuploidies after fetal screening, they opt for diagnosis as early as possible. Also, at present 1st trimester detailed anatomy ultrasound screening allows us to identify more than 40% of fetal malformations and therefore there are indications for studying the fetal karyotype by CVS using also microarray analysis.

This study analyzes the tendency of CVS increase and amniocentesis decline in Microcitemico Hospital, Cagliari, Italy in the last decade (Fig. 1). While in 2010 the percentage of Transabdominal (TA) CVS was 32,3% of all invasive prenatal diagnostic procedures and Amniocentesis was 67,7%, in 2018 the percentages were 61,3% for TA-CVS and 38,7% for Amniocentesis, respectively (Fig. 2). Our results show an increasing prevalence of TA-CVS for early diagnostic testing and underline the importance of continuous training of specialists skilled in CVS.

S45 - WHY DO WE STILL DO A TRAINING COURSE ON POSTPARTUM BLEEDING?

Goynumer G.

One of the targets of the Millennium Development Goal 5 is to reduce the maternal mortality ratio by three quarters between 1990 and 2015. Despite proven interventions that could prevent disability or death during pregnancy and childbirth, maternal mortality remains a major burden in world. In worldwide as a whole the maternal mortality ratio dropped by 44 per cent between 1990 and 2015 (from 385 to 290 maternal deaths per 100,000 live births). The Millennium Development Goal target, however, is still far off. If we would like to mention our country, the Millennium Development Goal 5 is achieved. Because the maternal mortality ratio dropped by 83.5 per cent between 1990 and 2015.

Post-partum hemorrhage (PPH) affects approximately 2% of all women who give birth and is associated with nearly one quarter of all maternal deaths globally. PPH is the leading cause of maternal mortality in most low-income countries. While PPH mortality is dramatically lower in developed countries, maternal hemorrhage causes significant morbidity including shock, adult respiratory distress syndrome, coagulopathy, pituitary necrosis, need for blood transfusions, operative management, and, in extreme cases, hysterectomy and loss of fertility.

Ninety-three percent of PPH-related deaths are reportedly avoidable through improved teamwork, communication, and proper use of sufficient medical and surgical treatments. Different obstacles to the delivery of high quality PPH-care were identified by both patients and professionals. These obstacles are lack of clarity of the guideline, lack of knowledges, failing team-communication and lack of information given by the professionals to the patients. Improving PPH recognition and response times along with improved team communication may significantly improve patient outcomes and decrease maternal mortality. Through simulation, health care teams can practice essential communication and technical skills.

Skill degradation is a phenomenon of skill loss that affects learners of all skill levels and age. Risk factors for degradation include increased latency of acquisition between a new skill and implementation into practice and frequency of implementation.

We still do a training course on postpartum bleeding due to improving fight against PPH and skill degradation. By training course on PPH, most PPH-associated deaths could be avoided.

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S46 - PERINATAL ULTRASONOGRAPHY AND CONGENITAL ANOMALIES: OUTCOME MEASURES FOR TURKEY?

Erenel H.

Fetal and infant health outcomes are important measures of the overall health of a population and of the quality of health care providers. Congenital anomalies are very commonly diagnosed through antenatal screening programmes. For some anomalies, antenatal diagnosis leads to better preparation of families and health services for an affected baby and can improve the care provided. For other anomalies, antenatal diagnosis is commonly followed by the option of termination of pregnancy for fetal anomaly. Fetal structural anomalies are seen approximately in 3–5% of all pregnancies. In a retrospective study, congenital anomaly was found in 57 of 12,352 (0.46%) cases who underwent fetal anomaly screening during NT measurement at 11–14 weeks of gestation. Most common anomaly was anencephaly (14 cases) followed by cystic hygroma (7 cases), spina bifida (6 cases) and omphalocele (5 cases) (1). In another study, 1290 low risk pregnant women were examined during 11- to 14-week routine scan with either transabdominal ultrasound or transvaginal ultrasound. Congenital anomaly was found in 24 of 1290 (1.86%) cases. Most common anomaly was anencephaly (14 cases) followed by spina bifida (2 cases) (2). Thanks to technological developments in the last ten years, cardiac anomalies can be detected much earlier than before. In a tertiary care center and perinatology department, 692 first trimester examinations were made in low risk pregnant women at at 12-14 weeks of gestation. Cardiac pathology was observed 6 (2 cases of AVSD, aort hypoplasia, left ventrcle hypoplasia, transposition of great arteries, Tetralogy of Fallot with absent pulmonary valve syndrome) of 692 cases (0.8%) (3). In another study among 17259 fetuses, congenital anomaly was observed in 203 fetuses (1.18%). The most common anomaly was meningocele, followed by other central nervous system malformations like anencephaly and hydrocephaly (4). In another study, congenital anomalies were screened retrospectively between 2009 and 2012 in a tertiary care center in The Southeastern Anatolia Region. There were 485 cases with congenital anomaly among 8286 deliveries and terminations. Incidence of congenital anomaly was 5.85% (5). In terms of single system anomaly, the most common anomaly was CNS anomalies and the most common sub-type was anencephaly. The congenital anomaly incidence both in the world and Turkey may vary depending on the races, geographical regions, socioeconomic level, environmental factors, and dietary habits. Our national data showed that the central nervous system anomalies are the common group however cardiac anomalies are the most common anomaly type worldwide. They are also the most overlooked anomaly group and it may be related with the difficulty of antenatal detection, heavy obstetric tempo in the peripheric regions and low experience in the cardiac examination. Ministry of health and societies should focus on improvement in the antenatal diagnosis of cardiac anomalies.

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S47 - WHY AND HOW TO INTEGRATE FAMILIES IN NEONATAL CARE?

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Medical risk factors for neurodevelopmental delays in surviving high-risk infants have been identified, but there is increasing evidence of the impact of sensory inputs on brain development, such as pain and stress, separation and proximity, bonding and attachment, family's wellbeing and interaction with the child.

Family centered neonatal care (FCC) is a philosophy of partnership between staff and families. Unrestricted parental access to the preterm or sick newborn, involvement of parents in infant care and decisions, and open communication with parents are its basic tenets. Around the world, neonatal intensive care units (NICU) have had different attitudes and facilities towards FCC principles. FCC has become an integral part of care in most NICUs in developed countries, but not practiced worldwide.

The presentation will demonstrate the current scientific evidence supporting FCC regarding short and long term child and family outcomes.

European Standards of Care for Newborn Health, coordinated by the parental organisation European Foundation for the Care of Newborn Infants (EFCNI), published in Dec 2018, cover 11 key topics of neonatal care, and emphasise infant and family needs in all chapters, especially in NICU design and Infant- & family-centred developmental care.

The standards advocate 24-hour access for parents to the NICU and adjusting the clinical setting to infant and family needs; recommend provision of environment that minimises exposure to stressful stimuli. By individualised support, parents should be empowered to participate in daily care procedures in the NICU starting from skin to skin (Kangaroo) care and diaper changes. This can reduce stress, increase care-giving competency, and strengthen parent-child bonding. Parents are teached to recognise their baby's behavioral and discomfort signals and encouraged to provide non-analgesic pain relief during medical procedures.

FCC does not always meet the full requirements of the child and modern family. The next level is family integrated care (FIC) that involves providing parents with sufficient education and tools, so that they are able to become confident primary carers of their infants under the team's supervision. Availability of psychosocial support to parents and peer support from trained veteran parents is important. For implementing FIC, the basic principles of FCC should already be in place within a neonatal unit, and resources available for further education, supervision, and staffing.

Integration of parents in neonatal care means mutual learning and teaching between them and the staff. All healthcare professionals need sufficient education and continuous supervision to provide FCC/FIC. The lecture will discuss potential facilitators and barriers and provide some practical recommendations on how to start integration of parents in neonatal care.

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S48 - THE MYSTERIOUS TRIAD OF DIABETES, OBESITY, AND PREGNANCY

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The global obesity epidemic has resulted in heavier women in the reproductive age. More than 30% of women are above the ideal weight at the onset of their pregnancy. Similarly, there are more obese women suffering from type I or type II Diabetes Mellitus (DM). The risk of Gestational Diabetes Mellitus (GDM) is strongly linked to increasing maternal Body Mass Index (BMI). This statement has been reiterated in all publications regardless of its location, study design and analytical method for the past 25 years. The best representative study of all is a meta-analysis that reviewed 20 studies published over a period of 15 years and reported the unadjusted Odds Ratio of developing GDM was 2.14 in overweight women, while that for obese, and severely obese women were 3.56 and 8.56, respectively, when compared with normal weight pregnant women. In the absence of DM, obesity alone is also considered an obstetric risk factor. There is no doubt that either obesity or GDM has adverse pregnancy outcome, but it is worse when both conditions coexist.

Recent studies have indicated that DM and obesity may exert their effects independently. Moreover, the pathophysiological understanding and management approach is rather more complex. It is not just insulin resistance, we have seen leptin resistance, immunological factors and genetic and epigenetic components play an important role in the confounding adverse maternal and perinatal outcomes in patients hosting the mysterious triad of obesity, diabetes and pregnancy. In terms of management, while obese women have been tried on low Glycemic Index diets achieved greater fat loss and better capacity to prevent weight re-gain after a large weight loss outside pregnancy, its benefit in pregnancy is still awaited with doubtful safety. More details will be clarified in my presentation.

S49 - DIAGNOSIS AND MANAGEMENT OF LATE-ONSET FETAL GROWTH RESTRICTION

Herraiz I.

Fetal growth restriction (FGR) refers to an entity in which a fetus is not able to fully reach its biological growth potential. Excluding cases with congenital anomalies, it usually is a consequence of a mismatch between fetal nutritional needs and placental supply. Late-onset FGR usually refers to those cases identified ≥ 32 weeks. These fetuses are usually characterized by mild and stable hemodynamic alterations that allows, with close vigilance, prolong the pregnancy until term. Late-onset FGR is associated to a higher rate of perinatal morbidity and mortality as well as cardiovascular, neurological and metabolic complications on a long-term period. Currently, there is no full consensus on its diagnosis, but most experts agree that it is important to discern between the late-onset FGR and the constitutionally small for gestational age fetus with an estimated fetal weight (EFW) < 10th centile but healthy otherwise. For this purpose, the use of customized centiles of EFW has been defended, while others argue that universal growth charts should be used. Additionally, we have to deal with a margin of error of 15% for EFW, which leads us to expand our spectrum of FGR suspicion beyond the 10th centile. Finally, it is increasingly accepted that the measurement of the cerebroplacental ratio (CPR), defined as the umbilical artery / middle cerebral artery index, is needed to identify a substantial proportion of late-onset FGR.

Regarding the management, nowadays there are no intrauterine therapeutic options for FGR, being delivery the only option available, and the "when and how" the most controverted points. However, since the risk of stillbirth increases beyond 37 weeks, there is wide consensus that delivery should be attempted through labor induction on the early term period (37-38 weeks). The main challenge for the induction of labor in FGR is that the tolerance of fetuses to uterine contractions is usually poorer compared to normally grown fetuses, especially in those with blood flow redistribution. There is scarce evidence regarding which is the best approach for cervical ripening on FGR. Recently, our group has found that the Foley balloon could be a more suitable method for FGR cases due to its lower association to uterine tachysystole when compared to prostaglandins. Achieving vaginal delivery is not a goal by itself, it has also been associated to better maternal recovery, lower maternal morbidity and earlier and longer lasting maternal-neonatal bonding. Women with a vaginal delivery also have a better chance of stablishing an early and effective breastfeeding that, according to the World Health Organization, entails a significant reduction of neonatal mortality when compared to its instauration 24 hours after delivery. This is of special concern in cases that will benefit most from an early onset of breastfeeding (such as FGR) and those interventions that will favor it should always be considered by clinicians. Broadly, all interventions focused on improving the nourishment of neonates will probably have a short, medium and long-term impact on the health and well-being of the newborn.

S50 - USEFULNESS OF SFLT-1/PLGF FOR EARLY DETECTION OF PREECLAMPSIA AND FETAL GROWTH RESTRICTION

Herraiz I.

Preeclampsia (PE) and fetal growth restriction (FGR) are obstetric complications that are closely related with placental dysfunction and are associated with increased maternal and perinatal morbidity and mortality, particularly in their early onset forms. These conditions often coexist, increasing adverse outcomes. The rapid identification and correct assignment of these women in centers with adequate resources where perinatal care can be optimized are essential to reduce complications. Most maternal deaths in pregnancies with PE could be avoidable with a tempestive diagnosis and standard care. Nevertheless, diagnosis of PE is still based on nonspecific signs and symptoms, and identification of FGR by symphysis-fundal height or ultrasound is also suboptimal, leading to delayed diagnosis. The implementation of angiogenic-related biomarkers based on the identification of placental dysfunction such as the soluble fms-like tyrosine kinase 1 (sFlt-1)/ placental growth factor (PlGF) ratio enhances the detection of early PE and FGR. A sFlt-1/PlGF ratio ≤ 38 has demonstrated to rule-out PE in women with suspicion for about 4 weeks with 95% negative predictive value. However, there is more limited evidence regarding the management of women with abnormal results.

Based on this knowledge, we have proposed a new strategy for the clinical use of the sFlt-1/PlGF ratio in which pregnant women at risk for PE/FGR are selected for intensive monitoring starting at 24-28 weeks, including the measurement of the sFlt-1/PlGF ratio in maternal serum. This simple test is useful to predict which cases will develop PE/FGR requiring delivery before 32 weeks. This approach allows a better stratification of the risk of early-onset PE/FGR in selected women. Therefore, it could perfectly be a complementary strategy to the first trimester screening for PE, delineating the follow-up of those with a positive screening in two possible ways: those with values > 38 undergo intensified fetal and maternal care while those with sFlt-1/PlGF ratio ≤ 38 can be reassured for the next 4-6 weeks avoiding unnecessary costs and visits.

Moreover, recent evidence from randomised controlled trial found that the adoption of angiogenic-related biomarkers for clinical use has the potential to reduce the incidence of maternal adverse outcomes.
We have also proposed the use of the sFlt-1/PlGF ratio for assessing the prognosis of already-diagnosed PE/FGR cases, based on the observation that the sFlt-1/PlGF value is inversely proportional to the time until delivery is needed. A sFlt1/PlGF value > 655 is associated to a short median time-to-delivery interval of 3 days, due to both maternal and fetal complications that require immediate delivery. In early-onset FGR, the sFlt-1/PlGF increases progressively as delivery approaches, this increase being more marked when PE is also present. This increment is mainly due to the increase in sFlt-1, which is the angiogenic-related factor that better reflects the progression of maternal disease.

In summary, the sFlt-1/PlGF ratio has been shown to have a strong predictive and diagnostic value for early-onset PE and FGR. Moreover, its implementation saves costs and improves maternal prognosis. Therefore, in the next years it hopefully become incorporated into clinical guides.

S51 - THERAPIES FOR THE PREVENTION AND TREATMENT OF PREECLAMPSIA

Herraiz I.

To date, the only available treatment for preeclampsia (PE) is delivery, which may be against fetal interests, especially when it occurs prematurely. The development of therapies for the prevention and treatment of PE that safely prolongs gestation are a major challenge in obstetrics. The improvement in the understanding of the pathogenic mechanisms of PE through the role of angiogenesis-related factors offers hope for the possibility of developing new beneficial treatments aimed at shifting the angiogenic balance in favour of pro-angiogenesis to correct the endothelial dysfunction. Besides, the serial measurement of the soluble fms-like tyrosine kinase 1 (sFlt-1)/ placental growth factor (PlGF) ratio helps us to monitor the effectiveness of the treatments.

There is currently strong evidence to state that the prophylactic low dose aspirin prior to 16 weeks' gestation in women at high risk for developing preeclampsia is effective in reducing – or delaying – the incidence of preterm PE by approximately 60-70%. The mechanism by which aspirin exerts this effect has not been fully elucidated, but there are already data indicating that aspirin inhibits sFlt-1 production in trophoblast cells facilitating the placental vascular development and the invasive capacity of the trophoblast.

Another drug that raises high expectations for preventing and treating PE is pravastatine. This hydrophilic statin with reduced transplacental passage has not only lipid-lowering properties but also pleiotropic effects that enhance endothelial function and prevents thrombosis. Preliminary studies in humans reveals that pravastatin is unlikely to be teratogen and restores the angiogenic imbalance in pregnant women with prothrombotic status or poor obstetric history. Even in patients with established early-onset PE, a striking improvement has been described after pravastatin administration. These encouraging results should be taken with caution since they do not come from large randomized trials.

Eculizumab, a humanized monoclonal antibody that inhibits terminal complement activation, has also been proposed as a therapeutic option. Some forms of PE, especially HELLP syndrome, may act as complement-amplifying conditions, and therefore be a suitable target for this agent. Preliminary reports support the usefulness of eculizumab during pregnancy in the setting of atypical haemolytic uremic syndrome. This is a much rarer condition than PE, but they share pathogenic and clinical characteristics. It remains to be established if there is any subgroup within the spectrum of PE, especially cases involving thrombotic microangiopathy, which may be likely to benefit from the use of eculizumab

Other treatments targeting the sFlt1/PlGF pathway may be of benefit in PE and are under investigation. Such strategies include the administration of recombinant proteins (VEGF, PlGF, peptides), neutralizing antibody against sFlt-1, blocking sFlt-1 production with short interfering RNAs and the removal of sFlt-1 through dextran sulfate apheresis. The main difficulty is to find a balanced dosage that allows to keep circulating levels of sFlt-1 safe, since its excessive elimination can also lead to undesirable effects such as an excessive hypotensive effect.

In conclusion, ongoing research on potential novel treatments for PE targeting etiopathogenic pathways are underway to improve the prognosis of a disease that so far does not have an effective treatment.

S52 - BLOODY BUSINESS IN OB: HOW ULTRASOUND CAN HELP?

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Background
Placenta accreta spectrum is the chief cause of postpartum hemorrhage resulting in maternal and neonatal morbidity/mortality. Ultrasound is critical for antepartum diagnosis. Peripartum hysterectomy has been the standard therapy but conservative management is increasingly being used and preoperative diagnosis is critical to plan the management. The etiology of accreta is due to a deficiency of maternal decidua resulting in placental invasion into the uterine myometrium.

Methods
We performed systematic analysis of selected databased published investigations and reviews. PubMed search was performed using the terms: placenta accreta, diagnosis, management.

Results
Ultrasound is a reliable tool for diagnosing invasive placentation. Several ultrasound features have been documented to be associated with a higher risk of placenta accreta, including the presence of placental lacunae (irregular vascular spaces resulting in a "Swiss cheese" appearance), retroplacental myometrial thickness less than 1 mm, loss of the normal hypoechoic retroplacental zone, and anomalies of the bladder-myometrium interface. Doppler ultrasound and most recently 3D power Doppler have the ability to differentiate between the degrees of placental invasion. Irregular intraplacental vascularization with tortuous confluent vessels affecting the entire placental width and hypervascularity of the entire serosa-bladder wall interface are important markers in differentiating placenta accreta spectrum in a prospective evaluation of at risk patients.

Conclusion
Placenta accreta spectrum is the chief cause of postpartum hemorrhage and are a significant cause of both maternal and neonatal morbidity and occasionally mortality. The prenatal diagnosis of placenta accreta is crucial and is associated with a significant reduction in postpartum complications.

S53 - MORTALITY STATISTICS: A GLOBAL APPROACH

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Internationally, there are different definitions to define stillbirth, maternal mortality, perinatal mortality. These differences relate to the gestational age, fetal weight, malformation, termination of pregnancy, cause of death. These differences may have an influence at the precise rates of stillbirth, maternal mortality and perinatal mortality and are important for the comparisons of international statistics. For global and local prevention strategies of fetal, perinatal and maternal mortality we need international consens about death registries and standardized protocols for death evaluation.

S54 - ANALGESIA IN NEONATES

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Effective analgesia in neonates is relevant not only because of ethics or empathy, but also since it is a crucial and valid part of contemporary nursing and medical practice. However and resulting in the need for a balanced approach, there is also emerging evidence on the extent of exposure to analgesics and poorer neurodevelopmental outcome in neonates. Consequently, the increased exposure to analgesics over time and the extensive variability observed in drug prescription practice is concerning given the limited evidence of benefit and the potential harm.

Implementation strategies to structure rational use of analgesics are effective to reduce exposure to narcotics, but result in increased paracetamol exposure. We therefore summarized the evidence on paracetamol use in procedural pain management, in minor to moderate as well as major pain syndromes in neonates. While there are sufficient data on short-term safety, there are still concerns on long-term side-effects. These concerns relate to neuro-behavioral outcome, atopy or fertility, and are at present mainly driven by epidemiological perinatal observations, together with postulated mechanisms.

Analgesic dosing regimens should take into account the severity and type of pain, the therapeutic window of the drug, but also the age or developmental state of the child. Translation of these concepts to safe and effective pharmacological management of pain in neonates necessitates thorough understanding of the principles of clinical pharmacology of analgesics in children. Growth, weight or size and maturation or age evolve in children and profoundly affect the pharmacokinetics (concentration-time profile, absorption, distribution, metabolism and excretion) and pharmacodynamics (concentration-effect profile, objective assessment) of drugs, and this is also the case for analgesics. This will result in extensive variability in dosing and effects, and this variability is most prominent in infancy. In addition to maturational changes, there are also non-maturational aspects (preterm neonates and critical illness, obesity, pharmacogenetics) that should be considered to further improve dosing in every individual newborn. This will be illustrated based on some recent observations on paracetamol and fentanyl pharmacokinetics.

We conclude that future clinical research objectives should still focus on the need to develop better assessment tools to quantify pain, and on the need for high quality data on long-term outcome of therapeutic interventions - also for paracetamol. Exploration of the development of the nociceptive system in newborns is necessary to enable optimal pain assessment, and most importantly to treat and prevent pain adequately in neonates.

S55 - CLINICAL PHARMACOLOGY OF ANTI-EPILEPTICS IN NEONATES

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Extensive variability in dosing and effects are the core characteristics of clinical pharmacology in neonates. The impact of drugs to improve outcome, while rational drug use in neonates remains underexplored. Clinical pharmacology aims to estimate the effects of such interventions, using pharmacokinetics (PK) and pharmacodynamics (PD) to generate predictions, including a grade of certainty and confidence intervals. PK (absorption, distribution and elimination, through either metabolism or renal elimination) estimates the concentration-time relationship. PD aims to estimate (side)-effects of a specific medicine (concentration-effect relationship). Very specific to newborns are the fast maturational changes in neonatal life with weight and age as main drivers of this maturation, resulting in extensive variability between and within-individual variability in PK and subsequent PD. Non-maturational changes further add to the variability. This is also the case for anti-epileptics, as will be illustrated by examples on PK or PD aspects related to phenobarbital, midazolam, lidocaine or levetiracetam.

Drug utilization research informs us on trends, on between unit variability and on the impact of guideline implementation, and this is also the case for anti-epileptic drugs. Ahmad et al. recently reported that neonates with seizures are still overwhelmingly exposed to phenobarbital with a very minor decease over the time interval (2005-2014, 99 to 96 %), a decrease in phenytoin use (15 to 11 %), and a very relevant increase in levetiracetam (1.4 to 14 %) with carbamazepine, lidocaine or topiramate as rarely administered AEDs in neonates (all <1 %). Better insights in the variety of mechanisms (asphyxia, infarction, channelopathies, metabolic syndromes) involved in the 'seizure phenotype' should enable us to shift from a 'one drug fits all' approach to individualized pharmacotherapy (better mechanism driven drug selection)

Finally, neonates can also be exposed to anti-epileptic drugs by maternal intake, either before (fetal), or after delivery (breastfeeding). The impact of breastfeeding on neurocognitive outcome following AED exposure during pregnancy and lactation has been documented by the Neurodevelopmental Effects of antiepileptic drugs (NEAD) group. At 6 years, children of mothers on AEDs during pregnancy had a higher (11.5 instead of 4.8 %) risk of impaired fine motor skills compared with controls and a lower and dose dependent IQ (-6 to -9 IQ point) following fetal valproate exposure when compared to other AEDs. Building on these background characteristics, subsequent breastfeeding in infants of women using AEDs was associated with improved neurodevelopment outcome compared with those with either no breastfeeding or breastfeeding for less than 6 months.

S56 - NEONATAL PAIN: BELIEFS, SKEPTICISM, AND SCIENTIFIC KNOWLEDGE

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During the last decades, a considerable improvement has been made in understanding the pathophysiology of neonatal pain and the long-term consequences of untreated pain in this age group, overcoming, thus, myths and beliefs of the past that have greatly influenced everyday clinical practice for years. Nevertheless, evidence show that, still, there is a large variation in the management of neonatal pain across centers and countries. Fear of acute adverse effects and poor neurodevelopment in the long-term following the administration of analgesics-sedatives, difficulties in pain assessment, relative paucity of relevant pharmacological studies, and personal preferences are important contributors to the existing differences among neonatologist, worldwide. On the other hand, clinical data regarding neurological outcomes after exposure to drugs such as opioids are conflicting, so that the question of whether the specific drugs may promote the damage of preterm brain largely remains unanswered. Inadequate pain assessment in neonates most probably reflects difficulties and reliability of the existing scales in assessing pain and its types (acute procedural, postoperative and chronic pain) as well as "culture on neonatal pain". To eliminate drug exposure and significant side effects, several non-pharmacological modalities –environmental (measures to minimize bright light, loud noises or frequent handling) and behavioural (skin-to-skin care, sweet solutions)- are increasingly being used so that to reduce total amount of noxious stimuli. Overall, prevention and minimization of pain must be a high-priority goal during neonatal care, as early events like neonatal pain and stress may lead to epigenetic alternations affecting the infants' developmental trajectory. Given, however, the aforementioned concerns, a tiered approach to sedation/analgesia seems most appropriate. Drugs should be used wisely when needed, while neonatal units should promote continuous education and protocol development on pain assessment and management.

S57 - CARDIOVASCULAR SUPPORT IN NEONATAL SEPSIS

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Neonatal sepsis still remains a severe medical condition associated with high morbidity and mortality, especially when associated with cardiovascular dysfunction and impaired tissue perfusion (shock). Despite this, the hemodynamic pattern of response in septic neonates has not been adequatelly investigated. Based on previous experimental data, neonates with severe sepsis were traditionally considered to develop "cold shock", a hypodynamic state characterized by increased systemic vascular resistanse (SVR), decreased cardiac output, tachycardia with or without arterial hypotention, cold extremities, and poor peripheral perfusion. More recent studies, however, indicate that similarly to older children, neonates may also develop "warm shock" (hyperdynamic circulation with increased or normal cardiac output and decreased SVR), bounding pulses, warm extremities and hypotension. Warm shock is postulated to result from the release of various vasodilating substances, whereas cold shock represents vasoconstriction to compensate impeding circulatory failure. Differences in hemodynamic manifestations are important for a more rational use of the various inotropic-vasoactive drugs in septic neonates. Functional echocardiography and hemodynamic monitoring may help in the evaluation of the infants hemodynamic status. Cardiovascular support of septic neonates along with the rest supportive care (antibiotics, respiratory support, etc) includes:

1. Administration of fluids: Early, aggressive volume resuscitation has been documented to reverse circulatory dysfunction and improve survival in pediatric-neonatal septic shock. In term neonates, administration of fluid boluses (saline or colloids) up to 60 ml/kg in the first hour of resuscitation has been proposed. Volume expansion (saline) should be less aggressive in preterm infants (risk of cerebral hemorrhage) and in cold versus warm shock (myocardial dysfunction).

2. Cardiovascular drugs: The choice of the appropriate drug should be determined by the infant's hemodynamic status. In warm shock (reduced SVR), inotropes/vasoconstrictors should be preferred and dopamine is the initial drug of choice. In the absence of a positive response, adrenaline or norepinephrine may be used. In infants with findings consistent with cold shock, the use of agents with predominent inotropic and vasodilating effect such as dobutamine, is preferable. Milrinone (a phosphodiesterase III inhibitor with vasodilatory activity in the pulmonary and systemic circulation) may be administered in right (eg, pulmonary hypertension) or left heart dysfunction and, in severe catecholamine-resistant shock. The experience from the use of other vasoconstrictors (arginine vasopressin and its synthetic analogue terlipresin) in neonates is limited. Given that the hemodynamic status in septic shock is a dynamic and constantly changing process, the various cardiovascular drugs used should be continuously titrated, depending on response and recovery of adequate organ perfusion.

3. Steroids: Although there are limited data on their use in septic neonates, steroids may be considered in catecholamine-resistant shock.

Overall, management of cardiovascular derangements in septic neonates should be individualized based on the hemodynamic status of each patient allowing, thus, the choice of the most appropriate cardiovascular drugs.

S58 - PREDICTION OF ADVERSE OUTCOME OF EARLY PREECLAMPSIA NEW OPPORTUNITIES

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Objectives
The aim of this pilot study was to assess weather sFlt-1/PlGF ratio would be more sensitive and specific predictor of adverse maternal outcome in patients with early severe preeclampsia in comparison to PIER (preeclampsia integrated estimate of risk) score.

Methods
The pilot study prospectively included 38 patients diagnosed with early severe form of PE, according to ACOG Guideline criteria. All patients were admitted to Intensive Care Unit, receiving appropriate prenatal care and observation, with delivery to terminate the disorder within 48 hours. Maternal signs, symptoms, and laboratory findings were assessed at hospital admission to generate PIER score data for predicting maternal outcome. Blood sample for sFlt-1/PlGF ratio was taken at hospital admission and retrospectively analyzed. The numbers and types of maternal complications have been recorded after delivery.

Results
sFlt-1/PLGF ratio correlates better with number of major adverse outcomes in comparison to PIER score and is a better predictor of maternal complications in our pilot study. sFlt-1/PLGF showed that the overall % identification of high risk patients was more accurate then applying PIER score. The complementary use of sFlt-1/PlGF ratio and PIER score showed the best performance, the highest accuracy for prediction of maternal complications. In our study by applying ROC analysis, optimal cut-off 513 for sFlt-1/PlGF was identified for prediction of maternal complications (Sens 62% Spec 100%).

Conclusion
Further prospective multicenter studies are needed to evaluate the usefulness of sFlt-1/PlGF ratio (preferably as a complementary tool to existing PIER score) as an optimal method in the management of preeclampsia and more accurate prediction of adverse maternal outcome.

Keywords
Preeclampsia, sFlt-1/PlGF, outcomes

S59 - LONG TERM FOLLOW UP AND NEUROGENIC BLADDER

Silber M.

The physiological fundamentals of the voiding control will be addressed, depending on a complex interaction between centers in the neuroaxis, afferent and efferent nerve pathways of the central and autonomic nervous system. In the medullary lesion that occurs in the meningo-myeloeles there may be high spinal injuries (predominance of innervation of the sympathetic nervous system), low (predominance of the innervation of the parasympathetic nervous system or both, provoking different behaviors of the bladder (hyper or arreflexia) and of the striated sphincter (permanent relaxation or vesicosphincteric dissinergism. Different patterns of neurogenic urinary dysfunction result from different treatment proposals and urological follow-up of these children. The treatment objectives vary according to age group, in the newborn and in infants is to preserve renal function, in school children is to obtain urinary continence and adolescents and young adults promote autonomy and a healthy sexual life.they will be discussed two management in the accompaniment of children with neurogenic bladder, one more conservative and one more proactive. In conservative management children are monitored with urinary ultrasounds and with periodic culture and urinary sediment exams. Children who are even asymptomatic are submitted to renal scintigraphy (dmsa) every year for follow-up of possible renal lesions. Only at-risk children and those with a clinically disorderly progression (with repeat urinary infections) are submitted to the most invasive procedures such as clean intermittent catheterization (cic), full uradinamic study and micturitional urethrography cyst.will be presented different studies that demonstrate that conservative management in children with neurogenic bladder is a viable option in children with low urological risk. The therapeutic options for clinical treatment of detrusor hypereativity as well as surgical options for bladder enlargement (such as mitrofanoff surgery) and therapeutic options for treating urinary incontinence such as the use of botulinum toxin and aponeurotic sling, among others. The following will be presented the results of the urological follow-up of children who had their congenital meningomieloce corrected by fetoscopy by the safer technique developed by dra denise lapa. 45% (25/55) of children operated antenatally by the safer tecnique present signs and symptoms of neurogenic bladder against 67% (35/52) of children operated by conventional technique (moms study ,p< 0,05. At 30 months of age, 20% (11/55) of children operated by safer technique present necessity of cic x 38 % (29/52) of the operated by conventional technique- moms study), p=0,098. Children operated by the safer technique also present lower use of prophylactic antibiotic therapy and medication for detrusor hypereativity at 30 months of age.

S60 - MORBIDLY ADHERENT PLACENTA

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Morbidly adherent placenta (MAP), also known as placenta accrete spectrum or abnormally invasive placenta is primarily an iatrogenic problem, closely associated with uterine surgery, most commonly cesarean delivery followed by dilatation and curettage and myomectomy. The incidence of MAP is rising worldwide due to the rising rates of cesarean delivery, which is the greatest single risk factor for MAP in subsequent pregnancies. However, even with the rising incidence, MAP is still rare (0.79–3.11 per 1000 births after prior cesarean). Thus, defining an optimal management strategy remains extremely challenging. Optimal management requires both accurate antenatal diagnosis and a robust perinatal management strategy. At the center of such a strategy is a multidisciplinary team that should be available ideally 24 hours a day, 7 days a week. As a minimum, this team should include experts in sonographic and magnetic resonance imaging, experienced obstetricians, surgeon experienced with complex pelvic surgery (often a gynecological oncologist), urologist, colorectal and vascular surgeons, anesthesiologist with expertise in complex obstetric cases, neonatologists, hematologists and interventional radiologists. .The team should also have access to adult and neonatal intensive care, massive transfusion facilities and intraoperative blood salvage services on site. Women at risk for MAP should be identified early in the pregnancy and timely referred to the multidisciplinary team which should operate under a standardized protocol based on evidence and adapted to the characteristics unique for the institution and the patient population in the catchment area. Such a protocol should also be coupled with a systematic data collection on maternal and fetal outcomes, complications, near-misses, accuracy of the diagnosis and effectiveness of interventions. Analysis of such data is valuable to assess and improve the success and effectiveness of the protocols used in the management of MAP, train the future experts and contribute to the literature.
Given the complexity of the management and the preparation required in advance, avoiding false-negative diagnoses is essential. Even in expert hands, the diagnosis of MAP is challenging, and false -negative diagnoses based on imaging are not uncommon. In our experience, all patients with a history of uterine surgery, e.g., 1 or more cesarean section and/or myomectomy and placenta previa in the index pregnancy are at a significant risk of MAP regardless of the imaging results and therefore should be managed following a standardized protocol for MAP. We use MRI in selected cases as an adjunct to sonography. At our institution, the standardized protocol for the management of PAS includes: 1) aggressive treatment to correct anemia antenatally; 2) at least, one course of antenatal steroids; 3) delivery between 34 and 37 weeks by cesarean section; 4) hysterotomy without cutting the placenta; 5) gentle traction of the umbilical cord in an attempt to deliver the placenta; 6) hysterectomy by gynecologic oncologists if indicated; uterine artery catheterization prior to delivery followed by embolization prior to hysterectomy only in suspected cases of placenta percreta in an operating room equipped for interventional radiological procedures; 7) cystoscopy and ureteral stenting in selected cases of placenta percreta; and intraoperative blood salvage. Using this standardized protocol, we were able to demonstrate to lower major maternal morbidity by half and significantly cut down the intraoperative blood loss and the need for blood transfusion as compared to historic controls for whom the management was determined on a case-by-case basis.

Required resources for comprehensive management of MAP may be limited to tertiary care centers with expertise. Thus, pregnant women at risk for MAP, as soon as suspected, should be referred to such centers.

S61 - CURRENT MANAGEMENT STRATEGIES AND NEURODEVELOPMENTAL OUTCOME IN NECROTIZING ENTEROCOLITIS

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Necrotizing enterocolitis (NEC), primarily a disease of preterms, is a major cause of morbidity and mortality. Although prematurity, formula-feeding, infection, and microbial dysbiosis were reported as the most recognized potential risk factors, the pathogenesis of NEC is complex and multifactorial with the primary end point of an inappropriate and exaggarated inflammatory response that result with intestinal dysfunction, inflammation, injury, and necrosis. There are currently no licensed drugs or therapeutics for both prevention and/or treatment of NEC.

The general treatments approach in NEC include stopping enteral feeding, prompt decompression, administration of total parenteral nutrition and intravenous fluid replacement, and broad-spectrum antibiotics. Surgical intervention should be performed in the presence of bowel perforation or necrotic bowel and lack of improvement with medical treatments. At present, new potential prevention and therapies for NEC are mainly focus on the Toll-like receptor 4 inflammatory signaling pathway, the repair of intestinal barrier function, probiotics, antioxidative stress, breast-feeding, and use of immunomodulatory agents.

It is well known that exclusive human milk intake may prevent NEC by reducing the incidence and severity of NEC. In addition, minimal enteral nutrition was also established as a successful strategy to reduce the risk of NEC. Some other strategies including the slow increase in enteral feeding, standard feeding regimens, and avoidance of formula-feeding can also prevent NEC.

Oral lactoferrin studies reported promising results for prevention of severe NEC. Maternal and neonatal vitamin D supplementation was also stated as a possible strategy to prevent NEC. Nowadays, the most discussed subject in the management of NEC include use of probiotics. Although the beneficial effects of probiotics have been studied extensively, there is still a lack of consensus on specific strain types and dosage. It is also unclear whether a single probiotic or a mixture of probiotics is most effective for the prevention of NEC. Therefore, there is no current recommendation for the routine usage of probiotics in preterm infants for prevention of NEC.

Today, several experimental approaches for both prevention and treatment of NEC are on way, we need time to translate the results of experimental studies to clinical usage. Therefore, more high-quality clinical trials are still needed to verify the validity and long-term outcomes of all these potential approaches.

The relationship between NEC and neurodevelopmental impairment has been investigated in several studies and infants with severe NEC were found to have increased risk of cerebral palsy, visual, cognitive and pschymotor impairment. These poor neurodevelopmental outcomes in infants with NEC seem to be multifactorial, including both nutritional and non-nutritional factors. However, it is important to know that survivors of NEC require long-term follow-up to monitor for signs of neurodevelopmental impairment to ensure prompt intervention.

The long-term follow-up, early diagnosis and intervention are critically important to improve and optimize long-term neurodevelopmental outcomes in infants with severe NEC. As most of the neurodevelopmental follow-up studies are performed at young ages, longitudinal follow-up beyond preschool age seems to be necessary to represent true long-term outcomes in these infants.

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S62 - CAN LUNG ULTRASOUND HELP TO CLINICIANS IN THE MANAGEMENT OF NEONATAL LUNG DISEASES

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Lung diseases in neonates can be a life-threatening condition if not diagnosed and promptly managed. Chest Xray is traditionally being used as an imaging tool to differentiate lung diseases in newborn. Lung ultrasound is an emerging solution, extremely user-friendly, with no radiation exposure and the physician at the bedside can quickly able to differentiate a normal aerated vs atelectatic lung, respiratory distress syndrome vs transient tachypnoea of newborn, pneumothorax, pleural effusion and bronchopulmonary dysplasia. Lung ultrasound scores are frequently being used now for prediction of the need for invasive ventilation and surfactant therapy. With the advantages of being a real-time readily available bedside imaging tool without any radiation exposure, Lung ultrasound soon would replace or minimize X-rays in NICU for differentiating lung pathologies in neonatal emergencies as well as clinical decision making.

S63 - INFANTS AT THE LIMITS OF VIABILITY – ARE WE HEADING IN THE RIGHT DIRECTION?

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Aim
To define and to discuss medical and ethical issues of premature infants born at the limits of viability in developed and developing countries

Background
The problem of prematurity is increasing in the world with the prevalence of 18% in some African countries and 5% in some European countries with more than 15 million of premature babies born worldwide every year. Survival of premature infants is dependent on the gestational age and birth weight, development of the country and availability of neonatal intensive care. If a premature baby is born before 28 gestational weeks and the neonatal intensive care unit (NICU) is not available, such infant has 95% probability to die. Intensive care is available for only 1% of all premature infants in need. The data concerning the survival of very immature and small premature infants in low-resource settings in developing world are distressing, while in the developed world much more of those babies survive, but survival without major morbidity is stagnant. Increased survival was caused by improvement of: the organization of perinatal care, prenatal care, care in the delivery room, care in the NICU and post discharge. From the historical perspective it could be considered a big achievement of medical science, but still, there is a place for improvement. Antenatal corticosteroid use increased significantly from 78.8% to 85.0% in the period of less than one decade. It has been emphasized that exposure of the infants to human milk and use of human milk at discharge increased, use of medications that were intended for reduction of morbidity (dexamethasone, H2 blockers, metoclopramide, and cefotaxime) declined. The total proportion of babies given early empirical ampicillin and those with negative cultures who were treated for more than three days also decreased, and the proportion of infants who were mechanically ventilated and the median days of ventilator support decreased. Hypothermia on NICU admission decreased as well as the mortality, necrotizing enterocolitis incidence, severe and surgical retinopathy of prematurity, and late onset sepsis. Defining limit of viability is gestational age and birth weight sensitive and is dependent on the biological capability of the infant to survive in the certain society which is dependent on development and wealth of the society. Availability of medical care organization and technology are influencing the survival and the early and the late outcome of the infants at the limits of viability.

Conclusion
Although the approach to the care of tiny infants changed with gentle approach, it seams that there is a need to change our way of thinking to improve the care of the infants at the limits of viability. "Baby astronaut" or gravity, age, thermoregulation and oxygenation (GATO) hypothesis maybe helpful in changing the environment in which babies are nurtured. The animal model of artificial uterus ("Biobag") in Philadelphia Children's Hospital in USA has been launched and presented. Is this the future of the care for tiniest infants and could it decrease the gestational age of 22 gestational weeks considered nowadays as the limit of viability?

S64 - ABNORMAL INTRACRANIAL TRANSLUCENCY: ASSOCIATED SONOGRAPHIC AND CLINICAL FINDINGS

Yayla M.

For more than two decades new methods are recommended for the early diagnosis of neural tube defects during pregnancy. Most of the studies conducted on this area are for the detection of open spina bifida using especially visualization and measurement of intracranial translucency (IT). Further studies reported that this technique could be used for chromosomal anomalies and other defects. On the other hand, being unable to see or measure IT in the posterior fossa examination between 11 and 13 weeks of gestation does not always indicate an abnormality.

We are screening the IT during the first trimester scanning for 10 years and we aimed to investigate the reasons of non-visualization or measurability of IT and the consequences of this finding. Retrospectively, the data of 1914 singleton pregnancies with positive or negative IT was evaluated and compared for the distribution of fetal malformations, chromosomal anomalies, fetal losses as well as maternal characteristics.

The rate of the cases whose IT could not be measured or visualized in posterior fossa was 4.05% during the initial scanning. We observed that the rates of maternal age, obesity, uterine anomalies, malposition and myomas, and also fetal posture disorders were higher in IT (-) cases than IT (+) cases. We noticed that in false negative cases (n=71), these factors were prominent and there were no fetal pathological findings. Compared to the group whose IT could be measured, poor prognosis of gestation, fetal loss or termination of pregnancy, existence of early genetic markers, the presence of chromosomal anomaly, the rate of central nervous system and other systemic malformations were statistically significantly higher in the group whose IT could not be measured. In the IT (-) cases, the sensitivity was 26.9%, the specificity was 95.9%, the positive predictive value was 21.9%, the negative predictive value was 96.9%, the accuracy rate was 93% and the odds ratio was 8.7 to predict the poor gestational prognosis mentioned above.

Considering the followed-up cases (n=96) in our series, we found that 73.9% of IT (-) cases were completely normal, 4.2% of them had normal prognosis together with mild findings such as Blake's pouch cyst, and 21.9% of them had significant pathologies. When we excluded the cases that we interpreted as false negative, the rate of actual IT (-) cases was 1.3% (25/1914) and we revised the rate of outcome with a poor gestational prognosis as 84%. Thus, the early detection of central nervous system anomalies by IT screening had a new sensitivity of 42% with a 95% accuracy rate. In other series, this rate varied between 0-100%.

As a result, assessment of IT during first trimester scanning can alert for the early diagnosis of central nervous and other system malformations and also for some chromosomal anomalies which could influence gestational prognosis.

S65 - PREDICTION OF PREECLAMPSIA USING DOPPLER ULTRASOUND EXAMINATION AND HEMOSTASIS PARAMETERS

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Objective of the study
Early diagnosis and prevention of preeclampsia using Doppler ultrasound examination and hemostasis parameters, including hereditary thrombophilia and antiphospholipid antibodies

Keywords
Doppler ultrasound, preeclampsia, thrombophilia, intrauterine growth retardation, antiphospholipid syndrome.

Preeclampsia is one of the most severe complications during the pregnancy. According to WHO, the incidence of preeclampsia is 7 times higher in the developing countries (2.8%) than in the developed countries (0.4%) [1]. The disease is one of the three leading causes of maternal morbidity and mortality all over the world.Preeclampsia may lead to the development of placental insufficiency and intrauterine growth retardation, which in their turn lead to higher frequency of preterm delivery and operative delivery [4].
Depending on gestational age, there is early preeclampsia (found before 34 weeks) and late preeclampsia (found after 34 weeks).

Materials and Methods
The study included 76 pregnant women: control group - 27 (35.5%) women with normal pregnancy and 49 (64.5%) women with complicated pregnancy: with preeclampsia - 15 (19.8%), intrauterine growth retardation - 12 (15.8%), preeclampsia and intrauterine growth retardation - 22 (28.9%). All women were examined by Doppler sonography in their 23-26, 32-37 and after 37 weeks of pregnancy. The blood flow velocity waveforms were recorded for uterine, umbilical, basilar and vertebral arteries of the fetus. The hemostasis testing included the evaluation of blood plasma coagulation levels and fibrinolysis parameters (D-dimer), determination of antiphospholipid antibodies (APA) circulation and genetic forms of thrombophilia.

Results
Thrombophilia was found in 31 (63.3%) pregnant women with pregnancy complications. Genetic forms (55.1%) and circulation of antiphospholipid antibodies (22.4%) were most frequently observed in patients with intrauterine growth retardation and preeclampsia. In general, we have observed 6.1% of heterozygotes for FVL (Factor V Leiden), homozygotes - 4.1%, heterozygous MTHFR C677T – 30.6%, homozygous – 14.3%, gene PAI-1 4G/4G polymorphism – 14.3%, 4G/5G – 20.4%, homozygous 455G/A polymorphism of fibrinogen – 4.1%, heterozygous – 8.2%, homozygous polymorphism of platelet GpIa receptor – 6.1%, heterozygous – 8.2%, polymorphism of platelet GpIIIa receptor – homozygous - 2.0%, heterozygous – 8.2%, heterozygous ACE (I/D) polymorphism – 10.2%, heterozygous 1166 A/C polymorphism of angiotensin II receptor – 4.1%, isolated APA – 8.2%. Abnormal uterine-placental hemodynamics was observed in all cases of pregnancies with intrauterine growth retardation complications. Fetoplacental circulation was abnormal in 21 (61.8%) cases with intrauterine growth retardation, in 50.0% of preeclampsia cases and in 83.3% of cases without preeclampsia. 6 cases (40.0%) of abnormal uterine-placental hemodynamics were observed in women with preeclampsia and without intrauterine growth retardation. All patients with

intrauterine growth retardation had high levels of blood plasma coagulation and fibrinolysis parameters (D-dimer). The changes in levels of blood plasma coagulation and fibrinolysis parameters were most clearly expressed in cases of pregnancy with abnormal fetoplacental circulation as compared with the control group.

Conclusions

The widespread use of Doppler sonography and thrombophilia testing can contribute to the early diagnosis of pregnancy complications such as preeclampsia and intrauterine growth retardation, thus ensuring the effective prevention of these pathologies.

S66 - OVERVIEW OF NEONATAL SEPSIS

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Neonatal sepsis continues to be a common and significant healthcare burden, especially in very low birthweight infants (VLBW). Neonates are predisposed to infections during the perinatal period due to their relatively immature immune system and multiple exposures to serious bacterial, viral and fungal infections. The incidence of neonatal infections varies by geographic region and maternal and neonatal risk factors. Worldwide, it is estimated that the neonatal mortality from invasive infections accounts for more than 1.4 million neonatal deaths annually. Risk factors for early-onset neonatal sepsis (EOS) include prematurity, immunologic immaturity, maternal Group B streptococcal (GBS) colonization, prolonged rupture of membranes, and maternal intra-amniotic infection. Intrapartum antimicrobial prophylaxis administered to GBS-colonized women has decreased the incidence of early onset GBS invasive infections dramatically. Active surveillance has identified Gram-negative pathogens as an emerging etiology of early-onset invasive infections. Late-onset neonatal sepsis (LOS) attributable to Gram-positive organisms, including coagulase negative Staphylococci and Staphylococcus aureus, is associated with increased morbidity and mortality among premature infants. Invasive candidiasis is an emerging cause of late-onset sepsis, especially among infants who receive broad spectrum antimicrobial agents. Prophylactic fluconazole administration to VLBW during the first six weeks of life reduces invasive fungal infections in neonatal intensive care units. The clinical decision of administering prophylactic fluconazole routinely to preterm infants should be made based on the local setting, including the epidemiology. Prevention of healthcare associated infections through antimicrobial stewardship, early enteral feeding, limited use of invasive devices and standardization of catheter care practices and meticulous hand hygiene are important and cost-effective strategies for reducing the burden of late-onset neonatal sepsis.

Keywords:
early-onset neonatal sepsis , late-onset infections, premature infants, risk factors, etiologic agents, strategies for prevention, antimicrobial treatment

S67 - GENETIC DIAGNOSIS OF THE MOST FREQUENT SYNDROMES

Kohlschmidt N.

Congenital heart disease, anomalies of the kidneys and urinary tract, increased nuchal translucency and CNS anomalies are frequent hallmarks for fetal syndromes. Bone dysplasias, abdominal wall defects, reduction deformities, thoracic and gastrointestinal abnormalities are less common but equally important. Chromosomal aberrations are the most common cause for antenatal abnormalities, many of which are microscopically visible. But about half of all chromosomal changes may only be detected by microarray techniques or in situ hybridisation.

Whilst for some monogenic syndromes, i.e. Wiedemann-Beckwith syndrome or Noonan syndrome, analysis of only one or very few genes is often successful to establish a definite diagnosis, more extensive

NGS-methods are required in case of unspecific features such as renal cysts or curved tubular bones.
-ome techniques might replace symptome guided diagnostic methods not too far but are still requiring validation for prenatal use.

Some common prenatal situations will be jointly discussed in view of established techniques.

S68 - BENEFITS DERIVING FROM THE USE OF HM

Kültürsay N.

Human milk (HM) is nutritionally the best for both term and preterm infants. The significant advantages for preterm infants are empowered host defense, gastrointestinal development and maturation, neurological development, reduction of necrotizing enterocolitis(NEC), retinopathy of prematurity (ROP) and bronchopulmonary dysplasia (BPD) as well as mental and physical benefits for the mother.

Human milk protection against infection persists longterm even when it is not further consumed: Immun regulatory effect. Maternal immune memory is transferred to child by HM. Human milk positively affects the immune system and neurocognitive development in dose dependent manner .

The bioactive components of HM protect against infection and inflammation,contribute to immune maturation,organ development, healthy microbial colonization. Human milk hormones, growth factors , gastrointestinal mediators stimulate gastrointestinal growth and motility, and enhance the maturity of the gastrointestinal tract. Human milk is associated with neonatal intestinal colonization by the beneficial microbes of Bifidobacteria and Lactobacillus species. Many other factors such as anti-inflammatory agents (eg, interleukin 10) , polyunsaturated fatty acids,enzymes (eg, platelet-activating factor [PAF] acetylhydrolase), Immunoglobulins, lactoferrin, oligosaccharides(e.g. disialyllacto-N-tetraose (DSLNT) and oligosaccharide 2--fucosyllactose), are all protective against NEC. Osteopontin, milk fat globule membrane proteins, HAMLET are newly discovered immune protective agents of HM. Human milk also has miRNAs, live immun cells(leucocytes) and multipotent and pluripotent stem cells that can be transfered to gastrointestinal system and neonatal tissues.

Lower renal solute load, Whey-dominant proteins, high Omega-3 fatty acid content (DHA ve EPA), better absorbsion of lipids, Zn, iron are important beneficial factors of HM. When compared with formula, HM increase the rate of gastric emptying ,increase the intestinal lactase activity, decrease the intestinal permeability, decrease the risk of NEC and sepsis early in life in premature infants. Preterm infants tolerate HM better than formula, reach full enteral feeds sooner, and are discharged earlier. The incidence and severity of ROP the incidence of BPD and periventricular leukomalasia (PVL) decrease. Improved long-term cognitive development, better Visual and Hearing function, better blood pressure and lipid profiles in adolescence are reported for HM fed ex-preterm infants.

Own mother's milk (OMM) of preterm infant has more protein and minerals in the first few weeks compared to term mother's milk. Together with the other important features this makes fresh OMM is the first preference for the preterm infant. However when OMM is lacking or during the transition time to obtain OMM, pasteurised donor milk (DM) can be used as a second choice. The cost of DM is comparable to preterm formula. In preterm and LBW infants, moderate-certainty evidence indicates that feeding with formula compared with donor breast milk, either as a supplement to maternal expressed breast milk or as a sole diet, results in higher rates of in-hospital weight gain, linear growth, and head growth but a higher risk of developing NEC. Fortification of DM with HM based fortifiers may decrease the risk of NEC.

S69 - FAMILY EXPECTATIONS FROM THE STAFF OF NICU

Kültürsay N.

The needs of family members are mostly not taken into consideration in classical neonatal intensive care units (NICUs). All interest and care is focused on the sick infant. Parents must cope with intense and confusing emotions during the crisis of premature parenthood. They feel shock, worry, anxiety, anticipatory grief reaction and need attention by the healthcare providers. The parents' presence and participation in the care of the infant is fundamental to reduce this stress and to provide optimal care for both the premature or sick infant and family.

Parental needs are frequently reported as support, comfort, reassurance, information and closeness and these needs are mostly unmet in NICUs. Analysis of 60 research revealed six needs (a) accurate information and inclusion in the infant's care, (b) vigilant watching-over and protecting the infant, (c) contact with the infant, (d) being positively perceived by the nursery staff, (e) individualized care, and (f) a therapeutic relationship with the nursing staff. Our survey on our NICU mothers and nurses also revealed that parents need further support.

Physical contact with the baby and participating in care, access to information written in a clear language, more flexible visiting policies to meet different family dynamics, being present at ward rounds, consistency of staff are given as important for parents. Staff must be able to recognise parent's emotional and practical needs and respond appropriately. The needs of parents can be met by informing parents about treatment plan and procedures, answering parents' questions honestly, actively listening to parents' fears and expectations, assisting parents in understanding infant responses to hospitalization and other effective nursing interventions.

During the infants' hospitalization, the relationship between parents and nurses is challenging due to a discrepancy between parents' and nurses' expectations of their roles. Parents–staff relationships and communication in NICU may sometimes be difficult especially for the nurses, but should never be a reason for separating mothers and fathers from their babies . The mothers who have positive relationships with care providers are more satisfied with the care received and report higher levels of psychologic well-being. The parents identify the nurses as the primary source of information.

The emerging care delivery model for NICUs is family-focused, developmentally supportive care. Active involvement in the infant's care and Kangaroo Mother Care give parents a sense of control and strengthen their motivation to be with their infant. Family centred care can help to meet the family needs, reduce the negative impact of premature birth on a family and is associated with long-term benefits.

S70 - RECURRENT PREGNANCY LOSS: WHAT IS THE EVIDENCE BASE NOW?

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A pregnancy loss (miscarriage) is defined as the spontaneous demise of a pregnancy before the fetus reaches viability. It includes all pregnancy losses from the time of conception until 24 weeks of gestation. Primary recurrent pregnancy loss (RPL) is described as RPL without a previous ongoing pregnancy (viable pregnancy) beyond 24 weeks' gestation, while secondary RPL is defined as an episode of RPL after one or more previous pregnancies progressing beyond 24 weeks' gestation. By definition, "recurrent" pregnancy loss is defined as the loss of two or more pregnancies.

GDG recommend the use of "recurrent pregnancy loss" to describe repeated pregnancy demise and to reserve 'recurrent miscarriage' to describe cases where all pregnancy losses have been confirmed as intrauterine miscarriages.

The exact prevalence of RPL is difficult to estimate. Some authors reported 1-2% of women with three or more PL prior to 20 weeks. (Ford, Shust 2009).

Larsen reported a prevalence of 0.8 – 1.4% among women with two or more pregnancies lost (confirmed by US and/or histology). Adding biochemical losses increases the prevalence to 2-3% (Larssen et al. 2013). There is a significant psychological and emotional impact on women and their partners because it represents the loss of a baby and a sense of personal failure. Support and understanding, along with acknowledgement that these reactions are normal and understandable, can help most patients, but some of them will require referral for professional counselling or support.

There are some risk factors for RPL:
- Age (the risk of PL is low in women aged 20 to 35 years and rapidly increases after the age of 40).
- Number of pregnancy losses (there is also a significant decrease in chance of a live birth by increasing number of miscarriages).
- Environmental exposure (exposure to occupational and environmental factors such as heavy metals, pesticides, etc.) seems to be associated with increased risk for RPL).
- Obesity, smoking and alcohol are some other possible risk factors for pregnancy loss.

What do New Guidelines say?
The ESHRE guidelines of November 2017, represents the scientific evidence available at the time of preparation. In the absence of scientific evidence on certain aspects, a consensus between the relevant ESHRE stakeholders has been obtained.

Concerning screening for genetic factors the GDG recommend that genetic analysis for pregnancy tissue is not routinely recommended but it could be performed for explanatory purposes. Parental karyotyping is not routinely recommended in couples with RPL. It could be carried out after individual assessment of risk.

For women with RPL, GDG suggest not to screen for hereditary thrombophilia unless in the context of research, or in women with additional risk factors for thrombophilia. Concerning acquired thrombophilia,

for women with RPL, GDG recommend screening for antiphospholipid antibodies, LA and ACA (IgG and IgM) after two pregnancy losses.

Concerning immunological screening, no immunological biomarker, except for high-titer AFL antibodies can be used for selecting couples with RPL for specific treatments. Immunotherapy, including paternal cell immunisation, trophoblast membranes immunisation, intravenous immunoglobulin, in women with previous unexplained RPL, does not improve the live birth rate.

TSH and TPO antibodies are recommended for thyroid dysfunction. Hypothyroidism arising before conception or during early gestation should be treated with levothyroxine in women with RPL.

There is insufficient evidence to recommend the use of progesterone to improve live birth rate in women with RPL and luteal phase insufficiency.

Treatment of some congenital or acquired uterine anomalies such as hysteroscopic septum resection or submucous myomas may have some beneficial effects (improving live birth rates, and decreasing miscarriage rates, without doing harm), but it should be evaluated in the context of surgical trials in women with RPL.

Concerning treatment of unexplained RPL, vaginal progesterone does not improve live birth rates in these women. There is no evidence to recommended endometrial scratching in women with unexplained RPL.

Concerning cervical insufficiency, in women with a history of second-trimester PLs and suspected cervical weakness should be offered cervical sonographic surveillance. In women with a singleton pregnancy and a history of recurrent second-trimester PL attributable to cervical weakness, a cerclage could be considered. There is no evidence that this treatment increases perinatal survival.

S71 - RECENT ADVANCES IN SURFACTANT REPLACEMENT

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Surfactant replacement became the most effective evidence-based therapy for respiratory distress syndrome (RDS). The mode of administration has evolved from endotracheal surfactant bolus administration during mechanical ventilation over Intubate-SURfactant-Extubate (INSURE) followed by continuous positive airway pressure (CPAP) towards less invasive surfactant administration (LISA) that aims to provide an adequate dose of surfactant effectively while the infant is breathing spontaneously, without positive pressure. These methods include pharyngeal, laryngeal mask, thin catheter or aerosolized surfactant administration. Following LISA, surfactant spreads quickly, making use of its unique biophysical properties without the need for positive pressure ventilation.

The effectiveness of LISA in preventing mechanical ventilation in the first 72 hours strongly depends on GA, and meta-analysis demonstrates that the rate of BPD in infants who have received surfactant by the LISA technique is low compared with standart methods. LISA effectiveness is not high in preterm infants with severe RDS and above 32 weeks. LISA is a manipulation that requires specific skills and should therefore only be performed by neonatologists experienced in airway management. Failure to insert the catheter at first attempt, surfactant reflux, desaturations, bradycardia and/or need for manual ventilation during LISA were observed in <10% to >30% of LISA manipulations. Surfactant deliveries via nebulisation, pharyngeal instillation, bronchoscope or laryngeal mask are alternative techniques that are currently being actively pursued in research, but have not yet been adopted to any significant degree into clinical practice.

New fast bedside lung maturity test on fresh gastric aspirate (GAS) for early targeted surfactant treatment has been developed. The method is designed for use as a predictive test at birth, and a spectroscopic prototype has been developed for bedside use. Clinical trials with this new lung maturity test are planned. On the other hand, lung ultrasonography (LUS) is increasingly used by clinicians in the management and follow-up of RDS in premature infants.

Current evidence suggests that inhaled corticosteroids (CS) may be an effective therapy in the management of developing BPD in preterm infants, but questions about their safety remain. An alternative to inhalation is the intratracheal administration of CS using surfactant as a vehicle, but this approach has only been studied in a limited number of infants.

The supply of animal-derived lung surfactants is limited and only a part of the preterm babies is treated. Thus, there is a need to develop well-defined synthetic replicas based on key components of natural surfactant. A synthetic product that equals natural derived surfactants would enable cost-efficient production and could also facilitate the development of the treatments of other lung diseases than neonatal RDS. Future research will include LISA with new synthetic surfactant preparations. The unique properties of surfactant as a 'vehicle' may be used to facilitate the spread of drugs to the peripheral airspaces in the lung. In this context for example, surfactant/budesonide mixtures are under investigation by various groups, connected with the hope to have good local effectiveness without relevant systemic side effects.

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S72 - ANALYSIS OF STIC FLOW IMAGING CHARACTERISTICS OF FETAL DOUBLE AORTIC ARCH AND RIGHT-SIDE AORTIC ARCH WITH MIRROR CAROTID BRANCH

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Objective
To improve the differential diagnosis of double aortic arch (DAA) and right-side aortic arch combined with mirror carotid artery branches (MRAA) by using 4-dimensional spatio-temoral image correlation (STIC) technology.

Materials and methods
From January 2016 to December 2018, STIC acquisition was used to observe the origin, course and shape of suspected vessels and their branches from different angles, directions by scrolling through the STIC volume.

Result
Prenatal diagnosis of DAA in 4 cases, MRAA in 21 cases, 24 cases had the same prenatal and postnatal diagnosis, 1 case of MRAA was confirmed DAA combined with left aortic arch atresia after birth. In 4 cases of DAA diagnosed prenatally, the suspected vessels converged with the ductus arteriosus(DA) first, and then converged to the descending aorta, the origin of left subclavian artery(LSA) was closer to the descending aorta; in 20 cases of MRAA confirmed after birth, the origin of LSA was closer and proximal of the heart in 19 cases and to the descending aorta in 1 case. Among 25 cases, 21 cases have arch at the beginning of LSA, 3 cases of DAA, the back of the arch pointed to the dorsal side of the fetal body, and 18 cases of MRAA,the back pointed to the ventral side of the fetus.

Conclusion
STIC blood flow assisted in diagnosing whether suspicious blood vessels converge into the descending aorta or not, and the origin, position and morphological characteristics of the LSA are also helpful for their differential diagnosis.

S73 - THE CONSTRUCTION AND APPLICATION OF A CROSS-SECTIONAL DATABASE IN FETAL ECHOCARDIOGRAPHY

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Objectives
Establish a fetal congenital heart disease(CHD) cross-section image database(CSD) to enhance interpretation of ultrasound images obtained from the transverse scanning screening(TSS) protocol to improve prenatal detection of CHD.

Methods
From January 2009 to December 2018, transverse real-time 2-dimensionsal clips were obtained by directing the transducer from the fetal abdomen to the upper chest that included the following: four-chamber, left and right ventricular outflow tracts, transverse ductal and transverse aortic arch, trachea views. The digital cross-sectional ultrasound clips were stored in a database (UCSD). Fetuses in which pathology specimens were available were used to establish a CHD anatomical cross-sectional database (ACSD). The combination of the UCSD and ACSD constituted the CSD.

Results
160 CSDs were established, 48 of them had both UCSD and ACSD, 19 fetuses had only ACSD, and 93 fetuses had only UCSD. During a continuously looped digital display of the UCSD and ACSD, the five views from the four-chamber to the tracheal view were clearly displayed and in high consistency.

Conclusions
The high consistency between UCSD and ACSD can help physicians and sonographers to master the anatomical and ultrasound characteristics of different types of CHD. This could result in an increase in the implementation of the TSS technique, proposed by ISUOG guidelines.

S74 - DOPPLER IS DIFFERENT IN FETUSES WITH SINGLE UMBILICAL ARTERY

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Objectives
To assess the PI trough UA and MCA and to assess the CPR in fetuses with Single Umbilical Artery (SUA) after 21 weeks of gestation
To identify if differences in measurement could change the significance / interpretation and potentially the case management

Methods
A retrospective observational study identified patients with SUA from fetuses examined between 15.11.2011 and 25.02.2018 by single operator.
Fetuses with structural or chromosomal abnormalities were excluded from the study.
We analysed the measured UA's and MCA's PI and calculated CPR for fetuses examined with gestational age between 20-38 weeks by transforming it to MoM and calculating the mean MoM for this group of patients.
As a control and validation of our study population we evaluated the MoM s for UA and MCA PI for the 3 vessel ombilical cord fetuses examined in the same conditions.
UA PI was transformed into MoM using ACHARYA G et al. Reference ranges for serial measurements of umbilical artery Doppler indices in the second half of pregnancy. Am J Obstet Gynecol.2005;192:937-44.
MCA PI and CPR were transformed using C.EBBING, S.RASMUSSEN and T.KISERUD; Middle cerebral artery blood flow velocities and pulsatility index and the cerebro-placental pulsatility ratio: longitudinal reference ranges and terms for serial measurements; Ultrasound Obstet Gynecol 2007; 30: 287–296.

Results
There were 4218 distinct patients and 57 fetuses with SUA (1,35% SUA) and gestational age at exam between 21-38 weeks. Ten fetuses were excluded for other associated abnormalities.
Fortyseven cases with Single Umbilical Artery were analysed.
Mean MoM PI for SUA was 0,0,89 while mean MoM for MCA PI was 0,94.
Calculating CPR MoM resulted in a mean of 1,02.
For the 3 vessel cord fetuses the MoM PI for UA was 1,00.

Conclusions
Our study group have a normal distribution of UA PI related to nomograms for 3 vessel cord fetuses thus validating the use of specific nomograms to evaluate differences for Doppler in SUA fetuses.
Vasodilatation in SUA is a reasoned adaptation consequence to compensate for diminished bloodflow vascular section. This is proven trough reduction in expected PI in SUA around 10%.
In order to maintain the blood / bloodflow in fetal territory a proportional response within fetal cardiovascular system is observed with reduction in expected MCA PI.
Balanced vasodilatation appear to be the rule for otherwise normal fetuses with SUA.
When interpreting and making clinical decision based on individual values either for SUA PI or MCA PI compared with nomograms established for normal fetuses one should take into account the 10% bias due to adaptive balanced vasodilatation in fetuses with SUA.
Only CPR should be used uncorrected for clinical interpretation and decision making in fetuses with SUA.

S75 - METFORMIN IN PREGNANCY: POSSIBLE OR EFFECTIVE?

Arısoy R.

The prevalence of diabetes in pregnancy is increasing worldwide as the pregnant population is becoming older and also as the prevalence of obesity is increasing. The majority is gestational diabetes mellitus (GDM). Gestational diabetes is a complication in about 5% of pregnancies and is associated with complications to the pregnancy and a long-term risk of diabetes in both mother and offspring. GDM should be explained in a detailed way to women at the time of diagnosis of gestational diabetes and offer women advice about changes in diet and exercise. 70–85% of women with GDM can control blood glucose levels with lifestyle changes alone. Medications should be added if needed to achieve glycemic targets. Three pharmacologic therapies are used to treat GDM: insulin, metformin, and glyburide. Metformin is an oral biguanide that primarily acts to decrease hepatic glucose production by inhibiting gluconeogenesis. It also improves insulin sensitivity and increases glucose uptake in peripheral tissues and decreases glucose absorption in the gastrointestinal tract. Metformin in pregnancy crosses the placenta but metformin does not increase congenital abnormalities and is generally well tolerated. Serious side-effects are very rare. In women with GDM, metformin is not associated with increased perinatal complications as compared with insulin. The use of metformin has similar or better results than the use of insulin. Particularly, metformin was associated with less maternal weight gain and less neonatal hypoglycemia. Another advantage of metformin is that metformin has a lower cost and higher patient acceptance, which may increase patient satisfaction and/or compliance. Consequently, metformin has gained acceptance as a safe, effective and rational option for GDM. Moreover, metformin is clearly more attractive than insulin to treat women with GDM.

S76 - WE ARE DEALING WITH CHROMOSOMAL ABNORMALITIES SINCE 30 YEARS: RECENT PRACTICE

Arısoy R.

Screening for fetal chromosomal abnormalities is an essential part of antenatal care. Historically, screening for fetal aneuploidy in pregnancy began in the 1960-1970s with maternal age as the only available marker. Women older than 35 years at the time of delivery were offered genetic counseling and amniocentesis because of procedure- related loss rates. However, screening with maternal age alone (cut-off >35years), could detect about 30% of trisomies. The first breakthrough in screening for fetal chromosomal abnormalities was done in 1988 with the introduction of a multiple marker screening test, based on a "risk" calculation for each pregnant woman using her age and three biochemical markers: human Chorionic Gonadotropin (hCG), maternal serum α-fetoprotein, and unconjugated Estriol (Triple test) from blood samples in the second trimester of pregnancy. In 1992, ultrasound fetal nuchal translucency (NT), by far the single best individual marker, was introduced and in 1997, a new multiple marker screening test the Combined test, using NT, Fb-hCG and Pregnancy Associated Plasma Protein –A was started. Since then various prenatal screening concepts have been developed, the most successful being Down syndrome risk estimation using multiple serum and ultrasound markers. Today a completely new approach to aneuploidy screening is available based on maternal plasma cell-free DNA testing. This has the potential to markedly improve screening performance but routine testing is currently too expensive in a public health setting. However,it can be cost-effective when used in combination with existing multi-maker tests. Presently, combined test in the first trimester is recommended for screening protocol in most countries. For women who do not present until the second trimester, the quadruple screen is recommended. A "genetic sonogram" uses ultrasound to assess the fetus for both structural anomalies and soft markers suggestive of Down syndrome. It is typically performed in the second trimester, but this screening is also useful in the first trimester and is becoming widespread. Women who receive a screen-positive result for any of the screening tests discussed should be offered the choice of an invasive test (chorionic villus sampling- amniocentesis) for genetic testing to definitive diagnosis. If the patient refuses invasive testing, noninvasive screening via cell-free DNA is an option. It is important that patients be counseled about the limitations of cell-free DNA screening in the setting of fetal anomalies as normal results can be falsely reassuring and abnormal results may be falsely positive. In the anomalous fetus, the frequency of a chromosome abnormality depends on the specific anomaly, the number of anomalies, and the combination of anomalies identified. The invasive diagnostic tests should be offered for karyotype analysis to all women with a structural fetal anomaly identified on ultrasound examination.

S77 - THE ROLE OF IMAGING DETECTION OF CONGENITAL DEFECTS IN THE ERA OF PGT-A AND NIPT

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Owing to the improved advances of molecular genetics, exome and genome sequences have been easily performed with shorter turnaround time, less cost and less manpower. NIPT launched from early 2010s, is the placental cell-free DNA test from the maternal blood specimen. NIPT is basically the screening test of three major trisomies however has been used as the screening of other aneuploidy and/or chromosome structural abnormalities such as specific microdeletion syndromes. PGT-A is the pre-implantation screening test by NGS of fertilized eggs and this test is offerable only for IVF pregnancy.

At the beginning of those molecular genetical tests, it had been thought that diagnoses of congenital malformation would be done by PGT-A and NIPT and imaging diagnoses would not be necessary in near future. However, there still be many of intrauterine malformations which cannot be detected by PGT-A and NIPT, such as single gene mutations, complexed genetic mutations, and morphological malformations with unknown causes, cortical malformations during brain developmental stages, intrauterine injuries by circulatory problems or viral infection and others. Detailed ultrasound imaging has been discovering and clarifying those abnormalities.

Recent development of 3D ultrasound has resulted in remarkable progress in visualization of early embryos and fetuses in sonoembryology. Morphological detection of fetal organs has been more and more in detail from the first trimester and longitudinal ultrasound approach during pregnancy can add fetal developmental information. Many of congenital malformations are at present detectable by ultrasound in the first trimester. The ability to visualize not only fetal face, hands, fingers, feet, and toes but also amniotic membranes is better with volumetric ultrasound than conventional ultrasound. Fetal ultrasound further "humanizes" the fetus, enables detailed observation of the fetal face in the first trimester, and reveals that a small fetus is not more a fetus but a 'person' from the first trimester.

Fetal ultrasound further recognizes fetal brain development. Neurosonoembryology has been established and still continues to evolve, and congenital anomalies such as acrania, holoprosencephaly and spina bifida have been detected in early gestation, because primary and secondary neurulation and prosencephalic development occur before the 3rd month of embryo. However, neuronal proliferation, migration and organization, which are important steps of the fetal brain development occur from the end of the first trimester therefore disorders relating to proliferation, migration and organization cannot be detected in the first trimester. While normal heart and other organs maintain almost the same internal structure throughout pregnancy after once being created, brain structure is created toward the final structure throughout pregnancy and shows quite different morphology in the early, middle and late pregnancy. Transvaginal ultrasound neuroimaging has revealed those developmental stage of fetal brain and their malformations in early to middle second trimester. Subtle developmental delay by neuroimaging can lead to the single gene mutation as the cause of congenital neuronal disorder.

Furthermore, owing to the advanced technology of flow detection and four dimensional ultrasound, organ functions can be detectable by ultrasound angiography and fetal movement investigation.
In conclusion, image detection by ultrasonography is the major part of prenatal diagnosis and will continue to play an important role in the future.

S78 - FETAL BRAIN ABNORMALITIES AND GENETIC CAUSES

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Fetal CNS is remarkably developing in the first trimester of pregnancy and changing its appearance from premature tubal structure to the bilateral cerebri, cerebellum and brainstem. Neuro-sonoembryology has been improved with great advances of 3D ultrasound technology such as HDlive silhouette technology and studio-live technology.

Recent advanced transvaginal three-dimensional neuroimaging has successfully demonstrated holoprosencephaly at 9 weeks in a case with 19 mm-CRL. However, detectable CNS abnormalities are limited in the first trimester, such as cranium bifidum, spina bifida and holoprosencephaly because those are congenital malformations resulted from neurulation and/or major prosencephalic disorders. The human brain is remarkably developing with neuronal proliferation and migration and will take place from 3rd or 4th months of gestation.

The term of malformations of cortical development (MCD) was first introduced in 1996 as a group of disorders that result from disturbances of the normal developmental processes of the human cerebral cortex and cause a wide range of developmental disorders of the cortex that are common causes of neurodevelopmental delay and epilepsy. MCDs result from a diverse molecular disruption of normal brain development and manifest as a wide array of anatomical and functional phenotypes, and classified into three groups; Group I as proliferation or apoptosis disorder, including microcephaly, megalencephaly spectrum, focal cortical dysplasias (FCDs) type IIa and IIb, Group II as migration disorder, including tubulinopathies, variant lissencephalies, gray matter heterotopia and cobblestone malformations, and Group III as post-migrational disorder, including polymicrogyria and schizencephaly. In any group or any type of MCD, various gene mutations are deeply responsible as causal factors of cortical maldevelopment. From the early second trimester, the brain structure can br clearly observed by ultrasound and most of congenital brain anomalies can be detected but it is quite hard to detect neuronal proliferation, migration, post-migration and their disorders during pregnancy. Phenotypes of MCDs conspicuously appear after 28 weeks of gestation when cortical gyri/sulci are clearly visualized by sonography. It has been believed that it is quite hard to detect or predict cortical maldevelopment before 28 weeks. "Early detection of migration disorder before gyration" by sonographic neuroimaging is one of our important challenges. From our experience, early detection of MCDs has been possible by using transvaginal high-resolution 3D ultrasound from early second trimester by observation of Sylvian fissure appearance, abnormal early sulcation, irregular ventricular wall, hyperechoic ventricular zone/subventricular zone, persistent ganglionic eminence (GE) and cavitation inside persistent GE, and medullary venous developmental delay. We have been performing close observation of those brain structural changes in detail in cases of MCDs with genetical investigation and believe that our recent challenge for fetal brain may help to establish a new field of fetal neuroscience and contribute to prevention and early intervention in future.

S79 - THYROID FUNCTION IN PREGNANCY

Ayala R.

Although the complications reported, due to hypothyroidism remain low, most of these are of serious consequence and may even be not evident until advanced neurocognitive development of a child born to a mother with thyroid deficiency. Current controversy lies on the stimulus by hCG-b due to analogous protein structure with TSH in early pregnancy stages, which may interfere with current thyroid hormone essays and complicate proper identification of any thyroid hypofunction. Present knowledge on all the functions of these hormones during embryonic and fetal stages are not fully known and may pose a key factor to further enhance a proper prenatal cate. Various organizations recommend performing thyroid function tests only in the presence of risk factors as well as clinical manifestations, although others do encourage doing these tests as a screening on all pregnant women. Within our protocols, we have found a significant population of hypothyroid women, of which, almost half do not have any risk factors or clinical signs or symptoms. Reviewing all what is known about thyroid hormone function, does open a small gap on the possibility of missing a proper diagnosis and prevent complications.

S80 - NEONATAL ASPECTS OF SPINA BIFIDA AFTER PRENATAL REPAIR

Brock Zacharias R.S.

Myelomeningocele (MMC) is a congenital abnormality of the central nervous system resulting from a failure of the neural tube to close, exposing spinal cord and nerves and leading to an abnormal development of the central nervous system and its consequences.

The pre-natal surgical repair offers better prognosis in terms of mobility outcomes, decreased hindbrain herniation and decreased need for cerebral spinal shunting as measurable outcomes when compared to open surgery after birth. Due to this new surgical intrauterine procedure, the neonatal care immediately after birth had to be adjusted accordingly.

The prenatal surgery is related to an increased incidence of C section and prematurity as a consequence of preterm labor or premature rupture of membranes, but it has also lead to a less invasive and short stay in neonatal unit. The neonatal aspects of taking care of MMC newborn has also changed after the pre-natal repair and some aspects should be emphasized. The absence of an opened wound at the back of the newborn allows the neonatologist to resuscitate the newborn in supine position without all the worries of breaking the thin membrane. After the prenatal surgery, the defect is closed, and the temperature control of the newborn is not affected by unprotected internal structures exposed to the environment, and by the leaking cerebrospinal fluid which may increase radiant and evaporative heat loss. Furthermore, we noticed a decrease in antibiotics use and infection rates, influencing positively the length of hospital stay when stratified by gestational age at birth.

In cases of suture dehiscence, a latex free environment is maintained and the wound is taken care by a specialist skin lesion nurse team.

The post-natal care of an infant with myelomeningocele requires a multidisciplinary approach co-ordinated by the neonatology team and involves spinal rehabilitation team, neurosurgery, urology, orthopaedics, physiotherapy and social work that follows a validated protocol.

In Albert Einstein hospital (HIAE) we follow some MMC newborn that have been gone throught the surgery called SAFER (Skin-over-biocellulose for the Antenatal FEtoscopic Repair of myelomeningocele) and I am going to present some of our data and the experience of our team.

S81 - ULTRASOUND IN DELIVERY ROOM NECESSITY OR LUXURY?

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Ultrasound in delivery room although exists for many years the indications are usually for emergency situations.

In recent years clinical evaluation of d labor has emerged and indications with guidelines appeared recently.

In this presentation a new approach to ultrasound in delivery room will be presented.

S82 - FROM SCREENING CHROMOSOMAL DEFECTS TO EARLY DETECTION OF CONGENITAL ANOMALIES

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Screening for chromosomal anomalies during the first and early second trimester has become the standard in modern prenatal care world wide.

However with the advent of early detection of chromosomal de-fects by maternal Non Invasive Prenatal Testing (NIPT), there is a less need for screening examinations. Therefore we anticipate a movement towards diagnosis of fetal malformations in the early gestation.

In this presentation 28 years of experience with early anomaly diagnosis of fetal anomalies will be presented, and the feasibility of what anomalies can be detected will be discussed.

S83 - PLACENTAL TRANSFUSION IN THE DELIVERY ROOM

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During term deliveries, conventional immediate cord clamping (ICC) results in nearly 30% of feto-placental blood volume remain in the placenta, and even gradually more cord blood loss depending on the gestational age during preterm deliveries. Thus, the newborn experiences a relative hypovolemia and usually faces the need for professional assistance for extrauterine transition in the delivery room (DR). This can be prevented by placental transfusion (PT) through either up to several minutes of delayed cord clamping (DCC) or umblical cord milking (UCM). UCM can be accomplished by either cut (c-UCM) or intact cord (i-UCM).

Placental transfusion has many clinically proven benefits for term and preterm newborns. Among these, higher blood pressure, easier extrauterine transition, less need for respiratory support in the DR, higher postnatal hemoglobin and iron stores, lower rates of intraventricular hemorrhage (IVH), postnatal allogeneic transfusions, chronic lung disease (CLD), necrotizing enterocolitis (NEC), and late onset sepsis (LOS) among preterm infants, besides better neurodevelopment in both term and preterm infants are the most important favorable outcomes of PT.

Cord blood is also a very well-known source of mesenchymal and hematopioetic stem cells, as well as endothelial progenitor cells which have been used in several pre-clinical and in a limited number of clinical studies in the field of perinatal regenerative medicine. Some of the complications of extreme prematurity as CLD and brain injury are potential targets of stem cell therapy which has been reported as feasible and beneficial. Conventional approach of ICC during delivery is potentially forcing the newborns to be innocent and ignorant donors of cord blood banks or even worse waste baskets in the DR. Numerous potentially beneficial stem cells remain in the placenta with the left over feto-placental blood by ICC.
Placental transfusion is safe, it does not cause any clinically significant complications as maternal postpartum hemorrhage, increased risk of isoimmunization, polycythemia or hyperbilirubinemia in the newborn.
Although safety and numerous advantages of PT have been consistently demonstrated, implementing this practice is still a problematic issue with the existing barriers. It is time to produce and adopt a global guideline for a team-based approach for placental transfusion in the delivery room. It would be a good start up, if institutional guidelines are developed and individual scientific experience is widely and rather rapidly transferred to knowledge.

S84 - EARLY ONSET NEONATAL SEPSIS IN DEVELOPING COUNTRY

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Introduction
Early-onset sepsis (EOS) is sepsis occurring in within 48-72 h of age. The most important neonatal risk factors for sepsis are prematurity, low birth weight, maternal infection, prolonged rupture of membranes ect. Group B streptococci and Escherichia coli are the most predominant causative agents. Because of its short and long term concequences it is very important to investigate EOS in order to take appropriate measures, especially in situation of limited resources.

Aim
The aim of our study is to investigate incidence, risk factors, the most common causative agents and their susceptibility to antibiotics.

Methods
We studied one year period in NICU, Sarajevo, Bosnia and Herzegovina. Data included: gestational age, birth weight, risk factors, causative agents, their susceptibility to antibiotics, and outcome.

Results
During the studied time there were 426 hospitalized neonates, 20 of them had diagnosis of EOS (4,69%), half of them were boys. Two thirds of patients had dispenea as a leading clinical sign. Mean gestational age was 32,4 GW (range 28-41). Mean birth weight was 2413g (range 1140-4020). Eight deliveries were done by cesarian cestion (40%). Five infants were born after premature rupture of membranes (>18h). Four patients had elevated CRP in the first 12 hours after admission and four had low platelets. Every third mother received antibiotics before delivery, two children died.

Conclusion
Premature rupture of membranes was not significant indicator of EOS development, nor were elevated CRP and low platelets in the first 12 hours after admission. The dominant clinical symptom was dyspnea. Causative agents were predominantly gram negative bacteria (the most frequent Kl. pneumoniae). All gram negative agents were resistant to gentamycin. In the situation of limited resources it is extremely important to monitor clinical sings of infection and bacterial susceptibility to antibiotics in order to select appropriate therapy.

Key words
EOS, risk factors, causative agents

S85 - EPIDEMIOLOGY OF PREECLAMPSIA

Kavak S.B.

Preeclampsia is a disease known since Hypocrats. However, its pathophysiology is still unclear. The incidence is 2.6% in developed countries and 8-10% in other countries. Today, the only definitive treatment of this fatal disease is giving birth.

Preeclampsia has well-understood risk factors. Risk factors have been classified as pregnancy-specific factors, pre-existing maternal conditions, and environmental factors. Preeclampsia is more common in primigravid patients or in women with an advanced age, preexisting hypertension and/or renal disease, pre-existing diabetes or gestational hypertension, a family history of preeclampsia, obesity, insulin resistance and maternal susceptibility genes. Primipaternity as well as limited sperm exposure; pregnancy after oocyte donation, donor insemination, multifetal pregnancy; and hydatidiform mole have also been identified as risk factors for preeclampsia. On the other hand, maternal physical activity and smoking reduce the risk of preeclampsia. While modifiable risk factors can be regulated before or at the onset of pregnancy, unmodifiable risk factors such as race and genetics affect the prevalence of the disease

To date, more than 300 classification of hypertensive diseases of pregnancy has been proposed. In some patients, diagnosis of preeclampsia is difficult. Disease-specific findings may be confused with symptoms of normal pregnancy. Gestational age at the time of diagnosis affects treatment. Preeclampsia continues to be the leading cause of maternal and fetal deaths worldwide. Therefore, many of the efforts in prenatal care focuses on timely detection of preeclampsia. Biochemical, ultrasonographic and specific risk factors are used for prediction and diagnosis. Mean arterial blood pressure is another important prediction test. Tests are most commonly used in combination to improve diagnostic accuracy. Although some drugs such as low-dose aspirin and pravastatin, which have recently been used for high-risk patients, yield positive results, research is ongoing.

Until definitive treatment is found, preeclampsia will continue to be a major public health problem.

Keywords
Risk factors of preeclampsia, Maternal and fetal mortality

S86 - FETAL ANEURYSMS - WHAT TO DO

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Fetal aneurysms are extremely rare vascular anomalies, whose incidence is yet unknown. These malformations have been described in a small number of case reports.
In most cases the diagnosis is made postnatal while antenatal diagnosis, because of the pathophysiology of aneurysm itself, as well as pathophysiology of its possible complications, is made usually during the third trimester, frequently after the 34th week of gestation.

The most often among them are: the Galen vein aneurysm, Umbilical artery aneurysm, umbilical vein aneurysm, fetal abdominal aortic aneurysm.

The Galen vein aneurysm (AVG) are abnormal connections between arteries and deep draining veins of the brain which develop before birth. They are formed between 6 and 11 weeks of gestation. AVG is not associated with chromosomal abnormalities but it can demonstrate signs of volume overload as cardiomegaly and hydrops, so the neonatal prognosis usually is poor with high incidence of morbidity and mortality. Prenatal diagnosis is usually make during the third trimester and ultrasound is usually sufficient to diagnose.

Umbilical artery aneurysm is a rare condition. It is associated with high risk of fetal aneuploidy and fetal demise.

Fetal umbilical vein aneurysm is an uncommon anomaly. The rate of intrauterine fetal death is reported to be approximately 4% to 5%. The main prognostic feature associated with a poor outcome of umbilical vein aneurysm seems to be the presence of other anomalies.

When the diagnosis of fetal aneurysm is made, the patient should undergo a detailed ultrasound evaluation of the fetal anatomy, including fetal echocardiography, to exclude associated anomalies. Amniocentesis or cordocentesis should be offered when other anomalies are found. Patients should be informed about the potential or an unfavorable outcome of pregnancy and should undergo close ultrasound surveillance to assess the size of the aneurysm, as well as any evidence of thrombosis

Advances in high-resolution ultrasound combined with color Doppler and 3-dimensional rendering have contributed to an increased understanding and finding anomalies of the fetal venous circulation in recent years.

Even though they are rare, some of these anomalies are of special interest to interventional radiologists, because of potential endovascular treatment which should be proven.

S87 - 3D ULTRASOUND ASSESSMENT OF CYSTIC ANOMALIES OF THE FETAL BRAIN

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Objective
The objective of this study was to compare 2D and 3D ultrasound in the evaluation of anatomical location, size, shape of cystic anomalies of the fetal brain and their effect on adjacent structures.

Methods
All scans were performed using E8 or E10 General Electric equipment (Zipf, Austria), with a 5-8 MHz 3D transabdominal and 5-9 MHz 3D transvaginal transducer. 117 cases with cystic brain anomalies were observed and analyzed offline using computer dedicated software (4D View, GE, Austria, Zipf) and compared with 2D images.

Results
117 fetuses with cystic brain lesion were sonographically diagnosed between the years 2009 and 2019. Gestational age at the time of diagnosis ranged from 18 to 38 weeks. With the help of different 3D display modes, such as 3-orthogonal-plane display or parallel-plane display, it has become possible to obtain a detailed view of the intracranial morphology, which enables to diagnose subtle anomalies of the fetal brain, such as cystic anomalies of the fetal brain. 3D ultrasound provides precise information about the anatomical location, size, shape of the cyst as well as their effect on adjacent structures compared to 2D ultrasound. This enables an exact classification of the cystic anomalies according to anatomical origin into extraaxial, intraparenchymal or intraventricular. The differential diagnosis includes normal variants of the cavum septi pellucidi and cavum vergae, periventricular pseudocysts, vascular cystic like structures, hemorrhagic cysts and infections cysts. The most common cystic structures were subependymal cysts and choroid plexus cysts.

3D ultrasound enables the differential diagnosis between periventricular pseudocysts and periventricular leukomalacia.

Conclusion
The introduction of high–frequency transabdominal and transvaginal 3D ultrasound probes has enabled a precise evaluation of the fetal brain. Furthermore, the correct classification of brain cystic lesions allows to give optimal advice to the parents, which permits to reduce the parents' anxiety regarding the outcome of their newborn.

S88 - PRENATAL DIAGNOSIS OF SKELETAL DYSPLASIA BY ULTRASOUND

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Using a high resolution 2D and 3D vaginal probes and a high frequency, the fetal skeletal scan can be effectively performed at the end of the first and at the beginning of the second trimester. Diagnosis of bone dysplasia and abnormalities of the musculoskeletal system is a very difficult task. It is crucial to study the entire fetus, extremities, spine, skull and chest.
There are about 200 bone dysplasias, the most of skeletal dysplasias have a low risk of connection with chromosomal aberrations, except for a small risk for trisomy 18 and 13 and neuroarthrogriposa.
The medical examination consists of:

1. Evaluation of all three bone segments: distal, proximal and middle segment;
2. Evaluation of long bone mineralization, measurement of a long bones.This is especially important for categorization of bone dysplasia;
3. Evaluation of fetal position and movement;
4. Estimation of the small bones of the hand and foot
5. Estimation of the configuration and mineralization of the skull bones, extremities, vertebral column and chest.

In addition to the above systematic examination, it is necessary to have family history data on the existence of a musculoskeletal disorder in any family member, which is important information because disorders of the musculoskeletal system have typical patterns of inheritance.
The incidence of skeletal dysplasia is 3-4 per 10,000 and perinatal infant mortality is 9 per 1,000.
It is difficult to estimate the incidence of individual skeletal dysplasias, as there are some entities that mimic skeletal dysplasia including dysmorphic and intrauterine growth restriction.
Many of these dysplasias are lethal (imposible to survive). The diagnosis is based on an anatomically morphological study assessing the characteristics of the enchondral ossification line or DNA assessment.
Skeletal dysplasia is a complex group of anomalies with different features and prognosis.
According to the international classification they are divided into five groups:

1. Osteochondrodysplasia (disorder of growth and development of bone or cartilage);
2. Dystoses (reduction of individual bones or their curvature);
3. Idiopathic osteolysis (disorders associated with multifocal bone resorption);
4. Skeletal disorders associated with chromosomal aberrations;
5. Primary metabolic diseases with associated skeletal disorders.

Most of these skeletal anomalies can be detected and diagnosed using ultrasound during inuteruterine life.

Keywords:
Sceletal dysplasia, pernatal dignostic, 2D and 3D ultrasound.

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S89 - MORBIDLY ADHERENT PLACENTATION AND ANTENATAL DIAGNOSIS BY FIRST TRIMESTER ULTRASOUND SCREENING

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FACOG

Introduction
Morbidly adherent placenta, a term used to describe abnormal placental invasion and implantation into the myometrium, includes the spectrum of abnormal placentation, categorized into accreta, increta, and percreta. This is associated with significant maternal morbidity and mortality due to life-threatening risk of hemorrhage. The incidence of abnormal placentation has increased in the past 4 decades due to higher rates of cesarean deliveries, uterine surgeries, endometrial curettages and other maternal comorbidities. Morbidly adherent placenta is rarely diagnosed by prenatal ultrasonography in the first trimester.
We report a case of morbidly adherent placenta diagnosed by first trimester ultrasonography, which resulted in spontaneous uterine rupture and intrauterine fetal demise at 15 weeks gestation.

Case Presentation
A 33-year-old patient with history of two prior cesarean sections presented with recurrent vaginal bleeding in the first trimester. The patient was diagnosed with subchorionic hematoma by ultrasound at 9 weeks gestation. A nuchal translucency screening ultrasound performed at 12 weeks gestation diagnosed placenta previa with abnormal placental implantation that was suggestive of placenta accreta.

Ultrasound findings noted an abnormal placental interface with the uterine wall identified by multiple venous lakes, increased vascularity with vessels invading the myometrium from the placenta and an ill-defined demarcation between the placental and uterine wall. The patient continued to have intermittent vaginal bleeding and a follow up ultrasonography at 15 weeks diagnosed intrauterine fetal demise with a large subchorionic hematoma. The patient underwent total abdominal hysterectomy and bilateral salpingectomy with initiation of massive blood transfusion protocol due to significant intra-abdominal hemorrhage from the placental site. Intraoperatively, the patient was diagnosed with spontaneous uterine rupture with placenta protruding out of the ruptured uterus. The surgical pathology report confirmed placenta percreta. The patient had an uneventful postoperative recovery period.

Discussion
Our case report highlights the importance of early recognition and diagnosis of abnormal placentation by prenatal ultrasonography in the first trimester. Our case and other case studies report similar first trimester ultrasound findings suggestive of abnormal placentation such as low placenta implantation site, unclear retro-placental space, and hypervascularity of the dilated lacunar spaces. First trimester screening ultrasound protocols are lacking in evaluation, awareness and diagnosis of abnormal placentation for the high-risk patients.

Literature review confirmed that morbidly adherent placentation is rarely detected and a diagnostic challenge in the first trimester. The first trimester ultrasound diagnostic sensitivity of 41% and specificity of 88% is lower when compared to second and third trimester. The second trimester ultrasound diagnosis has an improved sensitivity of 60% and specificity of 83.5% with a greater sensitivity of 71.4% and specificity of 88.5% in the third trimester.

Conclusion

This case warrants further research and training in improving first trimester ultrasound detection rates of abnormal placentation in high risk patients. Early detection is essential in the management of morbidly adherent placenta by equipping the obstetrical team with better preparedness and thus reduce or prevent significant life threatening adverse maternal and fetal outcomes.

S90 - ABNORMAL COILING OF THE UMBILICAL CORD DIAGNOSED PRENATALLY AS A MARKER FOR ADVERSE PREGNANCY OUTCOMES

Ladella S.
FACOG

Introduction
The umbilical cord plays a vital link between the fetus and the placenta for survival, growth and development of the fetus. The normal configuration comprises of single umbilical vein that carries oxygenated blood to the fetus and two umbilical arteries that remove deoxygenated blood from the fetus. A characteristic gross feature of the umbilical cord is the helical coiling pattern that develops during the second and third trimesters.

Postnatal studies of abnormal umbilical cord coiling have shown correlation with adverse pregnancy outcomes but limited studies have focused on identification of abnormal coiling in utero to predict and prevent adverse outcomes in pregnancy.

Our study looked at antenatal diagnosis of abnormal umbilical cord coiling index by prenatal ultrasound screening and the association with adverse pregnancy outcomes with the goal to increase awareness and close surveillance for pregnancies complicated with abnormal umbilical cord coiling index.

Methods
A retrospective cohort study was performed on patients seen at high risk clinic, affiliated with Central California Faculty Medical Group, UCSF Fresno, CA. Patients with abnormal antenatal umbilical coiling index (aUCI < 0.17 or > 0.41) diagnosed prenatally during study period 07/2017 to 09/2018, were compared to patients with normal coiling index. The aUCI was calculated as the reciprocal value of the mean pitch of one complete coil. Patient data was abstracted from Viewpoint ultrasound reporting system, and electronic medical records. Adverse outcomes such as polyhydramnios and intrauterine growth restriction (IUGR) were excluded if complicated with maternal diabetes or hypertension.

Results
During the study period, 32 patients with abnormal aUCI were compared with 65 patients with normal aUCI. Twenty-three patients had hypercoiled cord (aUCI > 0.41) and 9 patients had hypocoiled cord (< 0.17). The percentage of IUGR was higher in the abnormal aUCI group (18.8%) compared to the normal aUCI group (6.2%) with borderline significance (p=0.05). Of the 12 patients who had polyhydramnios in the abnormal aUCI group, 9 were included and 3 excluded due to underlying gestational diabetes. The percentage of polyhydramnios was significantly higher in the abnormal aUCI group (28.1%) compared to the normal aUCI group (7.7%) (p< 0.05).

Conclusion
In our pilot study, we found a statistically significant association of adverse pregnancy outcomes in patients with antenatal ultrasound diagnosis of abnormal umbilical coiling index. We recommend routine second trimester ultrasound screening of all patients for detection of abnormal umbilical coiling. Early diagnosis can help reduce adverse perinatal outcomes by increasing antenatal surveillance and monitoring of these pregnancies. Ongoing future studies will focus on larger sample size over longer duration, neonatal outcomes and validating current findings.

S91 - EPIDEMIOLOGY OF ANEMIA IN PREGNANCY IN TURKEY AND PROPER PROPHYLAXIS

Göncü Ayhan S.

Anemia in pregnancy is a common health problem with a 42% worldwide prevalence. World Health Association (WHO) placed Turkey in the severe group for pregnant women, with an anemia prevalence of 40%. National epidemiologic study on the prevalence of anemia in Turkey does not exist but some regional studies were published. In these studies, the reported prevalence of anemia during pregnancy was 29.4% in Afyon, 42.4% in Elazığ, 27.1% in Malatya, and 20% in Ankara. The different rates can be explained with demographic, cultural, and socio-economic factors. Iron deficiency is the most common cause of anemia with a ratio of 50%. Complete blood count and serum ferritin levels are adequate for diagnosis. A serum ferritin concentration <30 μg/L together with an Hb concentration <11 g/dL during the first trimester, <10.5 g/dL during the second trimester, and <11 g/dL during the third trimester are diagnostic for anemia during pregnancy. Iron prophylaxis is given to pregnant women to meet the increased iron demand. WHO recommends routine supplementation of all pregnant women with a single daily dose of 60 mg iron for six months during pregnancy. In Turkey, routine iron supplementation to all pregnant women has been advised since 2005. Pregnant women should attend antenatal clinics in the first trimester for the best management of anemia. Oral iron preparations can be used throughout pregnancy and should be given as first-line therapy. Iron2+ salts are the most frequently used oral iron preparations for the treatment of anemia. They are administered either in tablet form or as solutions. Iron3+ salts have very low bioavailability and not indicated for oral administration. Iron3+ polymaltose complex dextriferron is one of the few available oral Iron3+ compounds and belongs to the class of so-called slow-release iron preparations. The advantages of this iron preparation are its less side-effect profile compared with Iron2+ salts as a result of the slow release, and it can be taken with meals. IV iron therapy is recommended during 2nd and 3rd trimesters, but it cannot be used during first trimester because of missing safety data of first-trimester supplementation. IV iron should be given to women who cannot tolerate oral iron, those who have severe anemia later in the pregnancy; those for whom oral iron does not effectively increase the hemoglobin and/or ferritin levels, and those with anatomic abnormalities such as history of bariatric surgery or other conditions that interfere with oral iron absorption like inflammatory bowel disease.

S92 - NEONATAL MANAGEMENT AND LONG-TERM PROGNOSIS OF IUGR FETUS

Yiğit S.

Intrauterine growth retardation (IUGR) is defined as a decreased rate of fetal growth than expected normal rate for gestational age, based on the race and gender of fetus. Small for gestational age (SGA) and IUGR have been used interchangeably, however there is a difference. SGA is a term used for neonates whose birth weight is less than the 10th percentile for that specific gestational age. IUGR indicates in utero growth restriction of a fetus irrespective of their birth weight percentile. An infant with a birth weight between 10-90 percentiles can be IUGR and demonstrate signs of fetal malnutrition. Problems are more commonly observed in IUGR / SGA babies compared to on IUGR/ AGA peers include need for neonatal intensive care, perinatal asphyxia, meconium aspiration, pulmonary hypertension, hypoglycemia, polycythemia, indirect hyperbilirubinemia, sepsis, convulsions, hypotension, renal dysfunction, necrotizing enterocolitis and need for mechanical ventilation in early postpartum period. Mortality risk is also significantly increased in those babies. Neurodevelopment, vision and hearing impairment, abnormal bone development, diabetes, obesity, hypertension, dyslipidemia, increased risk of cardiovascular diseases and reproductive problems are common long term adverse outcomes.

At birth a skilled team should be present to resuscitate the IUGR infant since they may not tolerate labor stress upon chronic intrauterine hypoxia. Thermal regulation should be monitored because of decreased brown fat deposition in utero. Hypothermia should be prevented since it will result in increased metabolic rate and augment hypoxia. Respiratory and cardiovascular monitorization are necessary for increased rate of respiratory distress due to meconium aspiration, pulmonary hypertension or respiratory distress syndrome. Close blood glucose monitoring is warranted because hypoglycemia or hyperglycemia are often. Intravenous fluids may be necessary to maintain blood glucose after birth in severe cases, formula feeding is not recommended to prevent hypoglycemia in this group due to increased risk of necrotizing enterocolitis. Physical examination usually reveals findings of malnutrition. Genetic disorders and TORCH infections should be investigated in infants with IUGR beginning early in gestation. Anthropometric measurements may give a hint for prognosis. Symmetric IUGR (all growth parameters are effected) indicates high mortality and morbidity while asymmetric IUGR (head sparing) indicates better prognosis. Clinical Assessment of Nutrition (CAN) score can give information about the degree of fetal malnutrition. As the birth weight percentile decreases, the frequency of morbidity and mortality increases. However there is no certain cut off point for degree of fetal malnutrition or percentile to predict morbidity or mortality in IUGR/SGA infants. SGA infants are a heterogeneous group with a birth weights below ten percentile. In a study we aimed to determine a specific risk percentile for common morbidities of SGA infants. Sepsis, NEC, hypotension, need for transfusion and mechanical ventilation were found more common in SGA infants below 5 percentile.

S93 - DEMOGRAPHIC TRENDS IN BOSNIA AND HERZEGOVINA – CURRENT STATUS AND PROSPECTS

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The 2013 census data analysis has shown that Bosnia and Herzegovina has permanent population of 3 531 159. Population of Federation of Bosnia and Herzegovina is 2 219 220, the RS 1 228 423, and Brčko District 83,516. Negative difference in total population according to the census from 1991 and 2013 is 845, 874, representing relative decrease of 19.3 %. According to demographic projections of the United Nations (medium option), it is expected that by the year of 2050, population of Bosnia and Herzegovina, compared to 2015 will have decreased by 20 percent (UN, 2015).

From 2013 to 2016, by looking at only negative difference between live birth and dead born babies we lost population of 23,000. According to the data of the Union for sustainable return and integration of BiH, more than 150,000 left Bosnia and Herzegovina in the period from 2013 to 2017. According to demographic projections of the United Nations (medium option), it is expected that by the year of 2050, population of Bosnia and Herzegovina, compared to 2015 will have decreased by 20 percent (UN, 2015). Representative example of population policy in developed European countries such as Sweden. It is known for its specific «Scandinavian» approach to population policy, which is also known as family policy, which is directly under welfare policy within the welfare state. Belarus and Ukraine had very bad demographic status as in 2004 the total fertility rate in Belarus was only 1.23 children per woman, and 1.21 in Ukraine, the indicators placing these countries on the bottom of the world list. Financial support allocated for first child is 3,259 dollars, 6, 441 dollars for the second child, while the allowance for the third or more children is up to the amount of 13,067 dollars. Apart from this, the state provides housing for families with five and more children, while families with three or more children, also receive subsidies for the water, electricity, gas and phone bills by 50 percent. Women with 5 children, along with 1,500 dollars, get a title of 'national hero'.

What can we do? What is demographic potential for increase of live born babies in Bosnia and Herzegovina? Conduct research on main reasons for women not choosing to have another child.

Leading active pro-natalist policy with achievable expected results. Policy enabling good living and working conditions for return of youth whose parents (or their ancestors) who fled or emigrated in circumstances of bad economic situation and frequent wars and conflicts in the past two hundred years. Example of China (bamboo network).

Key words
population, demographic potential, birth rate.

S94 - ANTENATAL DETECTION OF A SMALL-FOR-GESTATIONAL-AGE FETUS AND CONSEQUENCES FOR OBSTETRIC MANAGEMENT AND NEONATAL OUTCOMES

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Objective
To assess the benefit of the screening protocol for small-for-gestational-age (SGA) neonates and to evaluate the benefit of antenatal diagnosis of fetal growth restriction (FGR) on obstetric management and neonatal outcome

Method
We performed an observational study of a historical cohort of 269.623 structurally and chromosomally normal singletons born in Slovenia from 2002 to 2017. Screening for FGR was performed by the measurement of fundal height starting at 24th gestational week in normal pregnancies and by serial US biometry in high risk pregnancies. We estimated the prevalence of SGA neonates, sensitivity, specificity, positive (PPV) and negative predictive value (NPV), and the Matthews Correlation Coefficient (MCC). We compared 3388 SGA neonates (birthweight < 10th percentile), antenatally suspected of FGR (true positive), 3606 non-SGA neonates, suspected of FGR (false positive), 15 139 SGA neonates without suspicion of FGR (false negative) and 247 490 non-SGA neonates without suspicion of FGR (true negative). Multivariable analyses were performed adjusted for relevant maternal and neonatal characteristics to evaluate the benefit of antenatal diagnosis of FGR for an obstetrical and neonatal outcome.

Results
The prevalence of SGA neonates was 6.87%. Sensitivity and specificity of the screening protocol was 18.29 % and 98.56%, respectively, with PPV of 48.44% and NPV of 94.24 %. The MCC showed low positive correlation between the screening protocol and diagnosis of SGA (0.27). The results of the comparisons of the obstetrical and neonatal outcomes are presented in Figure 1. We found no significant differences in neonatal outcomes between suspected and unsuspected SGA neonates, despite a significantly higher rate of cesarean deliveries and preterm births in suspected SGA neonates.

Conclusion
Screening for FGR by the measurement of fundal height starting at 24th gestational week in normal pregnancies and by serial US biometry in high risk pregnancies is not beneficial neither for diagnosis of SGA neonates nor for improving their neonatal outcome.

S95 - SCREENING AND PREVENTION OF FOETAL GROWTH RESCTRICTION

Frusca T.

Effective primary prevention of diseases can be obtained only in cases where characteristics of population or biochemical and biophysical markers can differentiate patients who will be affected by the desease from patients who will not, that is in case of FGR being able to predict high risk patients early in the first trimester. This is quite a different aim from the prediction/identification of IUGR. in the third trimester

Prediction /identification of IUGR in the third trimester relay on ultrasound evaluation of foetal growth, either EFBW or CA, and on the ability to differentiate IUGR from constitutionally SGA.

As regard to ultrasound measurements we have to underline the problems given by the use of different formula and different charts, for example between 2.6 and 23.6% of measurements would be classified as abnormal using three different charts of foetal biometry that are commonly used.

Recently a meta analysis by Caradeux (AJOG 2019) has reviewed 21 studies on more than 80.00 patients with ultrasound measurements in the third trimester and has reached the conclusion that:
1. Pooled data on the prediction of birthweight <10° centile showed observed
sensitivities of AC and EFW <10° of 38% and 35% respectively
2. The sensitivity of EFW <10° was better when aimed to FGR than to SGA.
3. Meta-regression analysis showed a significant increase in sensitivity when ultrasound evaluation was performed later in pregnancy

Different management is due in case of real intrauterine growth restriction compared to constitutionally small for gestational age. This underlines the role of a differential diagnosis. A recent Delphi procedure has pointed out the role of fetal Doppler velocimetry in order to correctly identify real growth restriction. (Gordijn UOG 2016).

Identification of population at risk in order to give primary prevention relay on clinical characteristics and on biochemical and biophysical markers. For this reason it is very important to investigate patients at high risk such as with previous intrauterine deaths, previous severe IUGR , previous thrombotic events that could be related to rare conditions, such as antiphospholipid syndrome or specific autoimmune diseases or chronic conditions in which specific treatment (i.e. the use of heparin aspirin clorochine or others) can have an significant impact on the outcome of pregnancy. In general population however neither biophysical nor biochemical markers are very effective in identification of population at risk of isolated IUGR at time when primary prevention could be used, in the first trimester. The best algorithm for identification of population at risk incorporate uterine artery Doppler velocimetry and biochemical markers not commonly used (ADAMS 13 ,PP13,PlGF), detecting 73% of cases of earli SGA (Karagiannis 2011

Prevention of IUGR is effective in case where growth restriction is associated to preeclampsia or in case of severe early foetal growth restriction , while it is not proven to be effective in preventing late growth restriction . The same kind of conclusion are related to the use of heparin , as its role has been proven in cases of severe foetal growth restriction related to placental vascular diseases.

Despite intensive research on NO donors and on its potential vasoprotective role , there is lack of evidence based data on its role for prevention of complications such as preeclampsia and IUGR. Recently gene therapy has been advocated for treatment and prevention of IUGR , experimental studies with adenoviral VEGF gene therapy in a sheep model has given interesting results , but as far as now there is no clinical application.

S96 - EARLY AND LATE IUGR

Frusca T.

The definition of Early and late IUGR refers to very different conditions as outlined by the Delphi procedure adopted and published on UOG2016 by Godrijn.
According to this paper, reporting the opinion of experts Late IUGR is defined when AC or AFW are below 3rd centile after 32 weeks or when at least two of the following criteria rematched: AC/EFW <10 centile, AC/EFW crossing >2 quartile in fetal growth charts, CPR<5centile or Umbilical artery >95 centile.
No consensus in this discussion with experts was reached about the role of abnormal uterineartery velocimetry in the definition of growth restriction. Recently the role of umbilical vein blood velocimetry or flow has been reported as a useful parameter to discriminate GR from SGA and to identity cases with a poor perinatal prognosis (Rizzo UOG2019) The role of Doppler in the differential diagnosis between SGA (consitutionally small babies) and late Foetal growth restriction is well recognized as suggested by many authors (Figueras UOG2014). A randomized trial is ongoing (TRUFLE2) about the management of this condition,with particular interest in when and how to deliver this babies according to presence of cerebral redistribution as defined by abnormal CPR (cerebroplacental ratio) or U/C (umbilical cerebral ratio) .
Early IUGR is frequently associated with placental vasculopathy and with preeclampsia. the definition relay not only on the onset of this condition before 32 w of gestation but mainly on the presence of elevated umbilical artery PI. He TUFFLE 1 randomized study gave answers to the role of computerized CTG and Ductus venosus velocimetry in the management of such condition, both representing essential tools in the decision of timing of delivery in early severe GR.(Lees and Truffle group UOG 2013, Lancet 2015, UOG2017, Frusca AJOG 2018)

S97 - SEAMLESS INTEGRATION OF FIRST TRIMESTER SCAN, SERUM BIOCHEMICAL MARKERS, AND NONINVASIVE PRENATAL TESTING (NIPT)

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Screening strategies for fetal aneuploidies are based on individual risk calculated from maternal age and nuchal translucency (NT) measurement and/or maternal serum markers and/or other ultrasound markers in the first trimester (defined by the conventional crown–rump length range of 45–84 mm). Following such screening, women can be offered a choice, according to their calculated individual risk, of having no further testing, noninvasive prenatal testing (NIPT or DNA-based prenatal screening), or invasive testing. Cut-offs, defining two (low/high risk) or three (low/intermediate/high risk) groups, should be defined on a local/national basis and will be affected by public health priorities and available resources. Offering NIPT should always be balanced with the potential and risk of conventional karyotyping, with or without microarray analysis, following invasive sampling. More importantly, the role of NIPT as an alternative to standard invasive testing in women considered to be at very high risk after combined screening (>1:10) but with no ultrasound anomaly should be evaluated in prospective studies. Expert opinion currently suggests that NIPT should not replace routinely invasive testing in this group, based on the fact that, in this population, only 70% of aneuploidies are trisomy 21, 18 or 13, and that chromosomal microarray analysis, if offered, is able to detect a large number of additional anomalies.

S98 - THREE-DIMENSIONAL ULTRASOUND IMAGING IN THE DIAGNOSIS OF ECTOPIC PREGNANCY

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Morbidity and mortality of ectopic pregnancy(EP) have been drastically reduced since the first successful surgical removal of a Fallopian tube ectopic pregnancy in 1884 by R L Tait. Diagnosis and treatment were revolutionized by the introduction of quantitative serum beta HCG essay, high frequency transvaginal ultrasound (TVS), laparoscopic surgery, and interventional radiology with uterine artery embolization. In this chapter, the focus will be on transvaginal sonographic diagnosis of ectopic pregnancy in various locations. With 2 D color Doppler TVS having established itself as state-of-the-art diagnostic tool for EP, it will be discussed whether the additional use of 3 dimensional TVS facilitates the diagnosis of EP.

Keywords
Ectopic pregnancy, 3 D ultrasound, tomographic ultrasound imaging, color/power Doppler

S99 - SECOND TRIMESTER FETAL GROWTH RESTRICTION: ETIOLOGY AND MANAGEMENT.

De Robertis V.

Aim

Second trimester fetal growth restriction (FGR) is a rare condition. The detection of these very early small fetuses is clinically relevant because this condition is associated with significant perinatal morbidity and mortality. The aim of this talk is to analyze the most frequent etiologies and to sort out the obstetric management of pregnancies affected by FGR onset before 24 weeks' gestation.

Discussion

Second trimester FGR occurs between 17 and 24 weeks of gestation. This anomaly could be suspected at the time of second trimester scan by fetal biometry as abdominal circumference (AC) is <10th percentile for gestational age. The first step in the diagnostic algorithm of FGR is to establish the accurate dating of pregnancy. In cases where the fetus appears to be small gestational age (SGA), an etiological diagnosis should be attempted. The causes of FGR are fetal, maternal, environmental and placental. Firstly a detailed US scan should be performed to exclude major congenital anomalies; fetal and maternal Doppler Velocimetry should be evaluated to identify a placental etiology of FGR. In absence of Doppler abnormalities, genetic causes should be excluded offering fetal karyotype supplemented by CMA. Moreover infectious workup, including serology for maternal extended TORCH may be considered. When FGR is suspected or identified, an accurate US and Doppler follow-up is worth in order to identify features of fetal acidosis- hypoxemia, which could lead to permanent fetal neurological damage or stillbirth.

S100 - IUGR, METABOLIC SYNDROME AND STRATEGIES FOR INTERVENTION

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Intrauterine growth restriction (IUGR) refers to the failure of the fetus to achieve its designated growth potential because of anatomical and/or functional disorders or diseases in the fetal–placental–maternal unit. Size at birth depends on the fetus's trajectory of growth, and the maternoplacental capacity to supply sufficient nutrients to maintain this trajectory. IUGR is diagnosed when a fetus does not reach its growth potential, complicates 7–10% of all pregnancies and is related with increased risk for adverse perinatal outcome and long-term fetal programming in the form of cardiovascular disease, metabolic syndrome(MS)(obesity, diabetes, fatty liver, dyslipidemia) and neurological deficits as David Barker et al have described since 1989. MS has become the most important health epidemic of the 21st century.

When fetal uptake of glucose, O2 and amino acids is decreased through maternal circulation, the fetus is adapted to undernutrition by mechanisms responsible for the energy and glucose metabolism, such as enhanced peripheral insulin sensitivity for glucose utilization, increased hepatic glucose production, lowered insulin sensitivity for protein synthesis in muscles, and impaired pancreatic development.

This provides the energy for cellular oxidative metabolism, but in the same time reduces the demand for amino acids for growth and anabolic hormone production and increases glucose production in the liver to maintain glucose supply to vital organs. These adaptations maintain the energy-dependent basal metabolic functions at the expense of body growth and lead to asymmetrical growth restriction of the fetus with abnormal growth of various organ and vascular development. Lean mass, lipid stores and number/size of skeletal muscle cells is decreased and subcutaneous tissues exhibit the most pronounced growth restriction, in favor of the brain growth: the "thrifty phenotype"

Variations in the processes of development through epigenetic modifications affect gene expression without alterations in DNA and program the function of vital systems linked to disease. If these adaptive modifications persist, they have the potential to promote energy absorption beyond metabolic capability thereby causing insulin resistance, obesity and T2D in adulthood. The accelerated postnatal nutrition and growth, -'catch-up' growth-, is one of the most important triggers of hypertension and cardiovascular complications in adult life.

Several interventions, nutritional and drug-related, have been proposed; the most of them are in experimental models and has shown that the above changes are correctable if the intervention is introduced very early in life. Replacing nutrients, oxygen, anabolic hormones (GH, IGF 1) and growth factors that promote β-cell development, insulin secretion and energy and net protein accretion in mother and fetus, improve the growth. NO donors (Larginine, sildenafil) have been used to increase uterine blood flow. Exendin 4 (Ex-4), a glucagon-like peptide (GLP)-1 analog, reverses the adverse consequences and prevents the development of diabetes in adulthood. PPAR and LXR are nuclear receptors which control the expression of genes involved in lipid metabolism and inflammation. However, these therapies due to the poor efficacy and potentially deleterious effects, are not currently recommended for human intervention. Dietary intervention strategies appear promising. Malnutrition and preeclampsia increase oxidative stress and are linked to IUGR with significantly lower antioxidants in offspring. Vitamins C and E, are free radical scavengers and prevent lipid peroxidation. Folate is necessary for methylation of biochemical

reactions, with important role in cell growth and replication, DNA repair, oxidative stress. Resveratrol and Melatonin both have antioxidant activities, are safe without severe adverse outcomes. Omega-3 Fatty Acids are important for fetal growth, prevention of coronary heart disease and hypertension.

In conclusion based on David Barkers "life history theory" that chronic diseases originate through developmental plasticity in response to malnutrition during fetal life and infancy and the Hippocratic dictum that preventing is better than cure "It is time to move away from simply low birth weight, to broader considerations of maternal well-being and achieving the optimal environment for the fetus to maximize its potential for a full and healthy life" (WHO recommendation)

S101 - FETAL ANOMALIES IN THE FIRST TRIMESTER

Zalel Y.

With improvement of the US equipment and the physician skills, along with the desire to earlier prenatal diagnosis, the world is moving towards early anomaly scan, i.e., detecting fetal anomalies as early as 11-14 weeks gestation.

However, the accuracy of detecting these anomalies varies according to the anomaly itself.

We present, herein, as a modification of Singelaky's study, anomalies that are almost always (>90%) detected, detected between 10-90% of cases and virtually never (<2% of cases) detected in the first trimester.

S102 - RECENT PREVENTIVE STRATEGIES FOR NOSOCOMIAL INFECTIONS IN THE NICU: TO DREAM THE IMPOSSIBLE DREAM?

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Nosocomial infection is a term frequently used interchangeably with hospital acquired or health care associated infection (HAI) which was not present or incubating at the time of admission to a hospital or other health care facility. These infections have serious health and financial consequences representing one of the leading causes of neonatal mortality and morbidity. In contrast to improvements in the quality of neonatal care, nosocomial sepsis is still a major problem in the NICUs all over the world. Although significant advances have been made in standardizing the definition of HAIs and developing evidence-based guidelines for prevention, there are still inconsistencies regarding the neonatal population which leads to gaps in data reporting, hence in developing preventive strategies. The neonatal patients are one of the most susceptible population given their need for many invasive procedures and support devices (ventilators, central lines, urinary catheters), along with the use of broad-spectrum antibiotics, steroids and TPN. The improved survival of these vulnerable babies necessitating prolonged support and NICU stay increase the risk of nosocomial infections (1,2,3).
The available preventive strategies aim at reducing risk factors and enhancing host defence systems. Hand hygiene is still the most important but simple and inexpensive intervention. Several studies have shown that strict adherence to hand washing practices effectively reduces nosocomial infection rates (3,4). Early enteral feeding with breast milk is the other key approach. Beneficial effects are attributed to the presence of bioactive proteins with anti-infective properties, mucosal trophic effect on intestinal epithelium, contribution to immune maturation and formation of a healthy intestinal colonization (1,5). Failure of single interventions to prevent nosocomial infections forms the rationale of implementing "bundles" of care which incorporate multiple interventions together and target the most frequent neonatal nosocomial infections which are Central Line-Associated Bloodstream Infection (CLABSI) and Ventilator-Associated Pneumonia (VAP). A significant benefit of preventive bundles has been shown in this context (2,6). More evidence is needed for the use of probiotics, lactoferrin, innate immune stimulants and stem cells (5).

In spite of all the potential barriers and difficulties in prevention, nosocomial infections should be regarded as unacceptable and a "zero-tolerance" point of view rather than "impossible" should be adopted in all NICUs.

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S103 - HOW TO AVOID HYSTERECTOMY IN CASES OF SERIOUS POSTPARTUM HEMORRHAGES?

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Massive postpartum hemorrhage is associated with significant maternal morbidity and mortality. Postpartum hemorrhage was responsible for more than 80,000 deaths worldwide in 2015. The definition should be include both blood loss and clinical signs of cardiovascular changes (fall in hematocrit, hypovolemia etc.). Uterine atony is responsible for 90% of all postpartum hemorrhages, trauma is responsible for about 7%, and coagulation failure for 3%.

Hysterectomy is life-saving and can be warranted earlier where patient hemodynamically unstable or there is uncontrollable bleeding despite other medical surgical measures. Hysterectomy being radical procedure is associated with loss of child bearing potential and psychological problems is the last option. Although the description of the ligation of hypogastric arteries can be found in textbooks, few gynecologists have accrued experience performing the procedure. Hypogastric ligation doesnot appear to compromise the patients' subsequent fertility.
Indications of bilateral ligation of the hypogastric arteries:

1. Life-threatening pelvic hemorrhage
2. Prophylactic reduction of pelvic blood flow
3. Patients refusing blood transfusion
4. Preservation of uterus.

In our tertiary referral centre no maternal deaths due to hemorrhage have occurred during the past three decades and many uteruses could have been saved using ligation of hypogastric arteries controlling profuse pelvic hemorrhage.
It is essential to familiarize medical staff with the guidelines including the ligation of hypogastric arteries for the management of postpartum hemorrhage through training.

S104 - SETTING UP THE ULTRASOUND MACHINE FOR FETAL HEART EXAMINATION

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Although the examination of the fetal heart is part of the standard fetal scan, fetal heart examination is still considered a challenge even for experienced physicians. The procedure is difficult to perform due to small size of the fetal heart and the prenatal circulation particularities regarding the physiology and anatomy. On the other hand, many conditions such as abdominal or uterine scars, maternal obesity, myomas, fetal position, oligohydramnios may impair the visibility of the fetal heart.

Fetal heart examination is commonly performed at 18 to 22 gestational weeks. In some settings, the majority of major CHD may even be recognized during the first trimester anatomical examination of the fetus. An early diagnosis may especially be needed in high-risk pregnancies such as when increased nuchal translucency thickness is identified.

Fetal heart examination should be conducted with real-time scanners, using a transabdominal and/or transvaginal approach. The choice of transducer frequency is a trade-off between beam penetration and resolution. With modern equipment, 3- to 5-MHz abdominal transducers allow sufficient penetration in most patients while providing adequate resolution. A lower-frequency transducer (2–2.25 MHz) may be needed to provide adequate penetration for abdominal imaging in an obese patient. During early pregnancy, a 5-MHz abdominal transducer or a 5- to 10-MHz or higher vaginal transducer may provide superior resolution while still allowing adequate penetration.

For a satisfactory cardiac examination, it is imperative to obtain adequate visualisation of the heart. Optimal views of the fetal heart are obtained when the cardiac apex is orientated toward the anterior maternal wall. If the fetal position is unsuitable for satisfactory visualisation of the heart anatomy, then it is necessary to await for spontaneous fetal movements, to undertake such measures as getting the mother to fill or empty her bladder, rotating or tilting her abdomen to change the fetal position.

Following getting the optimal view of the fetal heart, the examiner may further optimize the image by appropriate adjustment of technical settings, such as image magnification, signal gain, acoustic focus, frequency selection, harmonic imaging, and Doppler settings. Images should be magnified until the heart fills at least a third to half of the display screen. System settings should achieve a high frame rate of at least 50 Hz to overcome the technical difficulty created by the small size and rapid movement of the fetal cardiac muscle. Increased contrast, high resolution and low persistence are the three mainstays of fetal heart examinations. Usage of a single acoustic focal zone and a relatively narrow image field should also be emphasized. The cine-loop feature should also be used to assist the real-time evaluation of normal cardiac structures.

Adequate documentation is another essential feature for high-quality fetal cardiac examination. The standard views of the fetal heart both normal and abnormal should be stored as images or digital videoclips routinely. Images should be labelled with the patient identification and the examination date.

S105 - DIAGNOSIS OF ISOMERISM

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Heterotaxy syndrome (HS) or isomerism is a rare, complex disorder involving structural cardiac defects in combination with symmetrical development of abdominal viscera that are normally asymmetrical organs. In most cases, HS occurs sporadically, with an incidence of 1 in 10 000 - 40 000 live births. Preexisting maternal diabetes is the most commonly noted maternal condition associated with HS. The nomenclature commonly seen in the literature for isolating the subtypes of HS refers to the presence of extra splenic tissue (polysplenia) which is bilateral left sidedness, also called left isomerism or absence of the spleen (asplenia) which is bilateral right sidedness or right isomerism.

Patients with left isomerism tend to have fewer complex heart anomalies, allowing for a better prognosis, in the absence of heart block. The occurrence of complete heart block has been reported in 50% of fetuses with left isomerism. Spontaneous fetal demise occurs more often in fetuses with left isomerism, due to heart failure and the hydrops diagnosed in the first trimester. In contrast, intrauterine demise in the patient with right isomerism occurs with less frequency; however, the overall antenatal outcome for a patient with right isomerism can be much poorer than a fetus with left isomerism.

The associated findings with left isomerism include polysplenia, bilateral morphologic left atrial appendages, bilateral bilobed lungs, interruption of the IVC with azygos continuation into the SVC, midline symmetric liver, stomach on either right or left side of the abdomen, and absence of the gallbladder. Typical findings that accompany right isomerism include asplenia, bilateral morphologic right atrial appendages, bilateral trilobed lungs, bilateral SVCs, midline liver, and right- or left-sided gallbladder and stomach. In addition, most patients with right isomerism will have multiple and complex heart anomalies. Some examples include absent coronary sinus, common atrium, ventricular septal defect, transposition of the great vessels, total anomalous pulmonary venous connection to a systemic vein, or pulmonary artery stenosis/atresia.

An inconsistency between the location of the fetal stomach and cardiac apex can be the first indication that HS may be present. Other common sonographic findings in left isomerism, include the presence of multiple splenic structures (polysplenia), morphologic left atrial appendages (hook-shaped,narrow-stalk) bilaterally, IVC interruption with azygous continuation into the SVC, symmetric midline liver, stomach and absent gallbladder. Conversely, frequent sonographic findings of right isomerism include absence of the spleen, morphologic right atrial appendages bilaterally (pyramidal-shaped, broad-based), bilateral superior vena cavae, midline liver, and stomach and/or gallbladder on the right or left side of the abdomen. In right isomerism, numerous and complex congenital heart defects are often present, such as atrioventricular canal defects and anomalies of pulmonary venous return. However, both in right and left isomerism that there is a vast amount of variation from case to case in associated cardiac defects. Therefore, it is very important to assess the visceral situs accurately and consistently during each obstetric examination. During the routine obstetric sonographic examination, the position of the fetal stomach should be assessed in relation to the cardiac apex by using a transverse view of the fetal thorax and abdomen. Any noted discrepancy should raise suspicion that HS might be present. Visualization of the atrial appendages during fetal echocardiography would provide the most accurate diagnosis of HS. However, routine imaging has not been instituted as the appendages are very small and they lie in an

imaging plane outside the standard four-chamber view. A thorough fetal examination in the suspected heterotaxy patient should include relational positions of the IVC, descending aorta, and azygos system in addition to the cardiac rhythm and visceral organ arrangement. The most frequently encountered anomaly associated almost exclusively with left isomerism is interruption of the IVC with azygos continuation to the SVC. An important diagnostic feature of right isomerism is the ipsilateral position of the aorta and IVC. The aorta and IVC lie parallel on one side of the spine, with the IVC more anterior, instead of the normal arrangement of aorta to the left of the spine with IVC found on the right side of the spine.

The prognosis for a patient with HS varies significantly depending on the cardiac abnormalities and coexisting variable abdominal anatomy. A 50% or higher mortality rate is documented in patients with left isomerism, and for patients with right isomerism, the mortality increases to 85% or greater. When considering treatment for patients with HS, the goal is typically palliative, as surgical repair to achieve normal anatomic arrangement is impractical.

S106 - INTEGRATED HEMODYNAMİC ASSESSMENT

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Normal hemodynamics implies blood flow that provides adequate oxygen and nutrient delivery to the tissues. Blood flow varies with vascular resistance and cardiac function but blood pressure (BP) might not reflect compromised hemodynamics in many cases. Therefore, cardiovascular dynamics should be evaluated in integrated manner and should include targeted neonatal echocardiography (TNE) and near-infrared spectroscopy (NIRS) when required and if available. Close monitoring of trends in vital signs helps to catch slight deteriorations before they appear.

Unfortunately, current routine assessment of hemodynamics in sick preterm and term infants is based on incomplete information, sometimes only on mean BP.

Integrated hemodynamics focuses on how to interpret multiple tools of hemodynamics evaluation in sick infants (TNE, clinical details, NIRS, organ specific ultrasound) and the art of formulating a pathophysiologic relevant medical recommendation.

There is sufficient evidence that shows such an integration optimizes care of infants with hemodynamic compromise to prevent progression into late irreversible stages of shock, decreases overall patent ductus arteriosus (PDA) related complications, optimize care of infants with hypoxemic respiratory failure (HRF) and decreases the incidence of progression of infants to end organ dysfunction.

Compromised hemodynamics usually present in either issues in blood flow or requirement of high FiO_2. In the first category, low preload, high afterload, poor myocardial performance, low systemic vascular resistance (most common), left to right shunts and obstruction of systemic blood flow are main problems. Low blood pressure (systolic/diastolic or both), oliguria, metabolic acidosis, tachycardia and poor peripheral perfusion are alarming signs/symptoms.

In the second category, hypoventilation, limited diffusion, ventilation/perfusion mismatch, intrapulmonary right to left shunts, high pulmonary vascular resistance, lung congestion or abnormal anatomy of lung are main problems. Those infants show increased O_2 requirement and ventilatory failure. In addition, ischemia or hypoperfusion of intestine, brain, kidney and lung causes to organ specific signs and symptoms.

By integrating information from the clinical examination with NIRS, and TNE, a complete picture about the problem and management could be achieved. However, TNE is not absolutely required in many conditions. By close observation of BP trends, separate evaluation of each BP component (systolic, diastolic and mean), using age specific BP charts are more important and should be routinely performed. Non-specific selection of any medication should be strictly avoided.

S107 - NEAR INFRARED SPECTROSCOPY IN HEMODYNAMIC ASSESSMENT

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Oxygen is one of the most important substances for maintenance of the life. In physiological status, oxygen delivery and consumption are in the balance. However, it can be compromised in pathological conditions caused by lung, cardiovascular or hematological problems. If it could not be recognized in early stage, those conditions might lead to tissue hypoxia, necrosis and death.

For evaluation of compromised oxygen delivery/consumption, Near Infrared Spectroscopy (NIRS) is a unique tool. Basically, NIRS shows venous oxygen content. If oxygen delivery decreases or consumption increases, NIRS O_2 saturation drops and the difference between arterial sO_2 (pulse oximetry) and NIRS sO_2 increases. Hemodynamically significant ductus arteriosus, hypocapnia, anemia, low cardiac output and tissue stress/infection are examples of such changes. Oppositely, if oxygen delivery increases or consumption decreases, NIRS O_2 saturation remains high and the difference between arterial sO_2 (pulse oximetry) and NIRS sO_2 decreases. Excessive O_2 use and hypercapnia are examples of high O_2 delivery. Hypoxic brain injury or high dose sedation use are examples of low O_2 consumption.

Near infrared spectroscopy does not identify pathology but indicates an abnormal pathophysiological event in targeted tissue and mostly used for brain, intestine and kidney assessments. It also shows compensation level of targeted organ. By integration of NIRS to hemodynamics is especially helpful. Judicious use of NIRS in clinical practice might protect tissues from the next step, anaerobic metabolism and lactic acidosis, before irreversible stage developed.

S108 - WHICH MODEL IS OPTIMAL FOR TURKEY FOR GESTATIONAL DIABETES?

Özel A.

Gestational diabetes is a condition of *carbohydrate intolerance of varying severity that begins or is first recognized during pregnancy*, and complicates between 1% and 24% of pregnancies. While the routine approach for the diagnosis of gestational diabetes is 50-g glucose tolerance test and 100-g OGTT in cases of a positive screen, a new approach was brought to agenda after it was found in the study of Hyperglycemia and Adverse Pregnancy Outcome (HAPO) study that there is a linear relationship between blood glucose levels and gestational outcomes, and this was found to be closely associated with each value increase. It was shown that the approach of establishing diagnosis based on a single value at once with 75-g OGTT which is recently common in clinical practice helps 18% of pregnant population to get diagnosed, and the diet and exercise following the diagnosis improved gestational outcomes and affected gestational outcomes even in obese cases without gestational diabetes. While 75-g OGTT procedure based on single value increases the number of cases who are established the diagnosis of gestational diabetes compared to the two-step screening and diagnosis test, diet- exercise practice in cases with such diagnosis is a condition which keeps weight gain during pregnancy under control and also has a positive impact on gestational outcomes. Glycaemia being above the desired range with 1–2 weeks of follow-up of the blood glucose will require medical treatment. This is an expected and desired target. Therefore, applying 75-g OGTT based on single value has become the new clinical practice and it is recommended.

ORAL
Abstracts

Obstetrics - Fetal echocardiography and Congenital Heart Diseases

O1422 - THE CONTRIBUTION OF FETAL ECHOCARDIOGRAPHY IN THE ANTENATAL DIAGNOSIS OF DEL22Q11.2 (DI GEORGE AND OTHER SYNDROMES)

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Objective
Del 22q11.2 is the most commonly diagnosed deletion syndrome and is manifested clinically as Di George, velocardiofacial syndrome and conotruncal anomalies. Almost all types of congenital heart disease (CHD) have been diagnosed in patients carrying 22q11.2 deletion. Due to absence of typical extracardiac abnormalities and the fact that 85-91% of the deletion carriers suffer from CHD, echocardiography is the main diagnostic tool. Our present study aims to retrospectively review the echocardiographic findings of prenatally diagnosed patients with del22q11.2.

Methods
Retrospective review of the literature from 1995 until September 2017
We collected data regarding the prenatal echocardiographic diagnosis of del22q11.2, extracardiac findings and pregnancy outcome.

Results
There are 39 studies included and 526 patients described in total. The majority was diagnosed with Tetralogy of Fallot (32,8%), followed by interrupted aortic arch (14,6%), common arterial trunk (14,3%), pulmonary valve abnormalities (9,1%), ventricular septal defect (6,5%), isolated right aortic arch (3,8%), coarctation of aorta (3.6%), double outlet right ventricle (1.7%), transposition of the great arteries (1.3%) and single cases of aortic stenosis, hypoplastic right heart, aberrant right subclavian artery, absent aortic valve, bilateral superior vena cava, double aortic arch, vascular ring and normal intracardiac anatomy. In 10% of cases the cardiac abnormality is not specified. The extracardiac abnormalities are reported in a small number of patients (5.8%) and include cleft lip/palate, thymus aplasia/hypoplasia, hydrops, intrauterine growth restriction, renal abnormalities, single umbilical artery, microcephaly, polyhydramnios, esophageal atresia, sacral meningomyelocele, ventriculomegaly and hygroma colli. The pregnancy outcome is reported in 35% of patients. The majority (62.7 %) decided for termination of pregnancy and 22.7% of fetuses is noted to have survived the neonatal period.

Conclusion
The prenatal echocardiographic diagnosis of certain cardiac abnormalities should raise the suspicion for del22q11.2. Detailed fetal anomaly scan and genetic testing should ensue. In case of positive results for this deletion extensive genetic counseling based on cardiac, extracardiac findings and their prognosis is mandatory.

O1473 - PULMONARY ATRESIA WITH RIGHT HYPOPLASIC VENTRICLE AND PERSISTENCE OF DUCTUS ARTERIOSUS OPTIONS AND INNOVATIONS IN THE CURRENT TREATMENT CASE REPORT

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Case report on a multiparous 28 year old woman with single pregnancy diagnosed at 22 weeks of gestation with a fetus with atresia of the pulmonary valve through structural ultrasound, four chamber asymmetry due to small right chambers in comparison to the left and resulting in smaller size for the gestational age of the fetus. AV valves opening were found synchronic, rhythmic, pulmonary valve with a diameter of 1.8 mm with low flow index, the rest of the study is reported as normal.

During the first trimester nuchal translucency (NT) was performed as a marker of chromosomopathy reporting 1.99 mm, corresponding to 95th percentile (see figure 1) with a crown-rump length (CRL) of 48.8 mm, reverse wave of ductus venosus (DV) with pulsatility index of 2.74, the study was complemented with fetal DNA in maternal blood reporting no aneuploidies or microdeletions. The parents decided to keep the pregnancy with no interventions neither in uterus or neonatal period, the newborn died 10 days after birth. Congenital heart defects correspond to one third of all mayor congenital anomalies, with a prevalence of 4 -9 per 1000 live births, in which pulmonary atresia with intact ventricular septum corresponds to an estimated frequency of 0.083 per 1000 live births, currently there are traditional and advanced methods to identify these anomalies prior to birth, prenatal screening during second trimester identifies less than 40% of all cardiac malformations, but there are some markers during first trimester that include tricuspid regurgitation and abnormal ductus venosus blood flow. It has been determined that the combination of reduced or absent a-wave in DV flow with NT, correlated with increased risk of right heart defects as in this case. Once the diagnosis is made it is important to perform detailed prenatal echocardiography, to establish the treatment of choice, outcome and possible complications of the fetus in uterus and after birth. Congenital heart defects that can benefit from fetal cardiac intervention are: severe aortic stenosis with evolving hypoplasic left heart syndrome, pulmonary atresia with intact ventricular septum with evolving hypoplasic right heart syndrome and hypoplasic left heart syndrome with intact or severely restrictive atrial septum. Even when pulmonary atresia with intact ventricular septum could benefit from fetal intracardiac intervention, they must go through a careful selection, choosing those that might have best long term outcome, including fetuses with an identifiable but atretic pulmonary valve (PV), a patent sub-valvar right ventricle outflow tract, and variable right heart hypoplasia. Even though there are new treatments for this congenital heart disease it is important to advice the parents that there is the need of further surgeries, compromising quality of life, hence emotional, economical, and psychological challenges must be met further ahead. Also, the proper selection of an experienced and advanced hospital is advised.

O1477 - PRENATALLY DIAGNOSED CARDIAC RHABDOMYOMAS CHARACTERISTICS AND OUTCOME

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Objective

The aim of this study is to determine the sonographic characteristics of cardiac rhabdomyomas in antenatally diagnosed cases and to characterize their evolution and postnatal management.

Methods

This is a retrospective descriptive study. It includes cases diagnosed prenatally in our University hospital between 2003 and 2018. Exclusion criteria were postnatal diagnosis, twins and cases with intra-uterine fetal demise. The information is collected from fetal and postnatal echocardiography as well as birth records and newborns' records. In viable fetuses, postnatal echocardiography and patient outcome data are also obtained. This study was approved by our ethics committee.

Results

Eight cases of rhabdomyoma diagnosed antenatally met the inclusion criteria. The mean gestational age at diagnosis of rhabdomyoma is 31w. The earliest diagnosis is at 26w while the latest is 35w + 5d. Five of eight patients were diagnosed after 32 weeks (62.5%). The mean age of the mother is 29.5 years. Gender of the babies is male in 6 / 8 (75%) and female in 2/8 (25%). Only one patient (fetus) has a familial Tuberous sclerosis (12.5%). Four fetuses have multiple rhabdomyomas (50%) and the remaining 4 have single rhabdomyomas (50%). A total of 17 tumors were found in the 8 patients. Seven are located in the interventricular septum (41%), 5 in the left ventricle (29.5%), 3 in the right ventricle (17.5%), one in the atrioventricular septum (5.8%) and the last at the level of the right atria (5.8%). At diagnosis the average size is 19.5 +/- 8.8 mm. The smallest diameter is 4 mm and the largest is 48 mm. During follow-up, in all the 5 cases that had a control ultrasound there was a size increase with a mean of 1.68 mm +/- 0.55. In two patients of eight (25%) there was a valvular insufficiency. No patient had an associated cardiac malformation. All patients delivered at term between 36 and 40 weeks of age (87.5%) including five cesareans (62.5%), and three vaginal deliveries (37.5%). One patient had a preterm birth at 33 weeks due to polyhydramnios (12.5%). One baby died (he had a mass effect and a hypokinesia of the 2 ventricles) and another required reanimation with intubation. Three patients required resuscitation at birth (37.5%). The first requires an urgent surgery but unfortunately died during the operation (12.5%), the second died despite resuscitation (12.5%) (he had a large heart mass with heart failure, abdominal ascites and cardiac effusion). The third improved after a three-day resuscitation (12.5%). So in total six babies survived (75%); three of them were later diagnosed with Tuberous sclerosis (50%), and two were lost to follow-up. Two of the four patients with a single tumor antenatally were found to have several tumors postnatally.

Conclusion

Cardiac rhabdomyomas are often asymptomatic, benign tumors that have multiple presentation. Neonatal death occurred however in 12% of the cases. Association with tuberous sclerosis syndrome could impact the long term neurological status.

Obstetrics - Diabetes and obesity during pregnancy

O1022 - RISK FACTORS IN THROMBOPROPHYLAXIS GUIDELINES FOR CORRECT DIAGNOSIS OF ANTEMORTEM FATAL PULMONARY EMBOLISM

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Objective
To clarify the risk factors in thromboprophylaxis and to reinforce proper and safer guidelines for correct antemortem diagnosis of proven fatal pulmonary embolism (PE) during pregnancy, delivery and within 42 days after delivery

Methods
Design: Descriptive study
Setting: Analysis of maternal deaths due to PE verified by autopsies/embolectomies/computerized tomographic angiographies from the national registration system of maternal deaths in Turkey
Participants: 29 women who had necropsy computerized angiography or thrombectomy confirmation for fatal pulmonary embolism (PE) Main outcome measures: The risk factors and the prevention of death with current thromboprophylaxis protocols.

Results
29 women had necropsy, computerized angiography or thrombectomy confirmation for PE in the first trimester (n=4), second trimester (n=3), third trimester (n=2), during labour (n=3), and in the puerperium (n= 17). All women had antenatal risk factors for PE. One, two, three and four or more risks were identified in three, five, three and 18 women, respectively, including age > 35 (n=13), gravida > 3 (n=12), body mass index(BMI) > 30 (n=10), acute infection(n=8), venous thromboembolism (VTE) in the current pregnancy (n=7), transfusion (n=6), obstetric hemorrhage (n=5), intrauterine growth restriction (n=4), autoimmune disease(n=4), preterm birth (n=4), high risk thrombophilia (n=3), preeclampsia (n=2), stillbirth (n=2), previous VTE (n=2), hysterectomy(n=2), diabetes (n=1), varicose veins (n=1), sepsis after fetal invasive procedures (n=1), smoking (n=2), epilepsy (n=2), corticosteroid administration>10 days (n=4), hypertension (n=1) and hyperthyroidism (n=1). 13 women were delivered by the abdominal route including six repeated cesarean deliveries (CD), six primary CD and one hysterotomy. There were five vaginal deliveries. Three postmortem CD and two hysterectomies were performed. Eight (25%) of the patients were already on thromboprophylaxis due to prior episode of venous thrombosis + high risk thrombophilia+ leg amputation + immobilization(n=1), cerebral sinus venous thrombosis+ autoimmune disease (n=1), deep venous thrombosis (DVT) of the leg (n=4), obesity (n=3), hypertension (n=3) and mesenteric vein thrombosis (n=1) and intestinal surgery (n=1) , gravida>3 and smoking cigarettes (n=1).

Conclusion
Reducing the risk of fatal PE requires clinical risk appraisal of every women during pregnancy and puerperium. Because 18 women had four or more risk factors, clinical evaluation and physical examination is mandatory. Clinical symptoms, especially pain and swelling in the legs, acute infection and pregnancy complications, warrant attention; however, heterogeneous characteristics of the women and the

unpredictable and abrupt onset of the catastrophic events may present challenges. Thromboprophylaxis protocols may be subject to change in terms of indications, dosage, dosing intervals and duration to achieve both efficacy and safety during pregnancy and puerperium for reducing the risk of fatal PE. CD does not appear to be the sole factor for PE unless other risk factors are present.

O1040 - MATERNAL AND NEONATAL ADVERSE OUTCOMES FOLLOWING INDUCED LABOR IN ADVANCED MATERNAL AGE IN SINGLE INSTITUTION

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Objective
In South Korea, about 45% of women giving birth are 35 years or older. Women who were age 35 or older at delivery are generally referred to Advanced Maternal Age (AMA), which is risk factors for various kinds of complication besides genetic changes in fetus. The aim of this study is to evaluate maternal and neonatal adverse outcomes following induced labor in AMA.

Methods
This was a retrospective observational study of singleton, vertex-presenting nulliparous women from 37 0/7 to 41 6/7 weeks of gestation who were delivered following induced labor. After induced labor, outcomes in women with AMA were compared with young aged mother.

Results
A total of 314 nulliparous women were attempted induced labor (≥ 35 years n=73, 23.2%; < 35 years n=257, 81.8%) and among them, 257 (81.8%) delivered vaginally. There was no difference in gestational age and Bishop score between two groups. Rate of Cesarean delivery was significant higher in women with AMA (31.5% vs. 14.1%, p=0.001). Multivariable analysis showed that AMA was an independent predictor for Cesarean delivery (OR 2.98, 95% CI 1.56-5.71, p=0.001). Delivery time and the blood loss during the delivery were similar between the two groups (861±506 Vs. 843±529 min, 1.97±1.32 vs. 1.86±1.25 mg/dl, respectively, all p > 0.05). Regarding neonatal outcomes, there was no different between the two groups in NICU admission rate and Apgar score < 7 at 5 minute. There was no cesarean hysterectomy and perinatal death in this study.

Conclusion
Following induced labor, AMA was associated with a more than three-fold increased likelihood of birth by Cesarean in nulliparous women. We found, however, no evidence that induced labor in elderly primigravida increases adverse maternal and neonatal outcomes as compared with a young woman.

O1086 - THE ROLE OF EXCLUSIVE BREASTFEEDING IN IMPROVING OGTT RESULTS OF PATIENTS WITH GESTATIONAL DIABETES MELLITUS AT SIX TO TWELVE WEEKS POSTPARTUM

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Objective
Gestational Diabetes Mellitus (GDM) is one of the most common diseases complicating pregnancy and is associated with both maternal and fetal complications. Women with GDM have a high risk of developing postpartum type II diabetes mellitus. Prevention of this progression is speculated to be influenced by lifestyle modifications including breastfeeding, diet, and exercise. The objective of this study was to determine if exclusive breastfeeding during the postpartum period can improve results of 75 gram OGTT done at 6-12 weeks postpartum.

Methods
We compared baseline and postpartum 75 gram OGTT results of 120 patients with GDM in a tertiary hospital. Comparison was done among four (4) subgroups: (a) those that did not breastfeed, (b) those who breastfed for 1-4 weeks, (c) those who breastfed for 5-8 weeks, and (d) those who breastfed for 9-12 weeks. Analysis of variance (ANOVA) was used to compare the means of the four subgroups versus their 75 grams OGTT results.

Results
There was a significant difference in 75 gram OGTT results done at 24-28 weeks age of gestation and done 6-12 weeks postpartum, for values of fasting blood sugar, first hour, and second hour. There was also an observed higher decline in values as duration of exclusive breastfeeding increases.

Conclusion
This study showed that exclusive breastfeeding during the postpartum period is associated with improvement of results of 75 gram OGTT done at 6-12 weeks postpartum compared with those done at 24-28 weeks age of gestation. It was also observed that duration of breastfeeding is inversely correlated with 75 gram OGTT values.

O1171 - THE EFFECT OF MATERNAL AGE ON CESAREAN SECTION RATE AND MATERNAL AND NEONATAL MORBIDITY FOLLOWING INDUCED LABOR

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Objective
Women who give birth at 35 years of age or older are generally referred to advanced maternal age (AMA), which is risk factors for various kinds of complication besides genetic changes in the fetus. The aim of this study is to evaluate the effect of maternal age on emergency Cesarean delivery (CD) rate and maternal and neonatal morbidity following induced labor.

Methods
This was a retrospective observational study of singleton, vertex-presenting nulliparous women from 37 0/7 to 41 6/7 weeks of gestation who were delivered following induced labor. After induced labor, outcomes in women with AMA were compared with women < 35 years.

Results
A total of 314 nulliparous women were attempted induced labor (≥ 35 years n=73, 23.2%; < 35 years n=257, 81.8%) and among them, 257 (81.8%) delivered vaginally. The rate of CD was significantly higher in women with AMA (31.5% vs. 14.1%, p=0.001). Multivariable analysis showed that AMA was an independent predictor for CD (OR 2.98, 95% CI 1.56-5.71, p=0.001). The rate of instrumental deliveries and the blood loss during the delivery were similar between the two groups (13.7% vs. 7.9%, p=0.133, 1.97±1.32 vs. 1.86±1.25 mg/dl, p=0.605, respectively). Regarding neonatal outcomes, there was no difference between the two groups in NICU admission rate and Apgar score < 7 at 5 minutes. There was no cesarean hysterectomy and perinatal death in this study.

Conclusion
Following induced labor, AMA was associated with a more than three-fold increased likelihood of birth by Cesarean delivery in nulliparous women. We found, however, no evidence that induced labor in elderly primigravida increases adverse maternal and neonatal outcomes as compared with women < 35 years.

O1225 - THE RELATIONSHIPS BETWEEN ASTHMA AND OBESITY IN PREGNANT WOMEN

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Objective
To evaluate body mass index and the prevalence of obesity and overweight in women with asthma during pregnancy

Methods
In total 238 pregnant women with asthma were compared to a reference obstetric population of 5296 non-asthmatic pregnant women. Maternal weight, height and body mass index were compared. Groups of BMI were defined as follows: < 18.5 k/m2 Thin, 18.5 -25 normal weight, => 25 and < 30 k/m2 overweight and => 30 obese. Chi squared and Students t test were used for comparisons. Statistical significance was sset at 95% level ($p < 0.05$).

Results
Pregnant women with asthma have increased weight and BMI values while height was similar to that of the general population. There was a significant difference in the categories of BMI ($p = 0.01$) according to the asthma status. The proportion of obesity was significantly higher in the group with asthma (16.8% Vs. 10.9%).

Conclusion
The presence of obesity and asthma during pregnancy are related. If both conditions are present is probably that may influence in having worse obstetric and perinatal outcome but further studies are needed to clarify this. Prevention of obesity may reduce the presence of asthma during pregnancy.

O1227 - THE EFFECT OF MATERNAL OBESITY AND LIPID PROFILE ON FIRST TRIMESTER SERUM PROGESTERONE LEVELS

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Objective
To evaluate the effect of maternal obesity and lipid profile on first trimester serum progesterone levels

Methods
Prospective cohort study on 734 pregnant women
First trimester maternal serum progesterone, cholesterol, HDL-c, LDL-c and triglycerides were measured between 9 - 11 weeks gestation. Free β-hCG, PAPP-A, age, BMI, smoking status, gestational age at delivery, fetal sex and birthweight were also recorded. Women were classified according to their BMI in underweight (n = 21), normal weight (n = 395), overweight (n = 221), obese (n = 64) and morbid obese (n = 33).

Results
Gestational age at sampling was 10.0 4 ± 1.12 weeks. Serum progesterone levels decreased as maternal BMI increased (35,84 ± 12,00 ng/mL, 33,08 ±11,27 ng/mL, 28,04± 8,91 ng/mL, 24,37 ± 8,56 ng/mL and 19,87 ±11,00 mL for underweight, normal weight, overweight, obese and morbid obese groups respectively ($p < 0.000001$). There were statistical significant negative correlations between maternal progesterone and maternal BMI, triglycerides and cholesterol/HDL-c ratio, and positive correlations with gestational age at sampling, maternal age, cholesterol, HDL-c, CRL, free β-hCG and PAPP-A.

Linear regression showed that the only independent variables were BMI ($p < 0.0001$), PAPP-A ($p < 0.0001$), HDL-c ($p < 0.0001$), and free β-hCG ($p < 0.0001$) ($R2= 0,33$; $p< 0,0000001$).

Conclusion
First trimester serum progesterone levels are lower in overweight pregnant women and markedly decreased in obese, especially in severe obese women. Maternal HDL-c is independently related to progesterone levels as a protecting factor. Benefits of progesterone supplementation in obese women need further evaluation.

O1273 - THE INFLUENCE OF MATERNAL OBESITY ON PREGNANCY COMPLICATIONS AND NEONATAL OUTCOMES IN DIABETIC AND NONDIABETIC WOMEN

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Objective
This study aimed to investigate the influence of obesity on pregnancy complications and neonatal outcomes in diabetic and nondiabetic women.

Methods
This retrospective case control study was conducted on 1193 pregnant women and their neonates at a tertiary level maternity hospital between March 2007 and 2011. The pregnant women were classified into 2 groups according to the presence of diabetes mellitus. Six hundred and seven patients with gestational diabetes or pregestational diabetes formed the diabetic group (study group) and 586 patients were in the nondiabetic group (control group). Demographic characteristics, body mass index, gestational weight gain, obstetric history, smoking status, type of delivery, gestational ages, pregnancy complications, neonatal outcomes were recorded for each patient. Multivariable logistic regression analysis was performed to evaluate the effect of obesity and diabetes on the pregnancy complications and neonatal outcomes.

Results
The mean age and pre-pregnancy body mass indices of women with diabetes mellitus were significantly higher than the control groups ($p < 0.001$). Gestational weight gain and number of smokers were similar among the groups. Multiparity and obesity were more prevalent in the diabetic group compared to controls (both $p < 0.001$). Although gestational age at birth was earlier in the diabetic group, birth weights were higher in this group than in the control group (both $p < 0.001$). Cesarean delivery rates, the incidence of macrosomia, and neonatal intensive care unit admission rates were significantly higher in the diabetes group both with normal and increased body mass index (all $p < 0.001$). However, adverse pregnancy outcomes were comparable between the groups ($p = 0.279$). Multivariable logistic regression analysis showed that obesity is a significant risk factor for pregnancy complications (OR = 1.772 [95% CI, 1.283–2.449], $p = 0.001$) but not for adverse neonatal outcomes (OR = 1.068 [95% CI, 0.683–1.669], $p = 0.773$).

Conclusion
While obesity increases risk of developing a pregnancy complication, diabetes worsens neonatal outcomes. (This article was published online in the journal Geburtshilfe Frauenheilkd in 2018)

O1462 - CLINICAL MANAGEMENT OF GESTATIONAL DIABETES (GDM) BASED ON ULTRASOUND MEASUREMENTS DECREASES THE RATE OF MACROSOMIA

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Objective
To evaluate in everyday clinical practice the effectiveness of a protocol regarding the management of pregnancies with GDM

The protocol is based on a combination of maternal glycemic levels and the measurements from serial fetal growth ultrasound (USS) examinations in order to decide whether we should initiate insulin treatment in women with gestational diabetes (GDM). Aim of this protocol to prevent fetal macrosomia.

Methods
84 women diagnosed with GDM were followed up1 week immediately after their diagnosis of GDM and subsequently every 2 weeks. All women underwent fetal USS at the time of GDM diagnosis and then at least every 4 weeks, until delivery. After 1 week of diet control, insulin was initiated with the following two criteria: (a) if glucose levels were persistently high – fasting glucose (FCG)>95mg/dl and 1 hour postprandial glucose (PPCG)>130mg/dl – and fetal abdominal circumference (FAC)>10th centile or (b) if FAC>70th centile with simultaneous implementation of glucose targets FCG<80mg/dl and/or 1h PPCG<120mg/dl.

Results
Of the 84 GDM women, 49 (58.3%) were treated with diet only and 35 (41.7%) with diet and insulin. The number of fetuses with FAC>70th centile were 23 (26.7%) at the time of the first USS and 11 (13.3%) during the last USS, indicating a 50% reduction (p=0,021). There was no difference in the rate of caesarean sections between the diet and insulin groups. Mean gestational age of last USS was 36 weeks, with an accuracy of 96.7% when compared with neonatal birthweight (mean GA=38 weeks). Out of 84 neonates only 2 was >90th centile and 3 were <10th centile.

Conclusion
Serial fetal USS in GDM pregnancies provides very useful information for the decision making of initiating insulin treatment in pregnancies complicated by GDM, and appears to decrease the percentage of macrosomia, without further increasing at the same time, the number of small for gestational age fetuses.

Obstetrics - Maternal fetal Doppler: Fetal growth disorders

O1088 - DNA METHYLATION PROFILES OF GENES ASSOCIATED WITH ANGINONESIS IN PREGNANCIES COMPLICATED BY INTRAUTERINE GROWTH RESTRICTION

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Objective
Impairment in placental angiogenesis is blamed for the etiopathogenesis of intrauterine growth restriction (IUGR). DNA methylation of angiogenetic genes in placenta could act as mediators in IUGR pathogenesis. We aimed to assess the genes which affect placental angiogenesis could be aberrantly methylated in placental biopsies of pregnancies complicated by IUGR.

Methods
The methylation profiles of soluble fms-like tyrosine kinase-1 (sFLT-1), vascular endothelial growth factor (VEGF) and the placental growth factor (PIGF) were evaluated using Illumina MiSeq System in placental biopsies from term IUGR pregnancies without preeclampsia (n=18) and normally grown controls (n=17). DNA was isolated from samples of tissue collected from the fetal side of the placenta immediately after delivery. In the targeted regions, we have identified 30 CpG island (CpGi) within the sFLT-1, 24 CpGi within VEGF and 29 CpGi within PIGF genes.

Results
IUGR fetuses had significanlty lower placental and fetal birth weight compared to controls. The promoter of sFLT-1 at three CpGi and VEGF at six CpGi were the regions with significant methylation differences between IUGR and control placentas. sFLT-1 was hypermethylated at 265 and 352 CpGi, however hypermethylation was lower in IUGR group compared to control group at this position. sFLT-1 was hypomethylated at 456 CpGi in IUGR group and hypermethylated at the same region in control group. VEGF had hypomethylated at 668, 703, and 710 CpGi in conrol and IUGR groups, however hypomethylation at these positions were significantly higher in control group compared to IUGR. 776, 845 and 863 CpGi of VEGF promoter were hypermethylated in IUGR group whereas hypomethylated in control group with a significant differences. Comparison of DNA methylation profiles of different CpGi of sFLT-1 and VEGF promoter between the groups are shown in Figure 1 and 2. The methylation profile of promoter for the PIGF didn't differ between the groups. After adjustment for gestational age and the factors known to affect fetal birth weight, DNA methylation of VEGF 668 CpGi had significant negative association with fetal birth weight and was significantly associated with higher relative odds of IUGR birth.

Conclusion
Methylation changes in a specific region corresponding to the promoter of VEGF 668 CpGi in placenta could involve in IUGR and could be used to identify pregnancies complicated by IUGR Large sample-sized studies should be performed to assess the effect of DNA methylation on IUGR.

O1089 - LOW PLACENTAL GROWTH CAPACITY AND DISTAL VILLOUS IMMATURITY ARE CONSTELLATION OF SEVERE RESPIRATORY PLACENTAL INSUFFICIENCY WITH ADVERSE PERINATAL OUTCOME AT TERM PREGNANCY

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Objective

The growth of placenta and maturation of the placental distal villi are important factors determining function of the placenta at the end of pregnancy. [Benirschke K. 2006, Redline R.W., 2013]. Violation of these processes leads to placental respiratory dysfunction, fetal and neonatal mortality and morbidity. [Redline R.W. 2013, Roescher A.M. 2014]. The aim of the study was a comparative evaluation of structural distal villous phenotype and placental weight from pregnancies with normal (NPO) and adverse perinatal outcome (APO) with appropriate (AGA) and small fetus for gestational age (SGA).

Methods

112 placentas of the 37-42 gestational weeks associated with AGA (n-76) and SGA (n-36) fetuses were recruited in retrospective histopathological study. The study cohort was divided according to clinical data in regard to NPO (n-36) or APO (low 5-minute Apgar score with severe umbilical cord blood acidosis, intrauterine fetal death (IUFD), n-76) and subjected to examination of placental weight and structural distal villous phenotype. Excluded were placentas from pregnancies with premature placental abruption. Placental weight was submitted as low (<10percentile), normal (25-75percentile) and high (>90 percentile). Evaluation of number of immature villi was carried out in 100 peripheral villi of the representative placental histological section. Their ratio was calculated as percentage of immature distal villi.

Results

Placentas from pregnancies with NPO predominantly were associated with normal weight in 18(64,3%) of 28 cases with AGA and in 5(62,5%) of 8 cases with SGA, respectively. In 27 (96,4%) placentas with AGA and in 7(87,8%) with SGA we found mature structural placental villous phenotype. Only in 8,7% of cases with AGA and in 2,8% with SGA was found low placental weight (<10percentile), while there were identified mature distal villous phenotype. Placentas from pregnancies with APO were predominantly associated with normal weight in 26 (54,2%) of 48 cases with AGA and low weight in 26(92,9%) of 28 cases with SGA. Structural villous phenotype in placentas with APO was characterized by diffuse persistence of immature villi (>50% per slide) in 44(91,7%) of cases with AGA and in 27(96,4%) of 28 cases with SGA. Among them, in 31(39,5%) cases were observed combination of severe distal villous immaturity with low placental weight, that was in 96,7% of cases associated with IUFD in pregnancies with AGA (43,3%) and SGA (56,7%), respectively.

Conclusion

We identified that abnormal deviation of placental growth and maturity capacity at term pregnancies associate with APO and fetal hypoxia independently from fetal weight at term. Constellation of low placental weight and severe distal villous immaturity (>50% immature villi per slide) is a morphological indicator of adverse antenatal fetal condition and intrauterine fetal growth restriction (IUGR). We hypothesized that heterogeneity of placental weight and degree of placental immaturity at term

reflects different gestational age of fetal disease and stage of development of the placental adaptive capacity. Histopathological evaluation of placental weight in combination with distal villous phenotype may help to identify pathomechanisms of perinatal fetal asphyxia and to postnatal stratification of newborn from pregnancies with latent form of chronic respiratory placental insufficiency.

O1098 - COMPARISON OF THE SONOGRAPHIC UMBILICAL CORD COILING INDEX AND DOPPLER PARAMETERS WITH THE HISTOPATHOLOGICAL FINDINGS

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Objective
Doppler measurements are widely used for both the diagnosis and the management of intrauterine growth restriction (IUGR). As umbilical cord connecting the placenta to the fetus is accessible, we evaluated the antenatal ultrasonographic morphometry of the umbilical cord, to find out whether these measurements can be correlated with postnatal umbilical cord histopathology and neonatal outcomes to be used as a clinical guide in pregnant women with IUGR.

Methods
A prospective case control study was carried out of 36 pregnant women with IUGR and 3395 women without IUGR who were admitted Zekai Tahir Burak Women's Health Education&Research Hospital. Evaluation was made on a total of 114 pregnant women, 36 women with IUGR(31.6%), randomly selected 42(36.8%) pregnant women with a previous C/S and 36(31.6%) pregnant women without a previous C/S. Fetal biometry, morphometric measurements from the cross-section of the umbilical cord, helical index of the umbilical cord and umbilical artery Doppler evaluation were performed. Transverse diameter, circumference and area of the whole cord, both umbilical arteries and vein measurements and the presence of Wharton jelly were correlated with the histopathological evaluation of the standard umbilical cord samples. Statistical evaluations were performed with SPSS 17.0.

Results
The results of a total of 103 pregnant women including 30 with IUGR, 34 without a previous C/S, and 39 women with a previous C/S were evaluated. Statistically significant differences were detected in terms of: umbilical cord coiling index, umbilical artery Doppler values, whole umbilical cord measurements: transverse cross-section, circumference, diameter and area, small artery measurements, the umbilical vein area, perimeter and diameter measurements ($p<0.005$) between women with IUGR and those without IUGR. The presence of Wharton's jelly surrounding umbilical vessels was also significantly different ($p<0.001$). About the histopathological evaluation, thickness of the umbilical artery ($p=0.002$ and $p<0.001$), umbilical vein ($p=0.024$) and cell density of the arterial wall($p=0.033$) were also different between IUGR and non IUGR groups and a negative correlation was found between those and adverse neonatal outcomes. Umbilical artery from the measured larger one showing no ultrasonographic morphometric difference demonstrated histopathologic difference ($p=0.002$), suggesting us the concept of the compensation by one of the umbilical arteries. There were also significant differences in terms of umbilical artery S/D, RI and transverse diameter of the whole umbilical cord($p<0.05$)in pregnant women with prior C/S and with no C/S. There was also significant difference in the presence of Wharton's jelly for negative neonatal outcomes in multivariate regression ($p=0.035$). The Receiver Operating Curve evaluation showed that the presence of Wharton's jelly of the umbilical vessels, might be of diagnostic value for predicting the adverse neonatal outcome (Area Under the Curve:0.75, 95%CI:0.63-0.86, $p<0.001$).

Conclusion

In pregnant women with IUGR, morphometric differences were detected in umbilical cord verified by histopathological findings and the containment of Wharton jelly besides Doppler indexes with the potential to be included among the tests for the fetal well-being.

O1202 - MIDDLE CEREBRAL ARTERY PEAK SYSTOLIC VELOCITY CAN BE A PARAMETER FOR FETAL ABNORMAL CONDITION

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Objective
Although elevation of middle cerebral arterial peak systolic velocity (MCA-PSV) is known as a sign of fetal anemia, little studies of other clinical values have been reported. The aim of this study is to investigate the benefit of measuring of MCA-PSV for early diagnosis of fetal abnormalities or the benefit in cases of fetal growth restriction (FGR).

Methods
This retrospective study included fetuses who were measured MCA-PSV from June 2008 to December 2016 and delivered at our hospital. We defined high MCA-PSV as the value exceeding 1.5 multiple of median (MoM) and diagnosed fetal abnormalities after birth. To investigate the benefit of measuring of MCA-PSV in cases of FGR, 248 fetuses who were diagnosed FGR at our hospital were enrolled. We calculated estimated fetal body weight (EFBW) using ultrasonographic measurements, and diagnosed FGR (EFBW < -1.5 SD). We assigned the case to high MCA-PSV group when we found high MCA-PSV at least one time. We compared the perinatal prognosis of high MCA-PSV group and normal MCA-PSV group. The primary outcome was the frequency of emergency Cesarean section (CS), and the secondary outcomes were as follows: gestational age at delivery, birth weight, Apgar score, pH and base excess (BE) of umbilical cord blood gas and the rate of NICU admission.

Results
The numbers of high MCA-PSV group and normal MCA-PSV group were 18 cases (7.3%) and 230 cases (92.7%) respectively. The range of gestational week when we measured MCA-PSV was from 14 weeks to 42 weeks, and the average was 32.3 weeks. The frequency of CS was higher in high MCA-PSV group (61.1% vs. 29.1%, p=0.007). In high MCA-PSV group, gestational age at delivery was earlier (34.9 weeks vs. 37.0 weeks, p=0.007) and birth weight was also lower (1559 g vs. 2106 g, p<0.001). The median of Apgar scores at 1-minute were lower in high MCA-PSV group (5 vs. 8, p=0.002), and those at 5-minute were also lower in high MCA-PSV group (8.5 vs. 9, p<0.001). The rate of NICU admission was higher (88.5% vs. 60.1%, p=0.002) in high MCA-PSV group. pH (7.255 vs. 7.267, p=0.594) and BE (-3.95 vs. -3.50, p=0.73) of umbilical cord blood gas did not show significant difference.
Conclusion
High MCA-PSV indicated the possibility of early diagnosis of FGR. In cases of FGR, there was correlation between high MCA-PSV and perinatal short prognosis. Measuring MCA-PSV can be effective in assessing the fetal condition.

O1244 - ACUTE LYMPHOBLASTIC LEUKEMIA AND PREGNANCY: A CASE REPORT

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The occurrence of cancer and pregnancy is relatively rare, occurring in about one in 1000 pregnancies. The most common tumors diagnosed during pregnancy are breast and cervical cancer followed by melanoma, leukemia and lymphoma. The incidence of acute lymphoblastic leukemia (ALL) during pregnancy is low. Management of these cases are challenging for hematologists and obstetricians. A key point in management should be the optimal therapeutic treatment given to the patient with the least possible exposure and burden of the fetus.

We present a case with a 36 years old patient diagnosed with Acute Lymphoblastic Leukemia and 23 weeks. Patient was informed about the risks of the treatment protocols for the fetus and she decided to carry on with the pregnancy. Initially she was treated with corticosteroids regiment in order to control the disease for initiation of chemotherapy. At 29th week of pregnancy modified GMALL protocol was administrated and at 31 weeks she delivered due to fetal distress. Three months after delivery patient received allogenic bone marrow transplant. Twelve months after the transplantation she had lung metastasis. she Died 15 months after transplantation. Her baby is growing normally with no problems so far. The diagnosis of acute lymphoblastic leukemia (ALL) during pregnancy is easy but the treatment requires high-dose chemotherapy and can raise concerns for risks to both the mother and fetus. Special consideration to chemotherapy regimen and its doses and to fetal gestational age at the time of chemotherapy administration should be taken.

O1245 - PERINATAL OUTCOMES AMONG IMMIGRANTS AND REFUGEES IN COMPARISON WITH GREEK POPULATION IN A TERTIARY UNIVERSITY HOSPITAL IN GREECE

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Introduction
Greece is a first point entry to Europe for immigrats and refugees for more the three decades. The continuing conflict in Syria resulted in an unprecedented influx of refugees Many women were pregnant but also many became pregnant during their stay at the so called hot spots.

Objective
We sought the clinical characteristics and pregnancy outcomes of these women delivering in Alexandra hospital and compared them with those of Greek population.

Methods
A retrospective cohort analysis of all pregnant women attending Alexandra University Hospital from September 2015 to December 2018
Demographic data were collected together with obstetric and neonatal outcomes.

Results
Seven thousand nine hundred and eight one pregnant women deliveries were recorded in Alexandra University Hospital during between 9/2015-12/2018. Refugees accounted for 11% of this population. More than half of them were Syrian with the remaining from Afghanistan and Iraq. Compared to the native population they were younger and of higher parity. Most of them received inadequate antenatal care and one out of five have had no antenatal care at all. Barriers to access to health care, inability to communicate, religious and cultural differences were identified and all posed risks for their management. Our review showed high rates of preterm delivery, both late preterm and less than 34 weeks, a high rate of primary caesarean section, especially for fetal distress, and low Apgar scores for their neonates. Preeclampsia, fetal growth restriction, low birth rates and stillbirth were all higher compared to the native population.

Conclusion
Our review showed that refugees pregnant women are at high risk for pregnancy related complications and their management remains a challenge for all mainly due to administrative problems.

O1281 - INTERPLAY OF EPIGENETICS WITH FETAL GROWTH RESTRICTION

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Objective

Impairment of feto-maternal unit may result intrauterine growth restriction (IUGR). Placental microvasculature epigenetic regulation is one of the critical factor for fetal growth restriction, however, the spectrum of epigenetic pathophysiological mechanisms leading to IUGR remains to be elucidated. Epigenetic changes including DNA methylation, histone modification, and post-transcriptional small non-coding microRNAs are reversible modifications in gene expression without altering the primary DNA sequence. In this study, the GSE25861 gene's microarray data were downloaded from the "Gene Expression OmniBus" database to investigate the association of intrauterine growth retardation with epigenetic modifications.

Methods

Differences in gene expression level were generated by re-analyzing the mRNA transcripts of the placental micro-vascular endothelial cells obtained from preterm control placentas (n = 3) and placentas from pregnancies with severe IUGR (n = 6) with absent or reversed end-diastolic velocity in the umbilical artery. "Biobase", "Limma" and "Geoquery" libraries were obtained with bioinformatics analysis in R software. Protein-protein interaction network was constructed from the STRING database for visualize protein-protein interaction of these differentially expressed genes. In comparing the expression profiles of transcripts, "log2 fold change> 1" and $P \leq 0.05$ were considered statistically significant.

Results

Statistically significant differences were found in genes related to DNA methylation and histone modifications (acetylation, methylation, phosphorylation, ubiquitination) by using the DAVID (Database for Annotation, Visualization and Integrated Discovery) functional annotation system.

Conclusion

Epigenetic modifications have a crucial role in IUGR pathogenesis and this interplay will need to be explored by further molecular pathology studies to fully comprehend.

O1330 - ANTENATAL PLACENTAL PATHOLOGICAL ASSESSMENT USING SUPERB MICRO VASCULAR IMAGING (SMI)

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Superb Micro-vascular Imaging (SMI; Canon Medical Systems, Tokyo) is a blood flow imaging technique that employs a unique algorithm to minimize motion artifacts by eliminating signals based on analysis of tissue movement. SMI effectively separates flow signals from overlaying tissue motion artefacts preserving even the subtlest low flow components with unmatched detail and definition. Both blood flow and tissue motion (clutter) produce ultrasonic Doppler signals. The strong clutter signals overlap the low velocity blood flow components. Conventional Doppler imaging applies a wall filter to remove clutter and motion artefact, resulting in a loss of low velocity components. SMI analyzes the characteristics of clutter motion and uses a new adaptive algorithm to identify and remove tissue motion and reveal the true blood flow. Therefore, compared to conventional blood flow imaging such as color and power Doppler imaging, SMI significantly reduces motion artifacts and can visualize low-velocity blood flow in small vessels. Therefore, we considered SMI technic was particularly valuable in placental assessment during pregnancy. In our research, comparing ultrasound findings using SMI with placental histological findings after delivery, it is demonstrated that histological findings including congestion of villous stem vessels, placental infarction, increase of terminal villous vessels, and avascular villi were distinguishable by this technique. In the present report, the clinical value and future potential of SMI in antenatal placental assessment will demonstrate. We believe this new blood flow imaging technique is acceptable not only for the purpose of perinatal clinical assessments but also pathophysiological clarifications of various placental abnormalities.

O1451 - PREDICTION OF LARGE FOR GESTATIONAL AGE NEONATES

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Objective
To evaluate and compare the performance of routine ultrasonographic estimated fetal weight (EFW) and fetal abdominal circumference (AC) at 31+0 - 33+6 and 35+0 - 36+6 weeks' gestation in the prediction of large for gestational age (LGA) neonates born at ≥37 weeks' gestation.

Methods
This was a retrospective study. First, data from 21,989 singleton pregnancies that had undergone routine ultrasound examination at 31+0 - 33+6 weeks' gestation and 45,847 that had undergone routine ultrasound examination at 35+0 - 36+6 weeks were used to compare the predictive performance of EFW and AC for LGA neonates with birthweight >90th and >97th percentiles born at ≥37 weeks' gestation. Second, data from 14,497 singleton pregnancies that had undergone routine ultrasound examination at 35+0 - 36+6 weeks' gestation and had a previous scan at 30+0 - 34+6 weeks were used to determine, through multivariable logistic regression analysis, whether addition of growth velocity, defined by a difference in EFW and AC Z-scores between the early and late third trimester scans divided by the time interval between them, improved the performance of EFW at 35+0 - 36+6 weeks in the prediction of delivery of LGA neonates born at ≥37 weeks' gestation. Third, in the database of the 45,847 pregnancies that had undergone routine ultrasound examination at 35+0 - 36+6 weeks' gestation the screen positive and detection rate of LGA neonates born at ≥37 weeks' gestation and at ≤10 days from the initial scan were calculated for different EFW percentile cut-offs between the 50th and 90th percentile.

Results
First, the areas under the receiver operating characteristic curves (AUROC) of screening for LGA neonates were significantly higher with EFW Z-score than AC Z-score and at 35+0 - 36+6 than at 31+0 - 33+6 weeks' gestation ($p<0.001$). In screening by EFW >90th percentile at 35+0 - 36+6 weeks' gestation the predictive performance for LGA neonates born at ≥37 weeks' gestation was modest (65% and 46% for neonates with birthweight >97th and >90th percentiles, respectively, at screen positive rate of 10%), but the performance was better for prediction of LGA neonates born at ≤10 days from the scan (84% and 71% for neonates with birthweight >97th and >90th percentiles, respectively, at screen positive rate of 11%). Screening by EFW >70th percentile at 35+0 - 36+6 weeks' gestation predicted 91% and 82% of LGA neonates with birthweight >97th and >90th percentiles born at ≥37 weeks' gestation, at screen positive rate of 32%, and the respective values of screening by EFW >85th percentile for prediction of LGA neonates born at ≤10 days from the scan were 88%, 81% and 15%.

Conclusion
On the basis of these results it was proposed that routine fetal biometry at 36 weeks' gestation is a screening rather than diagnostic test for fetal macrosomia and that EFW >70th percentile should be used to identify pregnancies in need for another scan at 38 weeks and in the latter those with EFW >85th percentile should be considered for iatrogenic delivery during the 38th week.

O1457 - THE RELATIONSHIP OF LOW MATERNAL PAPP-A AT 11 13+6 WEEKS OF GESTATION WITH SMALL FOR GESTATIONAL AGE NEWBORNS AND STILLBIRTHS

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Objective
To assess whether low PAPP-A (Pregnancy associated plasma protein-A) at 11-13+6 weeks of pregnancy is related to bad obstetrical outcome and more specifically small for gestational age newborns and stillbirths.

Methods
A retrospective study, from 2 university hospitals (Athens University-Greece and Craiova University-Romania), which included all women who attended for the first trimester screening for chromosomal abnormalities (Nuchal Translucency, free-βhCG and PAPP-A). The study included all women with singleton pregnancies. In total there were 9533 women, while complete data and pregnancy outcome were available in 4012 women. Low PAPP-A (<0,3MoM) was found in 215 women, while complete data and pregnancy outcome was available in 103 of these pregnancies.

Results
From the 9533 pregnancies we identified 215(2.2%) with low PAPP-A (0,3MoM). Complete data and outcome of the pregnancy was available for 103 of these pregnancies. From the 103 pregnancies with low PAPP-A we excluded 11 cases who underwent termination of pregnancy for abnormal karyotype. From the remaining 92 pregnancies there were 8 cases of small for gestational age and 2 cases of intrauterine fetal death. There were also 3 cases of preterm delivery and 4 cases of late miscarriage (after 16 weeks).

Conclusion
Low PAPP-A (< 0,3MoM) during the first trimester of pregnancy seems to be related with an increased risk of adverse obstetrical outcome and more specifically with small for gestational age fetuses and stillbirth. Pregnancies with low PAPP-A values, even when the risk for chromosomal abnormalities is low should be managed as high-risk pregnancies.

Obstetrics - Hypertension in Pregnancy

O1048 - A PRELIMINARY STUDY ACUPUNCTURE AS AN ALTERNATIVE TECHNIQUE IN ESTABLISHING UTERINE CONTRACTIONS IN CONTRACTION STRESS TEST A RANDOMIZED CONTROLLED TRIAL

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A contraction stress test (CST) is an antenatal surveillance done in pregnancies at risk for the consequences of uteroplacental pathology like hypertension and diabetes. It evaluates fetal heart rate response to induced uterine contractions hence determining fetal reserve prior onset of labor. Acupuncture is used in obstetrics and gynecology as an effective tool in initiating uterine contractions.

Objective
This study aims to compare contractions produced by acupuncture technique from that of the conventional technique using oxytocin to determine if acupuncture can be an alternative method in establishing uterine contractions in CST.

Methods
This is a randomized controlled trial employed in fifty-four (54) term high risk pregnancies who were randomized into two groups: 27 patients in the acupuncture group and 27 patients in the oxytocin (control group). Acupuncture needles were applied bilaterally at two loci, Sanyinjiao (spleen 6) and Hegu (Large Intestine 4), to produce the desirable contractions that are interpretable for a CST.

Results
Subjects who received acupuncture had greater intensity (p=0.551) and significant longer duration (p=0.001) of uterine contractions than the oxytocin group. However, there was a significant shorter interval of uterine contractions after oxytocin treatment (p=0.013) than acupuncture. Furthermore, subjects who were in the acupuncture group obtained initial uterine contractions (5.29 versus 10.62 minutes; p=0.000) and achieved desirable uterine contractions (14 versus 30.89 minutes; p=0.001) faster than oxytocin. There is shorter waiting time for disappearance of the contractions in the acupuncture group than in oxytocin group (36.70 versus 57.74; p=0.000). One subject in the acupuncture group experienced minor bleeding at the needling site and 2 subjects complained of pain from needling. During the conduct of the study, it revealed that subjects in the acupuncture group spent less than in the oxytocin group due to use of lesser materials than that of the conventional method.

Conclusion
Application of acupuncture in Spleen 6 (Sanyinjiao SP6) and Large Intestine 4 (Hegu LI4) is effective in initiating and inducing uterine contractions. Acupuncture technique when compared to the conventional method using oxytocin, produces stronger and longer contractions. Furthermore, this study showed that contraction stress test can be completed in a shorter time thru acupuncture technique as it shows shorter mean time to achieve initial and adequate contractions thru this technique. Contractions also disappear in a much shorter time in acupuncture technique than in oxytocin group hence ideal for

outpatient setting. The adverse effects seen in this study were mild and transient. Cost to perform a contraction stress test using the acupuncture technique is significantly lower than that of the conventional method using oxytocin. Acupuncture should be considered as an alternative technique for contraction stress test as this is, simple, practical, cheap, and safe for the women and her infants.

O1049 - STROKE IN PREGNANCY. IS IT SAFE TO CT MEU IN PREGNANCY A CASE REPORT AND LITERATURE REVIEW

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We are presenting a case of stroke in a primiparous woman with no history of BP, cardiac or hyper coagulability problems. She smoked 10cigarettes/day. Her BMI was 23 and Asian Black in ethnicity. She developed gestational diabetes which was well controlled with metformin 500mg BD. She was on Aspirin 75mg from 12 weeks. Induction of labour was planned at 37w due to diabetes. She was admitted at 36 weeks due to slurred speech and weakness of the left hand. Medical registrar advised CT Head which was normal. Due to persistent symptoms, MRI of the head was performed, which showed small lesions in the front- parietal cortex, suggestive of stroke. She was commenced on Aspirin 300mg OD. During her stay she had MRV, heart ECHO, Doppler of lower limbs and CT angio-head which were normal. She delivered by an uncomplicated Elective CS at 36 weeks and 3 days. MRI performed a week later was normal. She made a good recovery. She was discharged on Aspirin with a further appointment with the stroke team.

Stroke in pregnancy is a recognised complication which contributes to >12% of maternal deaths. Incidence is between 4.3-210/100000. Stroke in young age (15-35) is more common in women and associated with poorer outcomes in terms of disability and dependency. Some risk factors for stroke are: a)age >35, b) black ethnicity, c)hypertension, d)heart disease, e)lupus, f)sickle cell disease.

Exposure to CT scan can be teratogenic. There is strong evidence that the teratogenic levels of the CT are 5000mrad. A single CT head is equal to 50mrad, 10mrad for CT cerebral angiography and chest X-ray is 1mrad. The risk for the baby to develop cancer is 1/17000 per 100mrad of foetal exposure. Use of iodinated agents carries risk of hypothyroidism in the newborn. There are no adverse effects to the foetus from MRI, but the long term consequences, are unknown. Prior to use of Galodinium, due to its long half-life, a thorough risk-benefit assessment should be made as it is associated with stillbirths and neonatal deaths.

In conclusion, stroke is one of the causes of indirect maternal deaths since pregnancy itself is hyper coagulated period. Literature shows that CT and MRI of the head are safe to use in pregnancy.

O1055 - DISTRIBUTION FREQUENCY OF PREECLAMPSIA WITHIN THE YEAR

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Objectıve
The pathogenesis of preeclampsia is still poorly understood. Recent research has shown that the incidence varies according to conception and birth season. A cross-sectional study was conducted to determine whether there was a relationship between the birth season and the prevalence of preeclampsia in the province of Mersin.

Methods
We retrospectively analyzed hospital discharge records of 451 hypertensive pregnant women who delivered in our hospital between 2010-2018. Spring (March, April, May), summer (June, July, August) and autumn (September, October, November), winter (December, January, February), was discussed. Monthly map was taken according to the last date and date of delivery.

Results
Among 451 hypertensive diseases, mild preeclampsia was the most common among women (42.1%). According to the season of birth, hypertensive pregnancy was the most common in winter (27.5%). According to the last menstrual period, hypertensive disease was higher in the pregnant women who were pregnant in spring (29.2%). The prevalence rate in January and July was higher than the other months (10.2%, 10%) and the prevalence in May was lower than in any month (4.2%).

Conclusion
The prevalence of hypertensive pregnancies was higher in the summer and winter months and it was lower for spring between Mersin women. It is observed that temperature and humidity changes may affect preeclampsia in different seasons. More extensive cohort studies are needed to validate this data.

O1056 - EFFECTIVENESS OF SYSTEMIC INFLAMMATORY INDEXES IN PREECLAMPSIA

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Objective

Abnormal changes in immune mediated inflammation contribute to the pathogenesis of preeclampsia (PE). In this study, our aim was to evaluate systemic inflammatory indexes [neutrophil / lymphocyte (NLR), platelet / lymphocyte (TLR), monocyte / lymphocyte (MLR), platelet / neutrophil (PNR)] as indicators of disease, and to evaluate early diagnosis and severity of PE. to investigate as a theoretical basis.

Methods

In this retrospective case-controlled study, clinical records of 548 pregnant women were screened. 28 patients had eclamptic seizures, 50 patients had hellp syndrome, 20 patients had superimposed preeclampsia and 19 patients had chronic hypertension were taken off study due to these disease. 122 healthy healthy control group and 309 preeclampsia (PE) patient (190 mild, 119 severe PE) Hemoglobin (Hb), hematocrit (Hct), platelet count, mean platelet volume (MPV), platelet / MPV ratio (P/M), leukocyte, neutrophil, monocyte, lymphocyte count, alt, ast, urea, creatinine values and systemic inflammatory response markers (NLR), (TLO), (MLO), (TNO) rates were recorded.

Results

No significant difference was found between mild and severe preeclampsia groups, but MPV, neutrophil, lymphocyte and monocyte counts, NLO, TLO, MLO and TNO values were significantly different when compared to control group. The ROC curve analysis showed that NLR had better diagnostic accuracy in separating PE from controls [NLR area under curve (AUC) = 0.548. ,When NLR taken as >3.49, 51.5% sensitivity, 50.8% specificity, 71.9% positive predictive value, 71.4% negative predictive value is obtained.

Conclusion

Secondary analysis of complete blood count parameters effectively evaluates systemic inflammation and immune status. Compared to absolute cell numbers, NLR and PLR provide more effective indicators for clinical evaluation, disease severity assessment and prognosis of PE.

O1113 - SYSTEMIC LUPUS ERYTOMATOSUS AND POSTPARTUM SEREBROVASCULAR ATTACK

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Objective
Cerebrovascular disease (CVD: stroke) is an obstetric mortal emergency that is associated with neurological severe sequelae which increases its risk in rare pregnancy. SVH occurs as a result of occlusion or perforation of the vessel. Hypertension is the most important risk factor. It is usually seen in preeclampsia and antiphospholipid syndrome in the second, third trimester and postpartum periods. Headache, impaired consciousness, nausea, focal neurological disorders, convulsion is the most common clinical picture.

Case
23-year-old Gravide1 Parity 0 There was no emergency problem during pregnancy follow-up. At 38th gestational week, fetal bradycardia at NST: 80 / min was seen and emergency caesarean section was performed. In the postoperative 2nd hour, sudden loss of consciousness and 1-minute long-lasting generalized tonic-clonic contraction were detected. Anus resuscitation was performed. In the follow-up, blurred consciousness, tendency to look to the left and to the left to the left, cooperation limitation, and tonic-clonic focal seizure in the left-upper-extremity, which lasted for 2 minutes were observed. TA 140/90, pulse 80, htc: 36,4%, hb12 g / dl, plt148000 (10e3 / µl), tsh3,7 (MIU / ML), 2 glucose: 114 (mg / dl), complete urine: protein (-), urea: 14 (mg / dl), creatinine: 0.52 (mg / dl), total protein 4 (mg / dl), albumin: 2.1 (g / dl), SGOT: 30.5 (U / L), SGPT: 19.4 (U / 1), Na: 128.8 (mmol / l), K: 4 (mmol / l), Ca: 7 (mg / dl), Mg: 3 (mg / dl), CRP: 26 (mg / l), vit b12: 330 (pg / ml). Brain MR: acute infarct area of bilateral lentiform nuclei was seen in right posterior parietal region. Contrast-enhanced MR-venography and echocardiography were normal.

In the EEG, a common paroxysmal anomaly was detected on the left frontal area. Coraspin 300 mg1 * 1, fraxiparin 0.6 2 * 1, tegretol 400 CR 2 * 1 alfamet3 * 1 treatment was started. Congenital lupus AV block was detected in the baby of the patient.

After 1 week, MRI showed regression of lesions, and he was discharged 10 days later. Cerebrovascular disease is a rare obstetric emergency with 25% mortality and 25% neurological sequelae. CVD is caused by occlusion or perforation of the vessel.

The occlusion of the vessel causes ischemia, perforation leads to hemorrhagia. Preeclampsia and antiphospholipid syndrome are the most common etiological factor in the second, third trimester and postpartum periods. She has headache, impaired consciousness, nausea, focal neurological disorder, and convulsion. In the postpartum second hour, sudden loss of consciousness, generalized tonic clonic seizure, focal clonic seizure in the left upper extremity was applied positive.

Conclusion
CVD is a high obstetrical emergency. Emergency diagnosis and treatment are important in prognosis. Reduction of brain edema and anticonvulsant therapy is essential in patients with CVD.

O1204 - VAGINAL BIRTH AFTER CESAREAN DELIVERY – IS IT SAFE 15 YEARS OF EXPERIENCE

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Objective

Aim of our retrospective study was to define percentage of successful vaginal births after cesarean delivery (VBAC) and compare this to planned and emergency repeat cesarean delivery.

Methods

We have retrospectively analyzed all deliveries after one cesarean delivery in our department for the last 15 years (2002 - 2016). We have also analyzed possibility of VBAC after two previous cesarean deliveries.

Results

During the study period, we have performed 23 660 deliveries, out of those 3 832 were cesarean deliveries (16.2%). 1 679 women were already after one previous cesarean delivery (7.1%). Elective repeat cesarean section was done in 882 women (52.5%). The rest, 797 women, had an attempted vaginal delivery (47.5%). In these, a successful vaginal delivery was in 642 cases (80.5%) and in the remaining 155 women (19.5%) we were forced to perform emergency repeat cesarean section. There were no significant differences in perinatal mortality or morbidity in newborns or in mothers (uterine rupture, emergency hysterectomy, injury of urinary bladder) between the groups. We have performed detailed analysis of VBAC and selected obstetric indicators for the last seven years (2009 - 2016). In this detailed analysis, we observed these success rates of VBAC: 92% in women with history of at least one previous spontaneous vaginal delivery, 72.1% in women without this history, 83.6% in women with spontaneous start of labor, 58.3% in women with induced labor, 80.7% in newborns < 4000 grams, 66.1% in newborns ≥ 4000 grams and 71.8% in women with history of failure in the mechanisms of labor (dystocia). The most common indication for emergency repeat cesarean section was non progressing delivery and fetal hypoxia. Separately, we describe first experience of attempted vaginal delivery in women after two previous cesarean deliveries.

Conclusion

We have confirmed high success rates of VBAC, which is associated with low risk of complications in mother and fetus. Comparing our data to literature, where we have witnessed an explosion of VBAC with subsequent rapid decline, our VBAC rates are stable during the study period. In the last years we have attempted, albeit in strictly selected population, VBAC after two previous cesarean deliveries.

O1237 - PREDICTION OF MATERNAL AND PERINATAL ADVERSE OUTCOMES IN EARLY ONSET PREECLAMPSIA WITH THE AID OF ANGIOGENIC MARKERS (SFLT 1 PLGF RATIO)

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Objective

Expectant management of early-onset preeclampsia (PE) is recommended until 34 gestational weeks as long as the maternal and fetal status remains uncomplicated. However, the appearance of adverse outcomes is difficult to predict with the commonly available diagnostic tools. Our aim is to analyze if the sFlt-1/PlGF ratio is more useful than other common parameters performed at the time of diagnosing early-onset PE to predict adverse outcomes and time-to-delivery interval.

Methods

Retrospective cohort study of 88 consecutive cases of early-onset PE (diagnosed before 34 weeks using NHBPEP criteria) in our tertiary hospital during the period 2016-18. Iatrogenic delivery decisions were made following current guidelines. sFlt-1/PlGF was measured at the time of diagnosis (+/-3 days) together with other routine lab tests including: protein:creatinine ratio, transaminases (ALT and AST) and serum creatinine. 12 cases were excluded: absence of sFlt-1/PlGF result (n=3), inability to expectant management (n=7), lost to follow-up (n=2). The association between the sFlt1/PlGF ratio and other routine parameters with subsequent adverse outcomes: maternal death, eclampsia, stroke, HELLP syndrome, subcapsular hepatic hematoma, pulmonary edema, placental abruption, and acute renal failure, as well as the time-to-delivery interval was analyzed. Previously described sFlt-1/PlGF cutoffs of 85 and 655 for aid in preeclampsia diagnosis and increased risk for delivery in 48 hours were used for analysis.

Results

76 cases of early-onset PE with intended expectant management were finally included. Fetal growth restriction was present in 48/76 (63.2%) cases and 18/76 (23.7%) developed adverse outcomes (with some women suffering more than one complication: 9 HELLP syndrome, 6 abruption, 3 pulmonary edema, 2 renal failure, 1 subcapsular hepatic hematoma). None of the parameters studied at diagnosis obtained a good prediction of the subsequent appearance of adverse outcomes, with areas under ROC curves of 0.65 (95%CI 0.50-0.80) for platelets, 0.61 (95%CI 0.45-0.77) for sFlt-1/PlGF, and < 0.60 for mean arterial pressure, protein:creatinine ratio, transaminases (ALT and AST) and serum creatinine. Mean (SD) gestational age at PE diagnosis was 29.7 (3.0) weeks. Mean (SD) time-to-delivery interval was 11.1 (9.7) days. The median (25th-75th centile) of the sFlt-1/PlGF ratio in cases delivered <= 2 days, 2-7 days and >7 day were 609 (319-1243), 346 (197-556) and 206 (128-373), respectively ($p<0.001$) as shown in the Figure. In 70/76 (92.1%) and 12/76 (15.8%) cases a value of the sFlt-1/PlGF ratio above 85 and 655 was measured at PE diagnosis, respectively. In the latter, the development of adverse outcomes was observed in 5/12 (42%) cases vs. 13/64 (20%) in PE cases with sFlt-1/PlGF ≤655 ($p=0.14$). The mean (SD) time-to-delivery interval was of 4.4 (7.5) vs. 12.1 (9.3) days, respectively, $p<0.01$. The relative risk for delivery in <= 2 days with sFlt-1/PlGF ratio >655 was of 5.3 (95%CI 2.7 – 10.6), $p<0.01$.

Conclusion

None of the parameters obtained at early-onset PE diagnosis were useful to accurately predict the development of adverse outcomes. However, the value of the sFlt-1/PlGF ratio was closely related to the time-to-delivery interval. Especially, a sFlt-1/PlGF value above 655 increases 5 times the risk of delivery in the next 48 hours.

O1288 - LEVELS OF SYNDECAN 1 HYALURONAN AND SOLUBLE FMS LIKE TYROSINE KINASE 1 IN DIFFERENT TYPES OF PREECLAMPSI

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Objective

The study aimed to assess serum levels of two components of endothelial glycocalyx (EG), syndecan -1 (Sdc-1) and hyaluronan (HA), as markers of endothelial injury as well as concentration of soluble fms-like tyrosine kinase 1 (sFlt-1) in patients with two forms of preeclampsia (PE), placental and maternal PE.

Methods

Blood samples were collected in the third trimester of pregnancy from 20 women with placental PE, 20 with maternal PE , and 20 with normal pregnancy for the assessment of serum levels of Sdc-1 and HA. All patients were hospitalized between 2015 and 2018 at the Division of Reproduction of Poznan University of Medical Sciences. Preeclampsia was characterized by hypertension (systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥ 90 mmHg on two occasions) and proteinuria (≥ 300mg/24 h), both of which found for the first time after 20 weeks of gestation. Placental PE was diagnosed if the intrauterine growth restriction (IUGR) of a fetus was additionally found. IUGR was diagnosed if ultrasound-estimated fetal weight was below the 10th percentile according to local growth charts and the Doppler criteria for placental insufficiency were also met. Maternal PE was diagnosed if no IUGR was found.

Results

Mean serum concentrations of Sdc-1 was 6,29 ng/ml in the whole group of patients with PE (placental and maternal PE). It was significantly lower than that in the healthy pregnant women (11 ng/ml, $p<0,001$). The serum level of Sdc-1 did not differ significantly between the two groups of patients with PE.
In contrast, the mean serum level of HA was significantly higher in the whole group of patients with PE (236,2 pg/ml) than in the control group (113,9 pg/ml). However, the concentrations of HA did not differ between patients with placental and maternal PE. Serum level of HA in the three groups of patients is shown in Figure.
No significant correlation was found between gestational age at the onset of preeclampsia and the concentration of Sdc-1 and HA in both studied groups.
The concentration of sFlt- was the highest in patients with placental PE (3,71 ng/ml). Both the levels of sFlt-1 in women with placental and maternal PE (3,22 ng/ml) were significantly higher than in the control group (0,3 ng/ml). There was no statistical difference between concentrations of sFLt-1 in patients with two forms of PE.

Conclusion

1.Evaluation of serum concentrations of HA in patients with PE seems to be more useful in the assessment of endothelial injury than that of Sdc-1.
2.The degree of EG damage is comparable in patients with placental and maternal PE.
3.The significance of lower concentration of Sdc-1 in patients with preeclampsia than in normotensive pregnant women needs further evaluation.
4. Mechanism of endothelial injury in women with placental PE is probably more sFlt-1 dependent than in patents with maternal form of PE.

O1328 - A RARE PREECLAMPSIA CONDITION TWIN PREGNANCY WITH COMPLETE TYPE HYDATIDIFORM MOLE AND COEXISTING ALIVE FETUS CASE REPORT AND REVIEW OF THE LITERATURE

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Aim

To present as a case of twin pregnancy with complete type hydatiform mole and coexisting alive fetus (CHMCF)

Case

A 19-year-old primigravid patient was referred to our clinic with a preliminary diagnosis of CHMCF at 26th gestational week. We examined an enlarged uterus (compatible with 30 weeks of gestation) and alive fetus consistent with 26 weeks of gestation. There was no evidence of fetal anomaly on admission. A normal-appearing placenta was present along the posterior uterine wall, and a separate large cystic mass was seen on the anterior wall, most consistent with complete mole (Figure 1-2). Serum β-hCG value was 134.342 mIU / ml, free T4 was 1.36 ng / dl, TSH was 0.489 uIU / ml. Other laboratory tests were normal and blood pressure (BP) was 110/70 mmHg. In addition, transabdominal ultrasonography and chest X-ray were normal. CHMCF was considered, and the family was informed about complications that may occur as a result of continuation of the pregnancy, risks of gestational trophoblastic disease (GTD) and treatment options particularly. The family did not accept invasive diagnostic tests and termination. The antenatal steroid (betamethasone) doses for fetal lung maturation was completed at 26 weeks. At 28 weeks of gestation, the patient's clinical condition deteriorated. Her BP spiked to 190/110 mmHg with severe headache, visual symptoms and active vaginal bleeding that was accompanied with severe preeclampsia. Intravenous magnesium sulphate was given to prevent seizures. Delivery was performed by caesarean section and a viable normal appearing female fetus (birth weight 1230 g, Apgar scores 6, 7 at 1 and 5 minutes, respectively) and placenta were delivered without complications. The separate mass of multiple grape-like cystic vesicles was removed by suction curettage to ensure complete removal of the molar tissue (Figure 3). There were no signs of placenta previa or invasion anomaly. On postoperative day 1, β-hCG was 19096 mIU / ml, and 3452 mIU / ml on the third day. She recovered well in 3 days of hospitalization and discharged. The diagnosis of complete type hydatiform mole was confirmed by pathology. At 2 months follow up her β-hCG levels were normal. She is healthy at one year follow up without any evidence of persistent GTD and her baby is doing well.

Conclusion

CHMCF is a rare obstetric condition. The estimated incidence is about 1 in 22.000-100.000 gestations. Management of these cases poses a clinical dilemma with inherent risk of severe maternal complications like abortion, preterm delivery, preeclampsia, thyrotoxicosis, antepartum hemorrhage, intrauterine fetal death, placenta accreta and GTD. Fetus also carries the significant risk of malformations, chromosomal abnormalities and extreme prematurity. Most of such pregnancies are terminated prematurely either because of persistent hemorrhage or severe preeclampsia and nearly three fourth of the cases do not go beyond 20 weeks of pregnancy. Continuation of CHMCF is an acceptable option but the chance of a live term birth is <50%, with nearly 33-50 % of the mothers developing GTD after the delivery. Therefore, counseling to the family and an individualistic approach is important.

O1429 - POST PARTUM BELL'S PALSY IN A WOMAN WITH ECLAMPSIA AND HELLP SYNDROME

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Case

Idiopathic unilateral peripheral facial nerve paresis, Bell's palsy, is a rare complication during pregnancy and puerperium and it is controversial whether pregnant women have a poorer prognosis compared to non-pregnant patients. We present a case of Bell's palsy that developed 72 hours postpartum, in a woman presenting with HELLP syndrome and eclampsia. A 28 years old pregnant woman, G3P2, with 2 uncomplicated vaginal deliveries at term in her obstetrical history and without any other medical history, presented for the first time at 36w+5 GA due to uterine contractions. The woman was a refugee from Syria that had come to Greece a few days ago and unfortunately, due to her state, she had not received a proper antenatal maternal and fetal surveillance during pregnancy. Initial assessment included BP measurement, laboratory tests, cardiotocography and ultrasound fetal scan. BP was 190/120 mmHg.,blood and urine tests showed Hct: 43.6%, PLT:110000, SGOT:140, SGPT:58, LDH:693, Uric acid:8,4, proteinuria, and sonography revealed a SGA fetus at <10th centile with EFW 2100gr; all of which indicated severe preeclampsia and HELLP syndrome. After nephrologic consultation, immediate induction of labor was decided but soon after, the woman developed eclamptic seizures which led us to an emergent cesarean under general anesthesia. The newborn, a male 2120gr with a good Apgar score was transferred in the NICU and was discharged a few days later in excellent condition. However, mother was transferred to the ICU of University Hospital immediately after the operation and stayed intubated and in shock for 2 days. On 4th day postpartum, he was discharged from the ICU and transferred to the Nephrology Department where she stayed for 5 more days, and efforts were made to control hypertension and regulate her impaired renal function. On the 9th day postpartum, she developed puerperal sepsis and was transferred again to the Obstetrics department where she received aggressive antibiotic treatment. She was discharged from the hospital 15 days after delivery. Moreover, 72 hours postpartum, the patient reported a sudden muscular loss on the left side of the face accompanied by an inability to smile, close the eye and raise the eyebrow. History, clinical examination, laboratory, and imaging investigation excluded trauma, infection, CNS pathology, and tumor as possible causes. The patient was diagnosed as having unilateral peripheral facial nerve paresis House-Brackmann Grade III- moderate dysfunction. High doses of intravenous prednisolone were given, with gradual tapering. Within three months, facial nerve function had fully recovered.

Conclusion

There have been reports in the literature that there is an association between facial nerve paresis and hypertensive disorders of pregnancy, and some authors have suggested that facial palsy may be a precursor for preeclampsia. However, in our knowledge this is the first report of a woman with overt eclampsia and HELLP syndrome that develops Bell's palsy shortly after labor, in which aggressive corticosteroid treatment resulted in an optimal outcome with full function recovery.

Obstetrics - Maternal nutrition

O1024 - COMPARISON OF THE EFFICACY OF IRON AMINO ACID CHELATE AND FERROUS SULFATE IN THE TREATMENT OF IRON DEFICIENCY ANEMIA AMONG PREGNANT WOMEN SEEN AT OUT PATIENT DEPARTMENT OF A TERTIARY HOSPITAL

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Introduction
Anemia is a major global problem that affects women and is prevalent during pregnancy. Effective management is needed to prevent adverse pregnancy outcomes. Ferrous iron salts are the preparation of choice and recommended for both prevention and treatment of iron deficiency anemia (IDA). However, most commonly available iron supplements are poorly absorbed, with gastrointestinal disturbances as side effect.

Objective
To compare the efficacy of iron amino acid chelate and ferrous sulfate in the treatment of IDA among pregnant women seen at the out-patient department of a tertiary medical center.

Methods
This is a single-blind randomized controlled trial. Included were women 18 to 40 years old, with singleton pregnancies diagnosed with IDA without any co-existing fetal and maternal complications. Twenty four participants allocated on each treatment arm who took their assigned treatment twice a day for 90 days. Hemoglobin, hematocrit, MCHC, MCV, RDW & serum ferritin levels were taken at baseline and on days 30, 60 and 90 from initiation of treatment. Mean blood parameters were compared before and after treatment between two treatment arms as well as the mean difference of blood parameters on days post-treatment from the baseline using T-test. Adverse effects between two groups were compared using Chi-square.

Results
No statistically significant differences in the mean blood parameters between Iron amino acid chelate and Ferrous sulfate on days 30 and 60 of treatment. There is significantly higher hematocrit and MCHC and lower RDW in Iron amino acid chelate group on day 90 after treatment. All CBC parameters on days 30, 60, and 90 post-treatment compared to baseline level were significantly increased for both treatment arms. However, day 90 level of serum ferritin significantly increased in the Iron amino acid chelate group.

Conclusion
Iron amino acid chelate is comparable to Ferrous sulfate in the treatment of IDA among pregnant women as it showed positive effects on CBC parameters up to day 90 of treatment. In improving serum ferritin level, iron amino acid chelate shows some promise. Iron amino acid chelate was found to be superior to ferrous sulfate as it achieved optimum treatment response even at a lower dose with lesser adverse effects. Improved oral iron treatment tolerability leads to better compliance to long-term therapy resulting to successful treatment outcome.

O1058 - GUT DYSBIOSIS CAN AFFECT HYPEREMESIS GRAVIDARUM

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Objective

Hyperemesis Gravidarum(HG) is a disease with severe nausea and vomiting, beginning before the 22nd week of pregnancy. In studies conducted in different populations, approximately 0.3% and 2% of all pregnancies were affected. Although HG is thought to be a psychological disease, its pathophysiology has not been solved. Some meta-analyzes revealed the association of HG with depression and anxiety during pregnancy. The relationship between various hormones in the pathophysiology of HG has also been shown; however, a definitive study has not yet been published. Another reason for HG is Helicobacter Pylori infection. Human intestinal microbiology is profoundly effective in human health and diseases through its complex structure and mutual host-microbial interactions. A healthy microbiota has important functions in energy collection and storage, trophic and metabolic functions and protection against pathogens. It interacts with mucosal epithelial cells, thereby allowing maturation and maintenance of the host immune system, which affects the microbiotic composition. As a result, microbial dysbiosis has been associated with a number of immune and metabolic diseases. HG is a disease in which pregnant women present with gastrointestinal system symptoms and some associated metabolic changes. When literature is examined, it is seen that HG is examined in many different aspects. However, this issue has never been evaluated in terms of microbiota.

Methods

The aim of this study was to investigate the intestinal microbiology of 20 patients, 10 of whom had normal pregnancies and 10 of them were HG and the differences between the two groups were planned. PUQE (Pregnancy Unique-Quantification of Emezis) scoring is an interrogation test used to determine the severity of pregnancy nausea and vomiting. According to the test results, patients in the middle and severe disease groups were identified as HG patients. Stool flora scan was routinely planned for all patients. After 3 days of incubation, colonies were counted and the results were expressed as colony forming units per gram feces (c.f.u./g feces).All data were evaluated statistically and their relationship with clinical condition was discussed.

Results

According to the PUQE test, there was a significant increase in Clostridium spp. and Candida spp. types and a significant decrease in Bifidobacterium spp. type in patients with hyperemesis gravidarum compared to normal pregnancies. At the same time, there was a significant difference between the group with HG and the group with normal pregnancies in terms of flora dysbiosis.

Conclusion

An intensive colonization by Candida spp. plays an active role in the breakdown of the intestinal barrier by the competition in the use of nutrients, leading to the loss of the established intestinal flora, which often contributes to the increase of intestinal permeability. Clostridium spp. do not have any beneficial properties for the microenvironment of the bowel. On the contrary, a significant amount of bioactive amines, histamine and gases (sulfur, CO2 and H2) can be released with proteolytic properties and can cause severe bloating. Bifidobacterium spp is one of the health-friendly bacteria in the actinobacteria family. It is effective in stimulating the immune system. The increase in Candida spp and Clostridium spp and the decrease in Bifidobacterium may be involved in the formation or exacerbation of HG. Our results suggest that gut dysbiosis may be a factor in HG.

O1073 - SUCCESSFUL PREGNANCY OUTCOME IN PATIENT WITH CARDIAC TRANSPLANTATION

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Objective

Pregnancies after cardiac transplantation carry high risk to the patient, fetus, and allograft and need to be closely monitored by an integrated team that includes a cardiovascular surgeon, cardiologist and a perinatologist in specialized centers. Preconception counseling is recommended for both evaluation of allograft dysfunction or vasculopathy and in terms of risk of recurrence of the underlying cardiac disease in offspring. Medications should be reviewed for teratogenic risk prior to conception Maternal risks are allograft rejection, infection, hypertension, and preeclampsia. Fetal risks include spontaneous abortion, premature delivery and low birth weight. We report a case of successful pregnancy in the cardiac transplant recipient.

Case

A 30 year-old patient were first evaluated preconceptionally. She underwent cardiac transplantation due to viral myocarditis and dilated cardiomyopathy eleven years ago. Since then she was under immunosuppressive therapy and no allograft rejection has been noted. Routine blood tests and ultrasonography revealed no abnormality with normal left ventricular function on echocardiography. Drug doses were regulated with cyclosporine 250 mg/day, azathioprine 200 mg/day and low dose prednisolone. Patient were informed about potential risks during pregnancy for both mother, fetus and allograft rejection. She got pregnant spontaneously. She was carefully followed-up during pregnancy by cardiovascular surgeon, cardiologist and an obstetrics team experienced in high-risk pregnancies. Pregnancy went on very well without any fetal and maternal complications. At 38th weeks of gestation she had mild hypertension. She delivered, normal male infant 2970 g, APGAR score 9/10 with cesarean section under general anesthesia. She was carefully monitored postpartum she was discharged at 6th day postpartum without any complication.

Conclusion

Physiologic adaptive changes in the cardiovascular system which occur during pregnancy may lead to clinical problems in the cardiac transplant recipient. Patient should be carefully for by a multidisciplinary team throughout pregnancy and the postpartum period.

O1196 - DIAGNOSTIC STUDY OF FIRST TRIMESTER HEPCIDIN FERRITIN AND SOLUBLE TRANSFERRIN RECEPTOR TO PREDICT ANEMIA IN THE THIRD TRIMESTER RESULT FROM A COHORT STUDY IN INDONESIA

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Objective
Anemia in the third trimester has been identified as a risk factor for maternal and fetal morbidity that might lead to mortality in the perinatal period. The need for finding the best marker to predict anemia in the third trimester has become more important, especially in countries with low resource setting, where laboratory marker examinations are expensive. Hepcidin was named as the king of markers for iron deficiency, but it may not be applicable in pregnancy. The fact that the prevalence of anemia increased by trimesters in the cohort study, has triggered this study which aimed at defining the best marker among hepcidin, ferritin or soluble transferrin receptor (sTfR) in the first trimester to predict anemia in the third trimester.

Methods
This diagnostic study was nested on the cohort study of vitamin D and its impact during pregnancy and childhood in Indonesia. Pregnant women were recruited in the first trimester from four cities in West Java, Indonesia. They were screened for first trimester hepcidin, ferritin and sTfR level in the sera which were measured by ELISA, and complete blood count (CBC) in all trimesters which was done by impedance method measurement (Sysmex XP-100, Japan). Only subjects with complete data were included in analysis. Diagnostic study was performed to compare the three markers by finding the receiver operating curve (RoC), likelihood ratio (LR) and risk estimate (RR).

Results
One hundred and eighty one pregnant women were eligible for analysis. The result of this study showed that serum ferritin level in the first trimester was the best marker to predict anemia in the third trimester of pregnancy. Hepcidin and sTfR performed poorly. A new cut off point of ferritin level below 27.23 ng/ml yielded the best ROC with 67% area under curve (95% CI 60%-75%, p <0.0001, Youden index J 0.28) and LR (+) 3.07 (95% CI 1.8-5.3) and specificity 86.29 % (95% CI 79.0%-91.8%). These last figures were better than the previously used cut off point of ferritin level below 30 ng/ml.

Conclusion
This study provided evidence that serum ferritin level in the first trimester was best to predict anemia in the third trimester. It will be valuable in targeting subjects for more rigorous approach for the prevention and treatment of anemia in pregnancy, especially in low resource setting. The usefulness of ferritin as the marker for treatment of anemia in pregnancy would need a carefully designed randomized controlled trial.

Obstetrics - Preterm labor

O1124 - ADMINISTRATION OF ANTENATAL MAGNESIUM SULPHATE FOR PREVENTION OF CEREBRAL PALSY AND DEATH IN PRETERM INFANTS– A DOUBLE BLIND RANDOMISED PLACEBO CONTROLLED PARALLEL GROUP MULTICENTRE TRIAL

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Objective
Previous meta-analyses have suggested that antenatal treatment with magnesium sulphate (MgSO4) to women at imminent risk of preterm birth seems to decrease the risk of cerebral palsy. Despite this, the European EPICE cohort study recently revealed an almost non-existing use of MgSO4 for fetal neuroprotection among children born before 32 weeks of gestation. The reluctance to adopt this practice across European centres may be due to limited understanding of the neuroprotective mechanism including concerns about the optimal dose and timing of treatment. Such reluctance may also be due to concerns regarding the robustness of the evidence presented in previous meta-analyses. A recent trial sequential analysis adjusting for risk of random error due to repetitive testing estimated that data from additional 400 women are needed before accepting MgSO4 as evidence-based fetal neuroprotection. Hence, the objective of this study was to evaluate MgSO4 as a neuroprotector in preterm birth before 32 weeks of gestation in a clinical trial.

Methods
In this multicentre, placebo-controlled, double-blind trial, we randomly assigned 560 women at imminent risk for delivery between 24 and 32 weeks of gestation to receive MgSO4, administered intravenously as a 5-gram bolus followed by a constant infusion of 1 g per hour or matching placebo. The primary outcome measure was moderate-severe cerebral palsy. Secondary outcome measures included mortality, the combined outcome of moderate-severe cerebral palsy and mortality, and short-term neonatal outcome measures. Follow-up of surviving children was done at or beyond 18 months of corrected age by a clinical assessment in combination with the Ages and Stages questionnaire (ASQ) which is a standardized, age-related, validated questionnaire containing questions that can reveal signs of cerebral palsy. The trial was registered at ClinicalTrials.gov (NCT01492608).

Results
560 women underwent randomization and gave birth to 680 children. Gestational age at enrolment and at delivery was 28.7 weeks (SD 24.0-31.8) and 30.1 weeks (SD 24.0-41.3) respectively. 42 children died before reaching the age of 18 months. Follow-up by clinical assessment was achieved for 100% of the remaining children. The ASQ was completed for 97% of the children at the time of abstract submission.
All women and children will be included in an intention-to-treat analysis after unblinding of the trial in July 2019. Data will be analysed by the end of August for presentation at the 14th World Congress of Perinatal Medicine.

Conclusion

The results from this randomised clinical trial will be added to the previous meta-analysis to obtain firm evidence for MgSO4 as a neuroprotector and determine whether it should be used as standard therapy for women in preterm birth.

O1133 - PESSARY USE IN PATIENTS DIAGNOSED WITH SHORT CERVIX AND CERVICAL INSUFFICIENCY

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Objective
The aim was to evaluate the effectiveness of pessary use in patients with cervical insufficiency or with cervical length less than 25 mm before the 25th week of gestation and to evaluate the examination and the findings.

Methods
In our study, among the pregnancies between the 16th and 24th gestational weeks, 60 pregnant women with a preterm delivery history and / or cervical length less than 25 mm were included. Among these 60 patients, 43 of them had short cervix, 17 of them had cervical insufficiency. According to the findings of the examination was applied to the patients pessary. Once a month, cervical culture and urine cultures were taken from patients who experienced pessary. Pessaries of pregnant women with 37 weeks of gestation were removed. Before reaching the 37th gestation week, pessaries were withdrawn in patients who had ongoing vaginal bleeding, premature rupture of membranes in unstoppable actions despite tocolytic treatment.

Results
Among 60 patients who experienced pessary, 21 of them gave birth before 28 weeks, 39 of them gave birth after 29 weeks and beyond. Those who gave birth after 34 weeks were 31 patients and those who gave birth before 34 weeks were 29 patients. The presence of cervical funneling before pessary application shows a statistically significant difference in terms of patient's giving birth before or after 28 weeks (p = 0.033). In patients with cervical funneling, there was a significant increase in birth before 28 weeks. Depending on whether or not patients applying with pain need for tocolysis, it shows statistically meaningful difference in terms of patient's giving birth before or after 34 weeks (p = 0.001) (OR 7, 61, 95% GA 2.4-24.6). In the group without need for tocolysis, there is a meaningful increase in birth after 34 weeks. In patients with short cervical, cervical length below 20 mm, the cervical length over 20mm and cervical insufficiency history did not seem to have any statistically significant difference in terms of patient's giving birth before or after 34 weeks (p= 0,154).

Conclusion
Our findings showed that, alongside the defined cervical risk factors, cervical funneling and need for tocolysis were important in pessary application. Further studies are needed on this subject.

O1200 - TRIAL OF LABOR AFTER CESAREAN IN PRETERM DELIVERY AND NEONATAL RESPIRATORY OUTCOMES

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Objective
The rate of Cesarean section (CS) in Japan has increased to 25%. There are few reports about trial of labor after Cesarean (TOLAC) in preterm delivery and outcomes in neonates. We performed this retrospective study to reveal the safety of TOLAC in preterm delivery and associated neonatal respiratory complication.

Methods
From 2005 to 2017, patients who had prior CS and neonates born between 28 and 36 weeks of gestation were enrolled. The primary outcomes were the success rates of TOLAC in preterm and the neonatal respiratory outcomes of TOLAC and CS group. We defined respiratory disorder as a condition requiring oxygen therapy in neonatal intensive care unit (NICU). The following outcomes were also studied: weeks of gestation, neonatal weight, 5-minute Apgar score, the rates of intubation and chorioamnionitis. Criteria for TOLAC: Only one previous cesarean, and former CS was conducted lower and transverse section, no history of myomectomy, singleton and vertex presentation, no contraindication of vaginal delivery. All patients had contents of emergency CS and taken pre-examinations for CS in emergency.

Results
In this period, total 112 patients with prior CS had preterm delivery. 17 patients were excluded due to placental abruption, severe preeclampsia or severe fetal growth restriction. 44 patients tried TOLAC and the other 51 patients received CS. Our study showed high success rates of TOLAC (100%) and no uterine rupture in this preterm periods. The rates of neonates who were admitted to NICU because of adverse respiratory disorder was significantly higher in CS group (27.2% vs 52.9%, $p<0.05$). There were no differences in Apgar score at 5 minutes, intubation and chorioamnionitis rates between two groups.

Discussion
In preterm deliveries, CS rate is significantly higher than that in term deliveries. TOLAC in preterm is thought to be safe for mothers. CS compared with vaginal delivery is known to be associated with increased odds of respiratory distress and five minute Apgar less than 7 in preterm neonates. The weeks of gestation and neonatal weight were not significantly different. In this study, the rate of respiratory distress was significantly higher in CS than TOLAC group. These differences can be related to the failure of lung fluid clearance after CS, especially in preterm neonates. TOLAC in preterm is thought to be safe also for neonates. Immediate CS at onset of labor in preterm period, only in the reason of prior CS, is not recommended for both mothers and neonates for these patients.

Conclusion
All TOLAC in preterm succeeded and proved to be a reasonable strategy also for neonates to decrease respiratory disorder. TOLAC in preterm delivery can be safe and feasible for both pregnant women and neonates.

O1260 - THE INFLUENCE OF ATOPIC CONDITION IN PREGNANT WOMEN ON OBSTETRICS AND PERINATAL OUTCOMES

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Objective
Atopic disease has risen up in the last decade. The atopic condition may influence fertility increasing it due to the Th2-cell cytokine profile, but the mechanism is yet unknown. The aim of this study is to evaluate the relationship between pregnant women with diagnosis of hay fever or not and their influence to their perinatal outcomes.

Methods
In total, 503 pregnant women with atopic condition were compared with a general obstetric population composed by 40354 pregnant women. Atopic condition included allergy to pollen, grasses, olive, cypress, false banana, arizonic, coniferous, waves, pollinosis and hay fever. Rates of preterm delivery (< 37 weeks' gestation), low birthweight (< 2500 g), neonatal acidosis (pH < 7.20), low 5 minute Apgar's score (< 7) and Cesarean section due to fetal distress were analysed. Chi squared was used for comparisons. Statistical significance was set at 95% level ($p < 0.05$).

Results
The rates of both preterm delivery and low birthweight were significantly higher in women with atopic conditions (16.6% Vs. 9.8% for preterm delivery and 14.1% V. 8.0% for low birthweight; $p < 0.000001$ for both). On the contrary, the rate of caesarean section due to fetal distress was lower in the atopic group (1.8% Vs. 4.4%, $p = 0.004$). However, the rates of low Apgars's score and neonatal acidosis were similar in both groups.

Conclusion
Women with atopic conditions are at higher risks of both preterm delivery and low birthweight. Inflammatory mechanisms should be furtherly studied.

O1262 - ROLE OF PROGESTERONE RECEPTOR GENE VARIATIONS IN PRETERM BIRTH

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Introduction
Preterm delivery is defined as delivery occurring before 37 weeks of gestation, and is a major public health problem throughout the world. Approximately 1 in 10 babies are born preterm. Based on gestation, preterm birth is subdivided into three different cohorts: extremely preterm (< 28 weeks of gestation), very preterm (28 to < 32 weeks of gestation) and moderate or late preterm (32 to < 37 completed weeks of gestation). The aetiology of preterm birth is multifactorial and includes different pathologies, genetic and environmental factors.

Objective
One of the genetic factors implicated as a factor for the occurrence of preterm birth is genetic polymorphism in progesterone receptor gene (PGR). The aim of this study is to evaluate whether polymorphism in the progesterone receptor gene both in mother and foetus is associated with susceptibility to preterm birth.

Methods
A total of 105 women with preterm birth and 108 women who delivered at term were genotyped for progesterone receptor gene polymorphisms (rs10895068, rs1042838, rs1042839) using Taqman assays and real time PCR. Cord blood was collected from their babies (108 at term and 117 preterm infants) and genotyped as well. We investigated a possible association between progesterone receptor gene polymorphism and occurrence of preterm birth.

Results
We found no significant difference in frequency of genotypes between premature and babies delivered at term (Fischer's exact test, P<0,05) and between women with preterm birth and women who delivered at term. We did find that frequency of genotypes for rs1042838 and rs1042839 between extremely preterm, very preterm and late preterm ladies differ significantly (Fischer's exact test, P=0.03). We also found that age and BMI of mothers is not connected with the occurrence of preterm birth in out cohort (ANOVA test, P<0,05).

Conclusion
This study suggests that genetic variation in the PGR gene of mother may trigger preterm labour. Prior information on the genetic composition of women could help in the identification and management of women at risk of preterm birth complication.

O1292 - PHM1 41 CELL LINE VIABILITY TEST ON VITAMIN D ADMINISTRATION FOR PREVENTION OF PRETERM LABOR

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Preterm labor is one of the most universal causes of perinatal mortality throughout the world. One of the pathophysiologic mechanisms which caused preterm labor is the activity of mother and fetus's HPA axis. Maternal biologic stress, such as hypoxia and stress condition, could trigger preterm labor through the activation of HPA axis. When HPA axis is activated, then the up regulation of hormones level which affects myometrium contractility will be occurred. Vitamin D is being known to have the role on the mechanism of HPA axis. This is an experimental research which used human smooth muscle uterine myometrium cell line PHM1-41 as an in vitro experimental subject model, treated by hypoxia oxidative stress condition and added by vitamin D. After PHM1-41 cells have been cultured for 24 hours on hypoxia condition and added by vitamin D, the PHM1-41 cell viability was measured using spectrophotometry. The result showed that the lowest PHM1-41 cell viability, which is 88.57 + 4.48, appeared on 300 nM vitamin D3 administration, while the highest PHM1-41 cell viabilty, which is 96.21 + 2.13, appeared on 10 nM vitamin D3 administration.

O1314 - EVALUATING THE OXIDATIVE STRESS DURING DELIVERY VIA THIOL DISULPHIDE BALANCE. DOES THE TYPE OF DELIVERY ALTER THE THIOL DISULPHIDE BALANCE

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Objective
The aim of this study was to evaluate oxidative stress via thiol disulphide balance which is a new method of demonstration of oxidative stress, during labor according to the type of the birth.

Methods
This study was conducted between February 10, 2017 and May 10, 2017 at Dr. Sami Ulus Women Health Education and Research Hospital, Ankara, Turkey. A total of 60 singleton healty pregnant aged 20 years and over were included in the study. Thirty pregnant women whose pregnancy resulted in normal vaginal delivery and 30 pregnant women whose pregnancies resulted in elective cesarean delivery were included.

Results
There was a statistically significant difference between prenatal thiol and total thiol levels in normal delivery and cesarean section ($p = 0.001$ and $p < 0.001$, respectively). There were statistically significant differences in postpartum thiol, total thiol and disulfide levels in both groups ($p = 0.001$, $p < 0.001$ and $p = 0.003$, respectively). On the other hand, there was no statistically significant difference between the study groups in terms of all three indexes ($p > 0.05$). There was no statistically significant difference in terms of thiol, total thiol, disulfide and indexes in the prenatal and postnatal period ($p > 0.05$). Total thiol, disulfide values and index 2 and 3 were significantly lower in the cesarean group after cesarean section, while index 1 was found to be statistically significantly higher ($p < 0.05$).

Conclusion
Our results suggest that antioxidant mechanisms are activated earlier in normal delivery and cesarean delivery reduces stress on the mother. However, there is need for studies that are more comprehensive and evaluated the effects on the fetus for definite results.

O1370 - THE RELATIONSHIP BETWEEN VITAMIN D LEVELS IN PRETERM DELIVERY

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Predisposing of preterm pregnancy includes activation of HPA axis, infection, decidual bleeding. Vitamin D affects the HPA axis by affecting the increase in uterine contractions by muscle strength, and also affects the body's defense mechanism against bacterial infections. The presence of premature contractions is thought to be due to low levels of vitamin D in the body. The aim of this study was to compare the difference of 25-hydroxy-vitamin D3 in preterm parturient patients compared with non preterm parturient. This research is a comparative analytic research with cross sectional approach. The subjects of the study were women with preterm parturient versus non preterm parturient, which consisted of 46 people divided into two groups. In both groups, serum 25-hydroxy-vitamin D3 was examined by Electro-chemiluminescence Immunoassay (ECLIA) method. The study was conducted at Dr. Hasan Sadikin Bandung in August 2017 - September 2017. The results showed the median value of 25-hydroxy-vitamin D3 levels preterm parturient patients was 17.26 ng/ml, while in non preterm parturient 24.30 ng/mL. The difference of 25-hydroxy-vitamin D3 levels in both groups was significant with $p < 0.0001$. The study concludes there is relation between vitamin D with preterm labour in Hasan Sadikin Genereal Hospital.

O1424 - PRETEM DELIVERY AND RETAINED PLACENTA OF AN ANGULAR PREGNANCY A CASE REPORT

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Introduction
The term 'angular pregnancy' is defined as implantation of embryo in the endometrium of the lateral angle of the uterus, medially to the uterotubal junction. Angular pregnancy is commonly confused with interstitial pregnancy and cornual pregnancy. Interstitial pregnancy is defined as the ectopic gestation developing in the uterine part of the fallopian tube. It is a very rare type of ectopic pregnancy and has high rate of complications. Although it may occur in an abnormal uterus both congenital and acquired, the cornual pregnancy is always intrauterine and located medial to the insertion of fallopian tube. We aimed to present a preterm labour and retained placenta case as a result of a continued angular pregnancy.

Case
A 41- year -old G2P1 patient who had vaginal bleeding admitted to Obstetrics and Gynecology Department of Düzce University Hospital. According to her last menstruel period, she had 7 weeks pregnancy. Her vaginal 2 D sonogram demonstrated that uterus was subseptate and there was 7 week gestation with a heart rate of 170bpm in right angular region of uterus. There were similar findings in vaginal 3D ultrasound and also myometrial thickness was 5mm. After informing the patient about the prognosis, pregnancy continued with periodic examinations. At 29 weeks of gestation, following the rupture of membranes, a1000 gr female neonate was delivered vaginally. After delivery, placenta didn't separate spontaneously and we couldn't remove the placenta totally with manual intervention and bum curettage. There was 6cm rest placental tissue on right cornual region according to ultrasound. Then 1mg/kg single dose methotrexate and broad spectrum antibiotic injection was administered to the patient. Her liver function tests, hemogram, crp levels was in normal levels. One week after delivery, retained placental tissue spontaneously and totally separated. After removal of placenta no bleeding and infection sign was noted.

Discussion
Angular pregnancy is a rare condition and there are few case reports in literature. Most of the time, diagnosis and differentiation from interstitial and intrauterine pregnancy of angular pregnancy could be difficult. Ultrasound findings that suggest an angular pregnancy include a gestational sac that is primarily surrounded by endometrium with adjacent thicker myometrium (>5mm) noted. While a small number of angular pregnancies reach to term, 38% of them results with spontaneous abortion and 23% with uterine rupture. If gestational sac descends into the uterine cavity term delivery is possible. But counselling and discussing with the patient is essential. If pregnancy continues, the increased risk of preterm delivery, placental abruption, growth restriction, and postpartum endometritis could be seen. Even spontaneous abortion or termination can be complicated with improper separation of placenta. In some selected cases placenta could be left in situ and methotrexate could be applied in order to preserve fertility. In our patient we preferred this approach and after methotrexate injection placenta completely removed.

Conclusion
Angular pregnancy requires attention from beginning to end in terms of mortality and morbidity.

O1446 - MATERNAL ANEMIA A RISK FACTOR FOR ADVERSE PREGNANCY OUTCOMES IS ASSOCIATED WITH GREATER HEALTH DISPARITIES IN AFRICAN AMERICAN WOMEN.

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Introduction

Preterm birth defined as delivery before 37 weeks gestation, increased in the United States from 9.6% to 9.8% in 2016. Preterm birth rate, a leading cause of neonatal and infant mortality increased in California to 8.6% in 2016. Fresno County California, has one of the highest preterm birth rates at 10.1%. African American women have the highest preterm birth rates at 15.7% compared to other ethnicities. Several studies showed an inconsistent correlation between anemia and preterm birth (PTB). Due to the high PTB rate in Fresno County, it is important to research modifiable and reducible risk factors. Our objective was to study the association of anemia with preterm birth in our patient population while addressing the health disparities and risk factors associated with preterm birth in the African American population.

Methods

A retrospective cohort study was performed on patients who delivered at Community Regional Medical Center, Fresno, California from January to December 2015. Data was abstracted from 906 ICD coded electronic patient records. Exclusion criteria included hemoglobinopathies, history of LEEP, cone biopsy, uterine abnormalities, tobacco use, prior PTB, IVF pregnancy and multiple gestations. Data collected on 300 preterm and 606 term deliveries included delivery gestational age, third trimester hemoglobin, ethnicity, parity, and maternal age. Maternal anemia was defined as hemoglobin concentration < 12.0 g/dL based on WHO standards which was also our institutional lab standard. The Chi Square test was used for data analysis.

Results

Our study showed a significant association of anemia with preterm birth (89%), compared to term deliveries (62%, p = 0.04). In addition, there was a significant correlation of anemia with increasing parity (p=0.015), and increased risk of preterm delivery with advanced maternal age (p=0.002).
When compared to other ethnicities, African-American (AA) patients showed a significantly higher percentage of preterm birth (43%, p<.05), an increased incidence of anemia (74% p<.05), and lower mean birth weight neonates (p<.01).

Conclusion

In our study population, the incidence of preterm births is significantly higher in pregnancies complicated by anemia based on third trimester hemoglobin. A significantly greater health disparity is observed for anemia, preterm birth and low birth weight among the African American patient group when compared to other ethnic groups. It is necessary and important to screen and treat patients in the second trimester for anemia, in addition to implementation of new health awareness educational programs for the African-American patient groups, to help reduce adverse pregnancy outcomes while improving maternal and neonatal health conditions.

O1486 - COMPARISON OF THREE DIMENSIONAL FETAL LUNG VOLUME AND FETAL PULMONARY ARTERY BLOOD FLOW IN GESTATIONAL DIABETES MELLITUS AND NORMAL GLUCOSE TOLERANCE

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Objective
By comparing three-dimensional fetal lung volumes and pulmonary artery pressures in pregnant women with gestational diabetes mellitus and normal glycemic index; We aimed to determine the effect of low lung volume and high pulmonary artery resistance on respiratory distress in newborns of gestational diabetes mellitus.

Methods
Forty pregnant women diagnosed with gestational diabetes mellitus aged between 24-32 weeks and 43 women with normal glycemic index were included in the study. Pregnant women; age, gestational week, fetal biometry, fetal pulmonary artery blood flow and fetal lung volumes were compared. Lung volume was calculated by rotational technique including VOCAL imaging program on three-dimensional ultrasound.

Results
Main pulmonary artery pulsatility index values were significantly higher in pregnant women with gestational diabetes mellitus (mean 4.021 ± 2.010) compared to pregnant women with normal glycemic index (mean 2.227 ± 0.8061) (p = 0.002). There was no statistically significant difference between the pregnant with gestational diabetes mellitus (mean 31.78 ± 13.23) and those with normal glycemic index (mean 33.06 ± 10.00) in terms of fetal lung volumes calculated by three-dimensional ultrasonography.

Conclusion
Pulmonary artery pulsatility indices in gestational diabetes mellitus were found to be increased in resistance compared to normoglycemic pregnant women. Although the measurements of pregnant women with gestational diabetes mellitus were higher than those of normoglycemic pregnant women in biometric measurements of pregnant women; There was no significant difference between the two groups in the comparison of fetal lung volumes. This shows that although the measurements of pregnant women with gestational diabetes mellitus are larger than gestational age, fetal lung volumes do not increase at the same rate and remain small. In conclusion, relatively low lung volume and increased pulmonary pulsatility index in pregnant women with gestational diabetes mellitus may be considered as predisposing factors that may cause postpartum respiratory distress.

Obstetrics - Perinatal infections

O1005 - RISK BASED APPROACH VERSUS CULTURE BASED SCREENING FOR IDENTIFICATION OF GROUP B STREPTOCOCCI IN LABORING WOMEN

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Objective
The aim of this study was to compare the two strategies, the risk-based approach and the culture-based screening, for identification of vaginal colonization with GBS, using an intrapartum rectovaginal culture as reference standard.

Methods
All pregnant women attending the prenatal clinic at Lillebaelt Hospital, Kolding, Denmark, over a 15-month period between April 2013 and June 2014 were invited to participate in this prospective observational study. For the antepartum culture-based screening approach, we obtained vaginal and rectal culture samples and for the reference standard paired vaginal and rectal culture samples were collected during labor. Risk factors were 1) prior EOGBS, 2) GBS bacteriuria during pregnancy, 3) temperature ≥38.0°C intrapartum, and 4) rupture of membranes ≥18 hours.

Results
The intrapartum rectovaginal GBS colonization rate was 30% (32/108) among participants with risk factors, and 15% (76/794) among participants without risk factors. The culture-based screening had a sensitivity, specificity, PPV, NPV, and LH+ in predicting intrapartum GBS carriage of 78%, 95%, 78%, 95%, and 17, respectively; and the risk based approach of 21%, 90%, 30%, 85%, and 2, respectively.

Conclusion
The culture-based screening performs considerably better than the risk based approach for identification intrapartum GBS colonization.

O1012 - GENITAL WARTS IN PREGNANCY DIAGNOSIS AND TREATEMENT THE MOST COMMON CAUSE OF LARYNGEAL PAILLOMATOSIS

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Objective
HPV infection is an epidemic of modern age with the highest number of infected girls between 18 and 30 years of age. Due to the alerted immune status during pregnancy the spreading of HPV infection is progressive .During the labor any retention of the child in the birth canal leads to aspiration of HPV particles witch further represents the most common cause of laryngeal papillomatosis in children.

Methods
The study involved 60 pregnant women between 18 and 30 years of age diagnosed with genital warts in early and advanced stages that were treated with RF technique which enables the smooth vaginal delivery with no signs of HPV infection on genito-anal region. Radio wave technique involves a special combination of radio wave access evaporisation and radio wave melting. Radio wave access evaporisation causes the evaporation of HPV infected cells and by radio wave melting we get the bloodless removal of condyloma.

Results
With colposcopic examination we reveal subclinical stages of genital warts on the mucous membrane of the labia and the entrance to the vagina, which provides conditions for their immediate removal. The result of radio wave therapy is a bloodless surgical field with a precise and controlled removal of all forms of genital warts in one act throughout pregnancy. Operation is performed only under local anesthesia with a minimum damage to the surrounding healthy tissue, rapid recovery without accompanying infection, bleeding, recurrence, and a complete protection to the mother and fetus.

Conclusion
Genital warts during pregnancy represent a risk to the fetus during vaginal childbirth regardless of the severity of the clinical picture. Absence of colposcopic diagnosis, avoiding removing warts in the pregnancy, use of the wrong treatment leads to progress of condylomata as for outputting an infection of the fetus, by aspiration of HPV particles in the birth canal.

O1045 - INFECTION IN PREGNANT WOMEN WITH EPILEPSY.

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Objective
Epilepsy is the most common neurological disorder in women of reproductive age. The inflammatory process in the cns leads to the induction of convulsive syndrome, which negatively affects the condition of the newborn. The aim of the study was to improve perinatal and obstetric outcomes in patients with epilepsy.

Methods
From 2014 to 2016, 129 pregnant women with epilepsy were under observation. Pcr was used to diagnose viral infections, antibodies to neurospecific proteins s-100, gfap, mbp and ngf were studied, and interferon status was determined. Group i - 59 pregnant women, who had a reduced level of neuroantibodies, negative pcr diagnosis and normal interferon status. Group ii included 42 pregnant women with positive pcr diagnostics, a high level of antibodies to the nbp, a decrease in ifn α serum <4 u / ml. In pregnant women of the ii group interferon alpha-2b was used. A second examination was performed before delivery.

Results
At the moment of delivery in group ii the level of neurosensitization decreased by 2.5 times, the virus dna was not detected. Spontaneous delivery in group i - 83%, in group ii 76.2%, in comparison group 82.2%. With an apgar score 8 -9 85% of children were born. Hypoxia in labor occurred in 15% in the i group, 11.9% - in ii. Signs of intrauterine invection in children from mothers of group i were revealed in 16.7%, from mothers of group ii - in 4.8%. In the study of nsp in children of the i group, significant hyposensitization was found, in group ii - within the limits of reference values.

Conclusion
The inclusion of interferon alfa-2b in the complex of ongoing treatment prevented the development of severe forms of iui and perinatal cns damage in newborns.

O1107 - IMPACT OF HUMAN CYTOMEGALOVIRUS INFECTION ON TROPHOBLAST TRANSCRIPTOME

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Objective
Placental dysfunction has been described as a pathological factor developing fetal growth restriction in congenital human cytomegalovirus (HCMV) infection. Previous reports about HCMV infection to trophoblast suggested that syncytiotrophoblast (STB) is resistant to HCMV infection, and that HCMV infection interferes with differentiation of human trophoblast. But the underlying mechanisms have not been clarified. This study aimed to investigate the impact of HCMV infection on gene transcriptome in cytotrophoblasts (CTBs) associated with the placenta dysfunction.

Methods
This study was conducted under the approval of our facility ethics committee. Human placentas were obtained from term deliveries of the women with written consent. CTBs isolated from the placentas were infected with AD169rev, a HCMV strain with infectability to epithelial cells. CTBs were collected at 72 hours after infection. The transcriptome profiles were compared between CTBs groups with and without infection by cap analysis gene expression (CAGE) sequencing method. Bioinformatic tools (KEGG pathway analysis) were utilized in the analysis of the gene expression data. The syncytialization of the cultured trophoblast cells with and without HCMV infection was assessed by hCG secretion and by immunostaining for cell surface desmoplakin.

Results
A total of 629 differentially expressed genes (DEGs) were identified in comparison between the groups with and without infection. Within 629 DEGs, 456 DEGs were up-regulated and 173 DEGs were down-regulated in CTBs with infection. KEGG pathway analysis demonstrated that DEGs were enriched in the signaling pathways related to cell cycle, focal adhesion. Importantly, most of the genes known to be up-regulated with syncytialization ware suppressed in the cultured trophoblast cells with HCMV infection. Additionally, this gene suppression under HCMV infection was concurrent with the reduced hCG secretion. The cell fusion evaluated by protein distribution of cell surface desmoplakin revealed that HCMB infection reduced the cell fusion of cultured CTBs. These findings imply that HCMV infection has negative impact on the syncytializing process that is indispensable for the maintenance of villous function in the placenta.

Conclusion
HCMV infection interferes with gene expression profile and functional differentiation in trophoblast cells. Suppression of syncytialization might be a HCMV survival strategy to expand the infection and would be associated with the placental dysfunction observed in the pregnancy with congenital HCMV infection.

O1128 - FEATURES OF CONGENITAL INFECTIONS IN MODERN CONDITIONS B. TUKBEKOVA S. KIZATOVA S. DYUSSENOVA N. ERIMBETOVA Z.MAMLINA KARAGANDA MEDICAL UNIVERSITY KAZAKHSTAN

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Objective

The problem of congenital infections is particularly relevant in modern conditions due to the prevalence and severity of inflammatory processes, is one of the leading in obstetric practice, perinatology, due to the high level of infection of pregnant women, mothers and parturient women and the risk of impaired fetal development and the birth of a sick child. The aim of the study was the clinical analysis of statistical data obtained during the research of children in the first 3 months of life with congenital infections, the identification of the features of its course using enzyme immunoassay, polymerase chain reaction and morphological studies.

Methods

The work was carried out on the basis of the department with the defeat of the central nervous system for young children in regional children's clinical hospital in Karaganda. We have studied the dynamics of the incidence of congenital infections over a 5-year period. Clinical diagnosis of congenital infections, ELISA and PCR examination, retrospective analysis of case histories for 2013 were used.

Results

Based on the results of the study, it was found that in 2018, compared with 2013, the diagnosis of congenital infections in our region increased 6.5 times and amounted to 14.3%. In the structure of congenital infections continues to lead CMV infection, and its detectability has increased almost 2 times and amounted to 84%, against 44.6% in 2013. In the structure of congenital infections was dominated by mono infections (61.6%) over mixed infections (38.4%). CMV infection is followed by herpetic infection (HSV) in 16% of cases. The largest part (75%) of mixed infections was also represented by Herpes simplex virus infections (CMV+HSV), the association of CMV with Mycoplasma infection was found in 25.0%. Chlamydia, toxoplasmosis were not diagnosed in any case. Thus, the structure of VUI is dominated by Herpes simplex virus infections.

The generalized course of congenital infections decreased significantly from 21% in 2013 up to 6% in 2018 year. In 2018, the clinic of asymptomatic carriage of CMV began to meet more (24%), mortality decreased, which indicates, perhaps, the improvement of diagnosis in the early stages of development, timely examinations in pregnant women, the application of the clinical protocol of CMV in children developed in 2013. Premature infants accounted for 12% of all newborns.

We found that in 45% of cases, congenital infection occurred as an acute infectious process with signs of inflammation in various organs (meningoencephalitis, pneumonia, hepatitis, interstitial nephritis). In 24% of CMV had a subacute course with the formation of the stigmas of dysembryogenesis and malformations.

Conclusion

The problem of congenital infections at the present stage requires the development and implementation of measures to improve the health index of women, reduce the level of sexually transmitted diseases, as well as the need for rehabilitation of children with lesions of central nervous system and congenital malformations of internal organs, requiring mandatory operational correction, timely to improve the quality of life of this category of children.

O1161 - VULNERABILITY TO HEPATITIS B INFECTION AMONG WOMEN IN PREGNANCY AND PARTURITION A CHALLENGING EVIDENCE TOWARDS HEPATITIS B ELIMINATION IN INDONESIA

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Objective
The increasing number of Hepatitis B Virus (HBV) antigen positivity among children under five years old in Indonesia had driven this study to explore how big was the protection toward HBV infection from vaccination program for all newborns in 1987 that would be reflected in positive anti HBs proportion among pregnant women.

Methods
Pregnant women in Bandung, West Java, were screened for three HBV infection markers, HBsAg, anti HBc and anti HBc by ELISA. Classifications were made based on combination of the three markers.

Results
Two hundred twenty two of the targeted 500 subjects had completed the screening. Approximately 66% of these women were between age 20-34. 95 % had 2 children or less, 80% of the family income was less than 250 US dollars a month. There were 46 women (39%) who had at least one medical procedure prior to current pregnancy. A small proportion (7%) of these pregnant women had familial or personal-behavioral risk factors for HBV infection. Almost all of the women (99.5%) did not recall nor having any record of previous HBV vaccine. Anti HBs negative were found in 72.4% of these women and only 20.4% were found with isolated positive anti HBs resulting to most probably HBV vaccinations. Chronic HBV infection was found in 8 (3.6%) pregnant women and 2 cases of isolated HBsAg positive. One pregnant woman was suspected to be infected with mutant HBV which needs further exploration. The results indicated that the HBV vaccination program is strongly indicated among women of reproductive age. The rarity of evidence for HBV vaccination among pregnant women would be a constraint to the elimination program, as FDA still classified the HBV vaccine in class C that animal reproduction studies had shown an adverse effect on the fetus and there are no adequate and well-controlled studies in human. Other recommendation was that women with risk factors for hepatitis B should be vaccinated during pregnancy and vaccination to all health care personnel should be encouraged, considering the loss from transmission to newborn form these routes were also high. Other study to assess possible mechanisms of non-responder or the need for new vaccine was inevitable.

Conclusion
The large proportion of pregnant women in this study was not protected from HBV infection, despite vaccination program for all newborns started more than 20 years ago. HBV vaccinations for women in reproductive age and especially among pregnant women are urgently needed in Indonesia.

O1163 - THE ROLE OF PRENATAL ULTRASONOGRAPHY IN THE DIAGNOSIS OF ANTENATAL VIRAL INFECTION WHAT IS THE REAL CONTRIBUTION

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Objective
At least 5.2% of pregnancies are complicated by clinically overt viral infectious illnesses and many more may be affected by silent viral infection. Evidence of fetal infection may be different structural damage and fetal death. Maternal signs and symptoms of infection are often nonspecific. Identification of fetal viral infection is possible by immunologic and special molecular biology techniques. Even if samples are obtained, may be difficult the accurate interpretation of the results.Ultrasound scanning is capable of detecting most of the grave alteration typical of the fetal viral infection.However to establish the significance of named capability the further elaborated studies is required.

The aim of our study was to determine the value of ultrasound examination to detect the alterations specifically for fetal viral infection.

Materials and methods
Screening ultrasound examination were performed in 2578 healthy pregnant women in 2nd and 3rd trimester(group1).Ultrasound examination also were performed in untreated 79 pregnant women in 2nd and 3rd trimester infected by intrauterine viral infection,identified primary by biochemical markers(group2).

Results
Using screening USD the following specific changes in the fetus and placenta has been detected in group1: hydrocephaly 4 (4.0%),anencephaly 1(1.3 %);IUGR 13(17.3%);calcification of fetal liver,brain or/ and kidney 9(12.0%); mitral stenosis 1(1.3%); placenta calcification 8(10.7%);placental intercotiledon gap dilatation 9(12.0%);fetal-placental circulation abnormalities 31(41.3%).Total 75 cases(associated malformations 39 cases).Damaged fetus was identified in 36 pregnant(1.36% of group1).Using next the biochemical testing,in 23 of them(62.0% of 36 pregnant) the persistent infection has been detected. In 13 pregnant(38.0%of 36 pregnant)the persistence of infection was not detected.Included in group2 pregnant with primary detected by biochemical markers persistence of viral infection had following specific changes: calcification of fetal organs and placenta 28(31.4%);CNS structural damage 11(12.6%); IUGR 8(9.0%);different fetal malformation 5(5.5%);fetal-placental circulation abnormalities 37(41.5%). Total 89 of cases(associated malformations in 10 cases).Number of cases among 79 pregnant with damaged fetus: detected by primary screening ultrasound examination 51(65.4% of group2);none detected by screening ultrasound examination 27(34.6 %of group2).The determined value of screening ultrasound examination to detect viral intrauterine infection is:Sensitivity 38.3%; Specifity 74.5%; Prevalence 52.0%; Negative predictive value 47%; Positive predictive value 62%;Negative likelihood ratio 0.82;Positive likelihood ratio 0.51.

Conclusion

Ultrasound scanning is capable to detect most of the grave alteration typical of fetal viral infection. Doppler studies can be used to evaluate the alterations in vascular flow that result from congenital viral infection.The use of the routine ultrasound examination as a screening test to detect intrauterine viral infection has a certain limitations and can be applied in combination with further serological testing. Combined study increases the specificity and sensitivity of and thereby the possibility of prognosis of the disease and the possibility of effective therapy.

O1269 - PRE EXISTING CHRONIC LIVER DISEASES AND INTRAHEPATIC CHOLESTASIS OF PREGNANCY A PROSPECTIVE COHORT STUDY

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Objective
The association of hepatitis C virus infection with intrahepatic cholestasis of pregnancy (ICP) has been previously noted. Our study aimed to investigate the association between pre-exiting hepatitis B virus (HBV) infection, non-alcoholic fatty liver disease (NAFLD) and ICP.

Methods
A prospective cohort of 38,273 pregnant women was enrolled from Nantong Maternal and Child Health Hospital affiliated to Nantong University of China between January 1, 2012 and June 30, 2016. Data were collected from questionnaires completed by the pregnant women at their first antenatal visit. Pre-existing HBV infection and NAFLD were diagnosed based on detailed medical history. Liver function tests were measured at baseline and followed-up until the end of pregnancy. Poisson regression was used to estimate risk ratios (RRs) of ICP for women with HBV infection and NAFLD. The impact of HBV carrier or NAFLD on LFTs and pregnancy outcomes of ICP patients were also assessed.

Results
The incidence rates of ICP among the pregnant women with HBV infection or NAFLD were significantly higher than those in women without pre-existing chronic liver diseases [3.68%, (42/1142) vs. 1.45% (546/37638) $p<0.001$; 8.47% (138/1629) vs. 1.23% (450/36644), $p<0.001$ respectively]. HBV infection and NAFLD were identified as independent risk factors for ICP (RR and 95%CI: 2.36, 1.72-3.23; 6.25, 5.16-7.58 respectively). ICP patients with HBV infection were more likely to have higher total bile acid (TBA) level than ICP patients without HBV. Besides, serum alanine aminotransferase (ALT), aspartate aminotransferase (AST), gammaglutamyltransferase (GGT) and total bilirubin (TBiL) levels of ICP patients with NAFLD were significantly higher than those in ICP patients without NAFLD. The incidence rates of preterm birth and caesarean section among ICP patients with NAFLD were significantly higher than those in ICP patients without NAFLD [36.96% (51/138) vs. 26.22% (118/450), $p=0.015$; 84.06 (116/138) vs. 73.11% (329/450), $p=0.009$ respectively]. Moreover, in singleton pregnancy, average birth weight and Apgar score of the newborns to ICP patients were significantly lower than those of newborns to ICP patients without NAFLD.

Conclusion
HBV infection and NAFLD may be associated with ICP. ICP combined with NAFLD has clear impact on maternal and neonatal outcomes. Therefore, we suggest that obstetricians should be more aware of the diagnosis of pre-existing chronic liver diseases especially NAFLD for improving perinatal health.

O1289 - IMMUNIZATION COVERAGE OF PREGNANT WOMEN IN GREECE AGAINST PERTUSSIS AND THE FLU AND THE RESULTS AFTER AN INTERVENTION IN A TERTIARY MATERNITY HOSPITAL

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Objective
To investigate the adherence to national guidelines regarding pertussis and flu vaccination during pregnancy in Greece as well as to evaluate the effect of an intervention aiming to increase the vaccination coverage rate during pregnancy at a tertiary maternity hospital.

Methods
During the retrospective part of our study we interviewed all women (n=197) who gave birth in Alexandra Maternity Hospital from March 2018 till May 2018, regarding their vaccination status against influenza and pertussis. All women who had not been immunized during pregnancy completed a questionnaire as to the reasons for not getting vaccinated. The prospective part of our study included active recommendation of both the flu and the TdapIPV vaccines to the outpatient maternity clinic in order to evaluate the acceptance of routine vaccinations during pregnancy.

Results
Interestingly, most of the women (92.9%) had been vaccinated during their childhood in accordance with the national vaccination guidelines and almost all of them (98%) declared their intention to immunize their children, but only 16.2% had been vaccinated against influenza during pregnancy and none of them (0%) had been inoculated with one shot of Tdap (or Tdap IPV) during pregnancy. A significant percentage of pregnant women (65.5%) replied favorably to being immunized during pregnancy as long as their doctor endorsed it. However, most doctors never recommended vaccination during pregnancy (73.6% of our cases). As for the reason for not get inoculated, 65% of women did not get immunized because their doctor did not suggest it, 18.8% due to the fear of possible side effects to the fetus and themselves. During the prospective part of our study inoculation against influenza and tetanus, diphtheria and pertussis was offered to pregnant women. Immunization reception was high with 94.9% out of 195 women getting inoculated against influenza and 92.8% against pertussis.

Conclusion
The rates of routine immunizations during pregnancy in Greece are surprisingly low. The lack of compliance with the national immunization guidelines appears to come as a result of physician hesitancy to endorse vaccination of pregnant women. In contrast, pregnant women appear to have faith to the recommendations of their doctors as we showed during the second part of our study. Furthermore, there is a considerable increase in the prevalence of neonatal pertussis cases in Greece, emphasizing the need for pertussis immunization during pregnancy.

O1311 - OBLIGATE ANAEROBE PREVALENCE IN VAGINAL MICROBIOTA OF WOMEN WITH MICROSCOPIC SIGNS OF AEROBIC VAGINITIS ACCORDING TO RT PCR

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Aerobic vaginitis (AV) is a form of non-specific vaginitis, characterized by genital inflammation, increased numbers of leukocytes and parabasal cells, and proportional decrease of lactobacilli in vaginal smear. The diagnosis is based on wet mount microscopy which is subjective. In order to evaluate vaginal microbiota of 333 women (aged 16- 69) with AV (according to microscopy), real-time PCR (RT-PCR) test was performed with "Femoflor" kit (DNA-Technology, Russia), following the manufacturer's instructions (DNA-Technology; Russia). Once the amplification reaction was over, the special software (DNA-Technology; Russia) was used to automatically calculate the total bacterial load (TBL) and the proportion of particular species and groups of bacteria in relation to the TBL in the given sample. The quantity of identified microorganisms was expressed in genome equivalents per 1 ml (GE/ml). The kit allows us to detect the following groups of vaginal inhabitants: Lactobacillus spp., gram-positive facultative anaerobes (Streptococcus spp., Staphylococcus spp.); gram-negative facultative anaerobes (Enterobacteriaceae spp.); obligate anaerobes (Gardnerella vaginalis/Prevotella spp./ Porphyromonas spp.; Eubacterium spp., Sneathia spp. / Leptotrichia spp./ Fusobacterium spp., Megasphaera spp./ Veillonella spp./ Dialister spp.;Lachnobacterium spp./Clostridium spp.;Mobiluncus spp./Corynebacterium spp.;Peptostreptococcus spp., Atopobium vaginae), mycoplasmas (Mycoplasma hominis, Ureaplasma urealyticum, Ureaplasma parvum), yeast-like fungi (Candida spp.).

Depending on the proportion of lactobacilli and opportunistic microorganisms (OM) in the TBL, three types of vaginal microbiocenosis were identified. Normocenosis — normal state of vaginal microbiota when the proportion of lactobacilli is more than 80 % of the TBL. Apparent dysbiosis (AD) is a variant of vaginal microbiota dominated with various opportunistic bacteria: the proportion of lactobacilli is less than 20 % of the TBL and the diverse microbial community constitutes more than 80 % of the TBL. Moderate dysbiosis (MD) is an intermediate state of vaginal microbiota when the proportion of lactobacilli decreases and constitutes less than 80% but more than 20 % of the TBL. The proportion of OM is more than 20 % but less than 80% of the TBL. Depending on the prevalence of obligate anaerobes or facultative anaerobes, three dysbiotic variants of AD or MD can be identified: aerobic, anaerobic or mixed.

Normocenosis was detected by RT-PCR in 67 cases (20.12%), but in 16 (4.8%) cases the quantity of mycoplasmas was more than 104 GE/ml, in 12 cases (3.6%) quantity of Candida spp. was more than 104 GE/ml. (8.4%) MD — in 88 (26.4%) and AD in 178 (53.4%) of 333 women with AV. 5 samples (1.5%) met the criteria of aerobic MD and 25 samples (7.5%) met the criteria of aerobic AD. Therefore aerobic dysbiosis was determined in 30 patients (9%) whose microscopy results met the criteria of AV. 75 samples (22.5%) met the criteria of anaerobic MD and 131 samples (39.3%) met the criteria of anaerobic AD. 8 samples (2.4%) met the criteria of mixed MD and 22 (6.6%) — the criteria of mixed AD. So dysbiosis associated with predominance of obligate anaerobes in vaginal microbiota was determined in 236 (70.9%) women with AV according to microscopic findings.

O1334 - TELBIVUDINE TREATMENT DURING LATE PREGNANCY PREVENTS MOTHER TO CHILD TRANSMISSION OF HEPATITIS B VIRUS A RETROSPECTIVE STUDY

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Objective
To investigate the efficacy of telbivudine (LdT) in blocking mother-to-child transmission (MTCT) of Hepatitis B Virus (HBV) during late pregnancy

Methods
A total of 651 pregnant women aged 18-40 in Nantong Third People's Hospital and Hospital affiliated to Nantong University with positive hepatitis B surface antigen (HBsAg) and HBV DNA were enrolled between January 2011 and December 2015. Patients with HBV DNA≥106 copies/mL (n=251) received LdT during late pregnancy according to the patients will, while 136 high viral patients with HBV DNA≥106 copies/mL who did not take LdT therapy and 268 low viral patients with HBV DNA<106 copies/mL served as the controls. Results: At 7 month and 1 year postpartum the basal HBV DNA serum level of treated patients, declined significantly (P<0.001), while no obvious decline was observed in the untreated high viraemic controls (P<0.05) and untreated low viraemic controls (P<0.05). The ALT level of the patients did not decline in untreated low viraemic controls, and decreased after the use of liver-protection drugs in untreated high viraemic controls. In LdT group, 134 (53.4%) patients achieved normal ALT level before delivery, and more than 80% patients kept normal level of ALT at 7 months postpartum (83.7%) and 1 year postpartum (87.3%). Only 1 infant (0.4%) in LdT group was HBsAg positive at 7 months, while 14 (5.2%) in the untreated low viraemic controls (P<0.001) and 15 (11.0%) in untreated high viraemic controls (P<0.001). Univariate analysis revealed that LdT treatment was associated with lower risk (odds ratio=0.05, 95% confidence interval 0.01-0.38; P<0.001) and HBV DNA levels was associated with higher risk (odds ratio=1.39, 95% confidence interval 1.17-1.64) of infant HBsAg positivity at 7 months.

Conclusion
In conclusion, maternal antiviral treatment with LdT during late pregnancy can effectively reduce the viral load and promote liver function recovery. Moreover, it can also reduce the MTCT rate of HBV.

Obstetrics - Postpartum hemorrhage

O1034 - AN EVALUATION OF FIRST 1000 MENSTRUAL REGULATION PROCEDURES

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Objective
The criminalization of abortions in South Korea has led to discrimination and stigmatizations for generations of women. These laws leave women in one of Asia's most developed countries being treated like second-class citizens. Due to the calls of the women and girls across South Korea on the government to reform the Criminal Act to guarantee Access to safe and legal abortion services, first steps have been achieved in year 2019, 36 years later than Turkey. This paper presents the first 1000 Menstural Regulation procedures" related trial after the legislation of the Population Planning Law No 2827 that came in to force in 1983,at the biggest maternity hospital in Ankara

Methods
A prospective cohort was carried out on 1000 pregnant women up to 8 weeks of gestation undergoing menstrual regulation by carman aspiration technique to evaluate the complications. Carman aspirations were performed by practitioners who accomplished the course of Family Planning under the observation of obstetricians/gynecologists. The demographics and contraceptive methods were recorded. Rates of procedure related abnormal bleeding, uterine rupture, infection, ongoing pregnancy were evaluated.

Results
Majority of the women were in 26-31 (36,9%) age group. Educational levels were as follows: Illiterate (n=236, 23,6%), primary school (n=600, 60,0%), secondary school and lycee(n=146, 14,6%), high level education(n=18, 1,8%). According to previous pregnancies: in 540 women (54.0%) five or more pregnancies occurred, whereas 94(9.4%) of them were primiparous. Contraception methods at any time included intrauterine device (n=162, 16.2%), oral contraceptives(n=84, 8.4%), condoms (n=49 4,9%), withdrawal (n=420, 42,0%), vaginal spermicide/ovules (n=42, 4,2%), vaginal lavage(n=90,9%), calendar methods(n=20, 2,0%), combined methods (n=18, 1,8%). 196 (19.6%) women used no methods of contraception. Early complications included bleeding (n=4, 0.4%), pelvic pain (n=15, 1.5%), uterine perforation (n=2, 0.2%), laceration of the cervix (n=1, 0.1%), vomiting (n=11 1.1%). Two women in whom uterine perforation occurred underwent laparotomy and primary suturization of the perforation site. Late complications included infection(n=9, 0.9%), incomplete abortion (n=8, 0.8%), ongoing pregnancy (n=6, 0.6%), leukorrhea (n=7, 0.7%).

Conclusion
Establishment of the safe abortion clinics in Turkey was an important landmark for the improvement of both the reproductive health and social status of the of the women earlier than Asian countries

O1104 - EARLY THROMBOLYTIC THERAPY SAVES LIVE IN AMNIOTIC FLUID EMBOLISM

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Amniotic fluid embolism (AFE) is a rare and fatal obstetric emergency. AFE is triggered by the transition of amniotic fluid to maternal circulation during pregnancy, delivery or postpartum period. Suddenly started dyspnea, cyanosis, hypotension, and rapid cardiac arrest should consider AFE. This process is usually followed by disseminated intravascular coagulopathy (DIC). Since mortality is the first 24-48 hours after diagnosis, emergency treatment and resuscitation are important in terms of prognosis

Case
A 32-year-old patient with gravida 3, parity 2 normal birth was admitted to our clinic as oligohydramnios at 40 weeks + 4 days gestation. There were no features in her medical history and family history. In the obstetric evaluation, 2 cm cervical dilatation was observed and spontaneous amniotic fluid was observed. Induction of labor with oxytocin was initiated (500 ml of 5% Dextrose + 10 ü of 20 drops of oxytocin min). All vital signs were stable and NST was reactive for 7 hours after admission. While cervical dilatation was 4-5 cm, sudden loss of consciousness, hypotension (TA: 60/40 mmHg), bradycardia (20/min), respiratory depression and cyanosis developed, the patient was urgently intubated and ventilated, and adrenaline (1: 10,000 diluted solution 0.5 mg iv) was done The patient underwent cardiac arrest and underwent CPR. An emergency caesarean section was performed. A baby with a Apgar score of 5 was delivered. The uterus was atonic. Bilateral hypogastric artery ligation was performed. The patient was informed about the bleeding and hysterectomy was performed. In our patient who responded to CPR, a 2 cm thrombus was seen in the right atrium in the inoperable cardiac echo and thrombus was observed to be switched to the pulmonary artery within 2 min. Acute core pulmonale was present.

Intraoperative investigations revealed platelet 28000, hemoglobin 11g/dl, hematocrit 33%, leukocyte 12000, urea: 34, creatinine: 0.6, AST:34, ALT:38, LDH: 96 fibrinogen 64 mg. Peripheral blood smear was determined in terms of microangiopathic hemolysis findings and D-dimer 4094 nanograms / ml. It was implicated DIC. TA:60/30 mmHg, fibrinogen 1g, TDP 2U, Erythrocyte suspension 2 and dopamine (10 mcg/kg/min dilated by intramuscular route) were applied. An embolectomy was planned in consultation with cardiovascular surgery. Bloody leakage was observed at the postoperative 5th hour by the cesarean incision. Abdominal drain was 300cc. Fibrinogen was detected 54 mg. Cryoprecipitate and 4 fibrinogen was applied. The hemorrhagic fluid from the abdominal drains 1400 ml in 15 min at 6 hours postoperatively. After relaparotomy venous doppler ultrasonography showed widespread thrombus in the upper and lower extremities and heparin infusion was started 2 hours after relaparotomy.

On postoperative day 4th patient was transferred to the obstetrics department from the intensive care unit.

In the microscopic examination of the hysterectomy specimen, the finding consistent with vernix casein and fetal squamous cell in uterine veins supports AFE.

AFE is a rare, fatal obstetric emergency. They should be delivered quickly, cardiopulmonary support should be provided and coagulopathy should be early prevented.

O1105 - A NEW 'SAREM PLICATION SUTURE' TECHNIQUE TO CONTROL HEMORRHAGE DURING CESAREAN DELIVERY COMPLICATED BY PLACENTA PREVIA

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Objective
This study aimed at investigating the usefulness of a new technique for uterine suturing in order to control excessive hemorrhage during cesarean delivery complicated by placenta previa.

Methods
This study was conducted on 75 female subjects underwent cesarean and diagnosed with placenta previa by ultrasonography at Sarem Hospital from October 2013 to May 2018. Standard protocols were used to control hemorrhage. In 18 cases, due to the excessive hemorrhage, 'Sarem plication suture technique' was used to control hemorrhage in the lower segment of the uterus.

Results
The Sarem plication suture technique was used for Eighteen subjects with excessive hemorrhage. Our results showed the less delivery-related complications in mothers due to excessive hemorrhage and the blood transfusion decreased also no mortality was reported. Moreover, no complications such as bladder or intestine rupture occurred also, there was no need for hysterectomy. In fact, in all cases, the uterus was preserved.

Conclusion
Sarem plication suture provided an efficient technique in order to control hemorrhage during cesarean delivery complicated by placenta previa. It also associates with less delivery-related mortality in mothers and uterus preservation.

O1116 - EARLY POSTOPERATIVE SMALL BOWEL OBSTRUCTION (EPSBO)

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Objective
After intra-abdominal surgery, all patients can have a table of ileus along a variable period. Colonic ileus, spastic ileus, called colonic pseudo - obstruction, was first described by Ogilvie in 1948 years. This syndrome is characterized by distal column dilatation without mechanical obstruction. EPSBO is rare in the early postoperative period. It occurs within the first 30 days after surgery. The pathophysiology, diagnosis, treatment of adynamic ileus is different. Our case is presented to emphasize the difference of early postoperative small bowel obstruction and adynamic ileus syndrome.

Case
The patient was admitted to the ward with the complaint of fever, abdominal pain, vomiting, abdominal sensitivity, inability to tolerate oral feeding, abdominal distension and post-caesarean section. During follow-up, CRP: 311 (mg / L) locoside: 187 sodium: 141 (mmol / L) potassium: 3,8 (mmol / L) (10e3 / osl) calcium: 7,5 (8mg / d /) albumin: 2 The fever of 5 (g / dL) was 39 C. Abdominal radiography revealed air-fluid levels. A nasogastric catheter was inserted as a result of general surgery consultation. Liquid and electrolyte values were tried to be protected. Antibiotic therapy was added due to CRP and high fever. However, worsening of the general condition of the patient during the follow-up period and the second CT computed tomography of the perihepatic, right and left paracholic areas In the abdomen a total volume of approximately 200 ml measured free fluid, small bowel loops in the presence of significant dilatation and the radiograph of the needle pancreas with serohemorrhagic fluid, on the post-op 8. day diagnostic laparoscopy was plan. Hemorrhagic fluid lakes, localized serosal defects, thickening of the scar tissue, and adhesions were detected during diagnostic laparoscopy. The adhesions were separated. The abdomen was washed. Patient was followed by a drain. On post-op day 3, the patient was discharged on post-op 14th day after cesarean section with the decrease of CRP and leukocytosis, absence of fever, spontaneous gas and stool output and rapid recovery of patient.
Early postoperative small bowel obstruction is a rare entity different from postoperative adynamic ileus. Because the clinical septum and its findings may be confused with the postoperative adynamic ileus, keeping the conservative approach longer may result in intestinal necrosis. It is important to take the relaparotomy decision early.

We discussed the case of epipoecosis who underwent relaparotomy on the 8th postoperative day 8 post-operative day.

Conclusion
EPSBO can be confused with postoperative adynamic ileus. it should not be delayed in making the decision of relaparotomy as long conservative follow-up may result in loss of ligament.

O1165 - WOUND DEHISCENCE POST CESAREAN SECTION IN A THALASSEMIA MAJOR PATIENT COMPLICATED WITH ANEMIA AND THROMBOCYTOPENIA

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Thalassemia is one of major hematologic diseases complicating pregnancy. It could affect fertility, fetal growth, labor, as well as puerperium period. In this case, we documented a thalassemia major patient with pregnancy complicated with wound dehiscence after cesarean section. 34 years old lady, G2A1 35 weeks pregnant was admitted with severe vomiting and malaise. She was a major thalassemia patient with bicytopenia (anemia and thrombocytopenia) receiving regular packed red cell transfusion since the last 24 years. Twenty-one days after caesarean section due to repetitive suspicious fetal monitoring, she suffered wound dehiscence until the level of abdominal muscle. The treatment was high protein nutrition, component correction followed with re-suturing and drainage. A well peri-operative preparation is needed in pregnancy with thalassemia to ensure good surgical outcome.

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O1183 - PLACENTA PREVIA DO NOT TOUCH MY UTERUS

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Introduction
Placenta previa (PP) is seen in 0.4% of the births, although its frequency can vary based on the region. One of the most important risk factors is previous c-section. Most patients have painless vaginal bleeding. The presence of invasion is the most important point in the management of these patients. Recommended treatment in the presence of invasion is a c-section hysterectomy between 34-36 weeks of pregnancy. In recent years, uterine sparing surgery has gained importance.

Methods
This study included patients with PP diagnosis who were operated in our center between June 2017 and December 2018. The common feature of these patients was that their primary surgeon was the same doctor. All patients had at least one cesarean history. Patients who were operated before the 24th gestational week were excluded from the study. In this period, a total of 77 patients were operated with PP diagnosis. All patients were diagnosed by preoperative transvaginal ultrasonography. Placenta localization and invasion status were evaluated by USG. 49 patients (63.6%) were found to have anterior totalis and in 39 patients (36.4%) posterior totalis were found. Abdomen was entered by Pfannenstiel incision in all patients. The lower segment transverse incision was used in the uterus. Patients with placental abruption and bleeding from the placental bed were evaluated as invasion anomalies. While preoperative blood values were the last blood values before the operation, postoperative (PO) blood values were the values 3 hours after the operation. The amount of blood in the aspirator was calculated as the amount of bleeding. In addition to the demographic data of the patients, the duration of operation, amount of bleeding, the presence of invasion, the amount of erythrocyte transfusion given and the duration of PO hospitalization in the hospital were recorded.

Results
The average age of the patients was 33 ± 5.3 (22-44), gravida 4.64 ± 2.1 (2-12), parity 3.17 ± 1.6(1-8), number of previous cesarean deliveries 2.46 ± 1.1 (1-4), gestational week 35.49 ± 1.7 (27-39.4). The operation time was 48.51 ± 13.9 (28-90) minutes and the bleeding amount was 698.05 ± 566.2 (50-2600). A total of 21 patients were given erythrocyte suspension and the overall mean was 0.61 ± 1.3(0-8) units. Two patients had no invasion. The duration of PO hospitalization was 2,48 ± 2,2 (2-20). Bladder rupture occurred in two patients. In the long-term postoperative period, three patients developed uterovesical fistula. One patient developed hematoma causing infection within the bladder and required cystoscopy
None of the patients underwent hysterectomy. None of the patients underwent major artery ligation and uterine balloon tamponade was not used. No mother's death reported.

Conclusion
PP is an increasingly prevalent obstetric condition. Although cesarean hysterectomy is recommended especially in patients with invasion anomaly, patients desire is to protection of the uterus. Surgical options without hysterectomy are prominent in these patients. Considering that the average age of menopause is 51 in Turkey, these patients will have their menstrual period more than 18 years. Surgery without hysterectomy is very important for patients who want to give birth.

O1201 - THE PLASMA ANTITHROMBIN LEVEL IN PATIENTS WITH OBSTETRIC DIC INDUCED BY PLACENTAL ABRUPTION HAS A PROGNOSTIC ROLE IN ORGAN DAMAGE

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Introduction
Disseminated intravascular coagulation (DIC) is characterized by the systemic activation of blood coagulation, and the two leading causes of obstetric DIC are placental abruption and postpartum hemorrhage, to which 37% and 29% of obstetric DIC cases are respectively attributed. The plasma antithrombin (AT) level is a powerful prognostic marker of DIC related to sepsis, malignancy, and liver disease. However, no previous studies had addressed the prognostic role of the plasma AT level in patients with obstetric DIC. The aim of this study is to investigate whether the plasma AT level has a prognostic role to predict the prognosis of patients with obstetric DIC.

Methods
We conducted a single-center, retrospective cohort study using records of our hospital from January 2007 to April 2017. Patients with obstetric DIC induced by placental abruption were considered eligible for the study. Obstetric DIC was diagnosed as a score of ≥8, based on the obstetric DIC score approved by the Japanese Society of Obstetrics and Gynecology. We evaluated data to identify the following outcomes: incidence of organ damage and lowest plasma AT activity level within 4 days after the onset of DIC. Organ damages are based on laboratory data, radiological findings and echocardiography. Categorical variables were analyzed using the Chi-Square test or Fisher's exact test. Intergroup comparisons of continuous variables were performed using Student's t-test or the Mann Whitney U test, as appropriate. A P value < 0.05 was considered statistically significant.

Results
Twenty nine patients were enrolled in this study and 8 patients developed organ damages. According to the receiver operating characteristic curve analyses, the calculated value of the area under the curves for the lowest plasma AT activity predictive of organ damage was 0.729 (p = 0.035). At a plasma AT activity cutoff point of 60.5%, the sensitivity was 90.5% and the specificity was 54.5%. We assessed four possible confounders related to decreasing plasma AT activity by logistic regression analysis: hypertensive disorders of pregnancy (HDP), Cesarean delivery, the volume of transfused FFP and the initial albumin level. Consequently, HDP and the volume of transfused FFP were identified as prognostic variables.

Discussion
This study demonstrated that lower plasma AT group (<60.5%) had higher incidence of organ damages. Since natural anticoagulants play an essential role in reducing hyper-coagulation associated with DIC, serum levels of anticoagulants should decrease during active DIC. Several studies have reported that serum level of plasma AT is significantly lower in septic DIC patients with poor prognosis, but no previous studies had addressed the prognostic role in patients with obstetric DIC.

Conclusion
As in other DIC, plasma AT activity can be a prognostic marker in obstetric DIC induced by placental abruption.

O1231 - TREATMENT OF ABNORMALLY INVASIVE PLACENTA IN THE FIRST TRIMESTER OF PREGNANCY A SINGLE CENTER EXPERIENCE.

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Objective
We aimed to demonstrate the experience of our clinic in the management of pregnant complicated with the abnormally invasive placenta in the first trimester of pregnancy.

Methods
The records of patients who were treated for the abnormally invasive placenta in the first trimester of pregnancy during January 2016–March 2019 at Inonu University School of Medicine Department of Obstetrics and Gynecology were reviewed retrospectively.

Results
During the study period, a first-trimester screening test was performed in 875 patients at the University of Inonu School of Medicine Department of Obstetrics and Gynecology. Of these, 4 (%0.4) were diagnosed with the abnormally invasive placenta in the late first trimester. Concurrently, 8 patients were diagnosed as cesarean scar pregnancy in the early first trimester of pregnancy (<10 weeks). The ages of the patients, obstetric history, pre-treatment β-human chorionic gonadotrophin (hCG) values, and treatment modalities were summarized in Table 1. All of the cases were multiparous and had at least one cesarean section previously. The history of uterine surgery or in vitro fertilization, which is considered to be a high-risk factor for scar pregnancy, was not detected in our cohort, but six patients had a history of abortion. All of the eight cases diagnosed in the early first trimester were treated dilation and curettage (D&C) under general anesthesia by ultrasonography guidance. Patients who reach the targeted β-hCG value discharged after the operation without complications. In case 9; systemic methotrexate (MTX) (1 mg/kg) treatment implemented following uterine artery ligation before hysteroscopic evacuation. Hemorrhage occurred from the hysteretomy scar during the hysteroscopy procedure, and bleeding control was provided by laparotomy. The other three patients who underwent bilateral uterine artery ligation and segmental resection were discharged on average for 5 days, and no peri-operative surgical complication or post-operative infective complications were observed.

Conclusion
Patients with the abnormally invasive placenta in the first trimester should be informed about the short-term, and long-term complications, and the patient should be informed about the termination of pregnancy. Management of patients that opted termination of pregnancy in the late first trimester of pregnancy should be individualized according to the patient's characteristics, perinatal sonographic findings and the experience of the center implementing the treatment. Segmental resection seems to be more effective for patients opted termination of pregnancy during the late first trimester of pregnancy due to the abnormally invasive placenta

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O1268 - SURGICAL OUTCOMES OF PLACENTA ACCRETA SPECTRUM (PAS) DISORDERS USING PRENATAL MRI A SINGLE CENTER EXPERIENCE

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Objectives

Placenta accreta spectrum (PAS) disorder is the leading cause of emergency peri-partum hysterectomy and may be associated with poor maternal outcome including massive hemorrhage, hysterectomy, bladder injury or even death. The aim of this study is to report our experience regarding surgical treatment of PAS and uterine preservation in particular; contribution of MRI in the prenatal surgical planning is also addressed

Methods

Between March 2016 and March 2019, 49 patients (mean age: 35.7 years, mean gestational age: 35.2wks) were evaluated prenatally with dedicated MRI (range: 28-34 gestational week, mean: 33.2wks) due to evidence of placenta previa in the second trimester ultrasound. All MRIs were reviewed by two experienced radiologists, prospectively. All 49 patients underwent C-section within 6 weeks (mean: 4 weeks) after the MRI by one experienced obstetrician. None of our patients received placenta in situ approach, methotrexate administration or endovascular assisted hemostasis; Pfannestiel incision was performed in all cases. Intraoperative/pathologic findings were used as the standard of reference. ROC curve analysis was performed to test the MRI predictive ability for PAS and extrauterine spread; possible association of the MRI features with poor maternal outcome including hysterectomy, massive blood loss and bladder repair was also tested.

Results

PAS was intraoperatively identified in 38/49 cases (accreta/increta, n= 12; percreta, n=26). Bladder involvement was diagnosed intraoperatively in 22/38 and parametrial involvement in 11/38 patients with PAS disorders. There was excellent agreement (K >0.75, p< 0.001) between MRI and intraoperative findings for invasive placenta, bladder and parametrial involvement. Interestingly, preservation of the uterus was achieved in 17/38 PAS patients (accreta/increta, n= 12; percreta, n=5); the rest of the cases (n=21) treated with cesarean hysterectomy. All the patients with bladder involvement (n=22) underwent bladder repair during the surgery (minimal, n=14, major, n=8); in two patients with bladder involvement radiofrequency (RF) ablation was successfully used for bladder detachment. All PAS patients required blood transfusion (range: 250-3500 ml, mean: 1043 ml); blood loss was greater in percreta cases (range, 500-3500 ml, mean 1445 ml). There was a significant association between each of the above adverse peripartum events and the presence of several MRI features including T2 dark intraplacental bands, increased hypervascularity within the placenta or placental bed and signs of myometrial distortion.

Most (n=40) of the deliveries were scheduled. Mean operation time was 81.5 min (range: 40-185 min); in percreta cases surgical times were longer (mean: 93.8 min (range: 60-185 min). All the patients were admitted to ICU for 24-hour monitoring and had an uneventful post-operative course; they were discharged on the post-operative day 4, without complications. In patients who underwent extensive bladder repair, the Folley catheter removed 8 days after the operation; none of them experienced permanent urinary problems. There was no need for re-operation in any of our patients. No maternal or neonatal mortality was recorded.

Conclusion

Prenatal treatment planning is essential for successful surgical treatment of PAS including uterine preservation. MRI is accurate in identifying the extent of PAS disorders thus, helping obstetricians to optimize patient's care.

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1382 - PERIPARTUM HYSTERECTOMIES CLINICAL ANALYSIS OF 5 YEAR EXPERIENCE FROM A SINGLE INSTITUT

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Objective

Emergency peripartum hysterectomy (EPP) is usually the last resort for life-threatening intrapartum/postpartum hemorrhages. Its incidence is between 0.25-5.09 in 1000 deliveries, although it varies considerably from a region to another. In this study, we aimed to review our institution's experience in EPPs in the last 5 years.

Methods

A 5-year retrospective chart review was accomplished for emergency hysterectomies that were performed for intrapartum and/or postpartum obstetric hemorrhage indication in Adnan Menderes University Research and Training Hospital's Department of Obstetrics and Gynecology. Both vaginal and cesarean deliveries were included. Demographic characteristics, systemic illnesses, delivery routes, hysterectomy indications, intra and post-partum complications of these cases were analyzed.

Results

Forty-one EPP cases were found in the review of our last-5-year obstetric records among the total of 4621 deliveries (0.88%). All cases were cesarean deliveries (CS). Mean age was 32.5±5.2 (Table 1). Majority of them were multigravida (n=38, 92.7%) and had previous CSs (n=34, 82.9%). Among the cases that had previous CS, 3 patients had 3 or more CSs in the past (7.3%). Twenty-eight cases (68.2%) had no systemic illnesses; gestational diabetes mellitus (GDM) was the most common systemic illness that was encountered for the rest (n=5, 12.2%). Placenta previa (PP) was the most common diagnosis in EPP cases (n=24, 58.5%) (Table 2) and there were total of 98 cases with placenta previa in the last 5 years. Other EPP indications were clinically diagnosed placental invasion abnormality (n=11, 26.8%), uterine atony (n=5, 12.2%), and systemic illness (n=1, 2.4%) (Table 2). However, after pathologic assessment there were 17 (41.5%) cases of invasion abnormality. Approximately half of the cases with complete PP (n=24, 45,8) had tissue confirmed invasion abnormality diagnosis. On the other hand, about half of the preoperative or intraoperative invasion abnormality diagnoses could not be confirmed by pathology (n=5, 45.5%). Pathology assessment of uterine and placental specimens from the cases with atony and systemic illness were reported as normal (Table 3).

Conclusion

Placenta previa diagnosis was the most common diagnosis related to emergency peripartum hysterectomies in our clinic even though approximately half of them were without placental invasion abnormalities. It would be appropriate to be ready for EPP in all cases with PP. In addition, our review once more indicated that cesarean deliveries have much higher risk for peripartum hemorrhage and hysterectomy. The most common emergency peripartum hysterectomy indications and the importance of a prepared mindset/early diagnosis will be discussed in this presentation.

O1481 - PLACENTA PERCRETA INDUCED UTERINE RUPTURE WITH THROMBOSIS IN THE RIGHT OVARIAN VEIN EXTENDING INTO THE INFERIOR VENA CAVA

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Uterine rupture is lethal in pregnant women. We herein report placenta percreta-induced uterine rupture at 30 weeks of gestation. A 29-year-old pregnant woman, with previous cesarean, was admitted to the labor ward with the diagnosis of preterm labor and placenta previa. The gestational age as calculated by sonography was 30 weeks. Tocolytics and lung enhancing agents were administered. Sudden abdominal pain followed by syncope and the woman was taken into the operating theatre immediately. Fetus was in the abdomen and placenta was protruding from the incision site. Cesarean section was performed and a male infant with a 5 Apgar score, 1785 gram was delivered. During laparotomy, a 10 cm thrombosis extending into the right parametrium from the placental insertion site to the infundibulopelvic ligament was noted. Despite all uterine conservative measures, massive uterine hemorrhage necessitated, total abdominal hysterectomy. 7 units of erythrocyte suspansion,7 units of fresh frozen plasma, 2 units of thrombocyte suspension and 4 gram fibrinogen were administered in the peripartum period. At the second postoperative day, ultrasonography revealed a 5 cm thrombosis originating from the left ovarian vein extending into the vena cava inferior cava. Full anticoagulation started. Pathological analysis of the uterine specimen revealed placenta percreta to be the cause of the rupture. Uterine rupture should be considered in the differential diagnosis in all pregnant women who present with placenta previa/accreta with acute abdomen irrespective of the gestational age.

Obstetrics - Preterm Premature Rupture of Membranes

O1084 - COMPARISON OF INTRAVENOUS OXYTOCIN INFUSION VERSUS INTRACERVICAL DINOPROSTONE FOLLOWED AFTER 6 HOURS BY INTRAVENOUS OXYTOCIN INFUSION FOR LABOR INDUCTION IN PRELABOR RUPTURE OF MEMBRANES A RANDOMIZED CONTROLLED TRIAL

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Objective
To compare two protocols for labor induction in pregnant women with prelabor rupture of membranes (PROM)

Population
Subjects were recruited from the University of Santo Tomas Hospital (Private Division and Clinical Division). Pregnant women with a live, term, singleton fetus, cephalic presentation, a reactive Non stress test, who presented with PROM and a Bishop score of ≤5, with no previous Cesarean section, or other uterine surgery.

Methods
This is atwo-arm superiority, open label, randomized controlled trial. Pregnant women with a live, term, singleton fetus, cephalic presentation, a reactive Non stress test, who presented with PROM and a Bishop score of ≤5, and with no previous Cesarean section or other uterine surgery were randomly assigned to receive either intravenous (IV) oxytocin infusion or intracervical dinoprostone 0.5 mg gel followed 6 hours later by IV oxytocin infusion. In both groups, all patients were hooked continuously to an electronic fetal monitor and intermittent tracings were done every 2 hours. Once oxytocin infusion has been started, it was continued until delivery unless otherwise indicated. Antibiotic prophylaxis against chorioamnionitis was given with the usual prophylactic regimen of Ampicilin 2 grams intravenously as loading dose then 2g intravenously every 6 hours.

Results
Vaginal delivery within 24 hours of labor induction increased significantly with intracervical dinoprostone gel followed by IV oxytocin infusion (87% versus 61%; RR: 1.43; 95% CI: 0.99 – 2.06; P<0.044). Comparable result was observed for nulliparous women included in the study population. The time interval from labor induction to active phase was significantly shorter in the dinoprostone-oxytocin group than in the oxytocin alone group (2.4 ± 2.1 versus 6.3 ± 1.4 hours; p<0.001). The time interval from labor induction to delivery was also significantly shorter in the dinoprostone-oxytocin group (6.3 ± 1.5 versus 10.4 ± 1.4 hours; p<0.000). Cesarean delivery rates were statistically similar in the dinoprostone-oxytocin and oxytocin alone groups (17% versus 40%; p=0.102). The neonatal outcomes were comparable in both groups, except for birth weight.

Conclusion

Intracervical dinoprostone 0.5 mg gel followed 6 hours later by an oxytocin infusion in term women presenting with PROM and an unfavorable cervix (Bishop Score of 5 or less) was associated with a higher rate of vaginal delivery within 24 hours, shorter time interval from labor induction to active phase of labor, and shorter time interval from labor induction to delivery, and no difference in maternal and neonatal complications was observed compared with oxytocin infusion alone.

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O1157 - CORRELATES OF NEUTROPHIL LYMPHOCYTE PLATELET LYMPHOCYTE AND PLATELET NEUTROPHIL RATIOS OF WOMEN BETWEEN WITH OR WITHOUT PREMATURE RUPTURE OF MEMBRANE AT LABOR

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Objective
Comparison of prepartum platelet / lymphocyte, platelet / neutrophil and neutrophil / lymphocyte ratios and evaluation of prepartum-postpartum white blood, hemoglobin, platelet, lymphocyte, monocyte and neutrophil rates in pregnant women with and without premature rupture of membrane(PROM) at labor.

Methods
In this retrospective case control study, a total of 50 patients were enrolled. 25 women with PROM were compared with 25 women with painful pregnancy at term non-PROM. Patients with both groups were compared of age, gestational age, birth weight, birth sexuality. Data using spss 23 program in both groups for prepartum and postpartum hemoglobin (Hb), white cell (Wbc), monocytes, lymphocytes, platelets(Plt), neutrophil values and prepartum neutrophil / lymphocyte ratio(NLR), platelet / lymphocyte ratio(PLR), and platelet / neutrophil ratio(PNR) for comparison of Mann Whitney u test, Spearman correlation tests and chi-square tests were used. Statistical significance was accepted as $p < 0,05$.

Results
The mean age distribution was 25.8 years, and the mean gestational age was 38, 3; the average birth weight was 3140. The distribution of some sociodemographic characteristics of the participants is given in Table 1. Male babies were born from 52% of PROMs, and 60% of female babies were born non-PROMs. Comparison of the rates of wbc, hb, plt, lymphocyte, monocyte, neutrophil in the prepartum-postpartum evaluation is shown in Table 2. A statistically significant difference was found between Wbc, Neutrophil and Monocyte ratios ($p < 0.05$).
A positive correlation was found between prepartum NLR and prepartum PLR in non-PROM ($r = 0.67$, $p < 0.01$). A positive correlation was found between prepartum NLR and prepartum PLR ($r = 0.72$, $p < 0.01$) and a negative correlation was found between prepartum PNR and prepartum NLR in PROM ($r = -0.51$, $p < 0.05$). These relationships are shown in Table 3.

Conclusion
Postpartum Wbc, Neutrophil and Lymphocyte levels were found to be significantly increased compared to prepartum in all cases. Although there is an increase in the relationship between PLR and NLR in PROMs and non-PROMs, there is a negative relationship between PNR and NLR in PROM and it supports PLR increase. In future, these rates can be used to predict patients with PROM and PPROM. Since PPROM is an early-week variant of PROM, the results found in this study are also important for PPROM.

O1185 - METERNAL AND NEONATAL OUTCOMES OF PREGNANCIES WITH PREVIABLE PREMATURE PRETERM RUPTURE OF MEMBRANES

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Objective
The aim of this study is to evaluate maternal, neonatal, fetal outcomes of pregnant patients diagnosed with premature preterm membranous rupture before 24 weeks with follow-up until birth and related factors affecting outcome.

Methods
This retrospective study was planned in screening patients applied to our clinic with confirmed preterm membrane rupture before the 24 + 0 gestational weeks, diagnosed between April 2012 and August 2017. Inclusion criterias were patients with singleton gestations between 14-24 gestational weeks and confirmed diagnosis of PPROM. Gestations complicated with a fetal anomaly, fetal death during application, families opting for termination of pregnancy and cases with multiple gestations were not included in the study. We recorded demographic characteristics, medical history, gestational age at diagnoses of PPROM, risk factors, parameters during follow-up and management, related data of delivery, maternal and neonatal complications in the postnatal period of the patients in our study.

Results
The study included 192 patients, of whom in 21 (10,94%) patients intrauterine fetal death occurred. 67 (34,8%) of newborns were lost during follow-up in intensive care unit after delivery. Finally, 104 (54,16%) of these infants were discharged alive. We compared in two groups alive (n=104) and dead (n=67) patients medical data. Statistically significant variables in multivariate regression analysis affecting neonatal survival are amnion fluid volume, the presence of oligohydramnios and / or anhydramnios, duration of PPROM, average of first minute Apgar, average of neonatal birth weight. ROC analysis showed us that gestational week at birth was determinant for fetal death prediction.

Conclusion
57.14% of patients resulted with neonatal survival with diagnoses of PPROM before 24+0 gestational weeks. The most important determinants in these cases for survival were duration of PPROM, gestational age at birth and amount of amniotic fluid. There is no major complication 19,27% of infants.

O1232 - ANTIBIOTIC REGIMEN FOR PRETERM PRELABOUR RUPTURE OF MEMBRANES – IS ERYTHROMYCIN STILL THE FIRST CHOICE

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Objective
Many authoritative guidelines have recommended prescribing erythromycin as antibiotic prophylaxis in preterm prelabour rupture of membranes (PPROM). The aim of this study is to evaluate the spectrum of pathogens in PPROM and the effectiveness of erythromycin prophylaxis on these pathogens.

Methods
All pregnancies who were diagnosed to have PPROM and delivered >=24 week of gestation in an obstetric unit from 2013 to 2017 were retrospectively reviewed. The pathogens isolated from the maternal, placental and neonatal cultures and their sensitivity profile to various antibiotics were analyzed. The neonatal outcomes were evaluated.

Results
The overall incidence of PPROM was 2.63%. Gram-positive bacteria were cultured in 18.4% of the PPROM patients, the commonest being Group B streptococcus (GBS) (14.6%), followed by Gram-negative bacteria (12.8%), the commonest being Escherichia coli (8.0%). Both Gram-positive and Gram-negative bacteria were significantly associated with early onset neonatal sepsis (p=0.036 and p=0.001). When each bacterial species was analyzed individually, Escherichia coli was significantly associated with early onset neonatal sepsis (p=0.004) but not for GBS (p=0.392).
Gram-positive bacteria had high resistance rates to commonly used antibiotic regime, with 42.2% of GBS and 50.0% of enterococcus and other streptococcus bacteria being resistant to erythromycin. Escherichia coli had high resistance rate to ampicillin (70.3%) and gentamicin (33.3%) but lower resistance rates to co-amoxiclav (3.6%) and intravenous cefuroxime (14.0%).

Conclusion
Gram-positive and Gram-negative bacteria were found in 29.1% of patients with PPROM. Administering erythromycin alone was insufficient to cover these bacteria in 67.7% of these patients with positive cultures.

Obstetrics - Fetal neurosonography and CNS anomalies

O1173 - CEREBROPLACENTAL RATIO AND FETAL CRANIAL BIOMETRY PRELIMINARY RESULTS

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Objective
To evaluate the possible relation of cerebroplacental ratio (CPR) with fetal cranial biometric parameters measured by obstetric ultrasonography
Fetal biometric development and its relation to CPR will be investigated.

Methods
Fifty-three apparently healthy pregnant cases in their second trimester were evaluated by obstetric ultrasound. Fetal cranial biometric parameters: biparietal diameter (BPD), head circumference (HC), abdominal circumference (AC), femur length (FL), the width of cisterna magna (CM), cavum septum pellucidum (CSP), lateral ventricle (LV); estimated fetal weight (EFW) were measured. Doppler ultrasound measurements for middle cerebral artery (MCA) and umbilical artery (UA) were also made to calculate CPR values. Demographic characteristics and fetal cranial parameters were statistically analyzed for their correlation with CPR (Table 2).

Results
Demographics and descriptive statics were provided in Table 1. Correlation analyses revealed positive correlation between CPR and cisterna magna width (CM) (r=0.305, p=0.029). There was also a positive correlation between CPR and some other non-cranial parameters: AC, FL, gestational weeks and EFW (r=0.380, 0.374, 0.335,0.334 and p=0.005, 0.006, 0.014 and 0.016, respectively) (Table 3).

Conclusion
Our preliminary results indicated that fetal cisterna magna width is correlated with the cerebroplacental ratio. Possible explanations for this finding, including fetal cranial and cerebral vascular development, morphometric and volumetric implications will be discussed in detail.

O1221 - INVESTIGATION OF THE SERUM ELABELA LEVELS IN PREGNANT WITH NEURAL TUBE DEFECTS

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Objective
Elabela is a hormone that plays crucial role in embryonic development. It regulates embryonic stem cell apoptosis, embryonic stem cell self-renewal, cardiovascular development, as well as proper endodermal differentiation particularly for early embryonic development. Its level is evaluated in much pathology in pregnancy. It is known that Elabela is expressed in neural tube. In this study, we investigated the serum Elabela levels in pregnant bearing fetuses with neural tube defects for the first time in literature.

Methods
Thirty cases were included in the study. Blood samples were collected from 15 pregnant women bearing fetuses with lumbosacral neural tube defects (Group 1) and 15 pregnant women bearing normal appearing fetuses (Group 2). Levels of Elabela in the blood samples were determined.

Results
Age, gestational week, obstetrics history, body mass index and Elabela levels of the cases in Group 1 and Group 2 were similar. Mean serum Elabela levels was 6,4±1,7 ng/mL in Group 1 and 6,8±1,4 ng/mL in Group 2. There was no statistically significant difference in Elabela levels between the groups. ($p>0,05$, the Independent Samples Test).

Conclusion
In the present study, we determined that serum Elabela levels do not change in pregnant women with neural tube defect. Further studies are needed in this area.

O1463 - THE ROLE OF 4 D ULTRASONOGRAPHY FOR THE IN UTERO ASSESSMENT OF FETAL NEUROBEHAVIOUR IN PREGNANCIES COMPLICATED BY GESTATIONAL DIABETES MELLITUS

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Objective
To assess with 4-D ultrasound the differences in fetal behavior in pregnancies complicated by gestational diabetes (GDM), and to examine how glycemic control affects fetal neurobehaviour.

Methods
A 16 month prospective study, where Kurjak antenatal neurodevelopmental test (KANET) has been applied to assess fetal neurobehavior in pregnancies complicated by GDM, using 4-dimentional ultrasound Patients had regular ultrasound examinations after 28 weeks, when gestational diabetes was diagnosed, which were scheduled according to either the level of glycemic control orthe ultrasound findings (e.g. polyhydramnios, macrosomia and KANET score).
Based on the KANET scores, the fetuses were considered as normal (≥ 14 points), borderline (6-13), or abnormal (0-5).

Results
We studied 119 pregnancies complicated by GDM and 110 low-risk pregnancies, which represented the control group. Comparison of KANET scores in diabetic (119 patients) and non-diabetic pregnancies (110 pregnancies) showed differences in the fetal neurobehavior. The largest incidence of fetuses with abnormal and border line KANET scores was found in the group of fetuses with poor glycemic control, or ultrasound findings indicative of poor glycemic control (e.g. polyhydramnios, macrosomia etc.). KANET test scores appeared to improve, with improvement of glycemic control.

Conclusion
Evaluation of the fetal behavior in fetuses of diabetic pregnancies using KANET test has the potential to detect fetuses with abnormal behavior and this appears to relate with the level of the glycemic control, and the improvement of KANET score was related with the improvement of glycemic control.

O1479 - CHARACTERISTICS AND OUTCOME IN PRENATALLY DIAGNOSED ENCEPHALOCELE IN A MIDDLE EASTERN POPULATION

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Objective
Prenatally diagnosed encephaloceles have different ultrasound features and outcomes reported in publications. We aim to assess characteristics and outcomes of this entity in an unselected population.

Methods
It is a ten years retrospective observational study including 11 cases of prenatally diagnosed encephalocele. The ultrasounds were carried out in outpatient settings, by two experienced ultrasonographers. The maternal socio-demographic characteristics were reviewed along with ultrasound characteristics, associated malformations and final outcomes.

Results
Diagnosis was done at a mean age of 18.7 weeks (13–25). In all cases, it was an occipital encephalocele. The first- trimester ultrasound was considered within normal limits in 9 cases. Associated anomalies were present in 6/11 fetuses. Growth retardation was noted in 2/11 cases. The outcome was termination of pregnancy in 9/11 cases. Parents who choose continuing the pregnancy were motivated by religious reasons

Conclusion
Prenatally diagnosed encephaloceles represent a heterogeneous group. Our Middle Eastern series is characterized by occipital localization and a high rate of associated abnormalities with most cases ending in termination of the pregnancy.

Obstetrics - Aneuploidy and fetal anomalies - first trimester

O1090 - THE VALUE OF HIGH RESOLUTION CHROMOSOMAL MICROARRAY IN FETUSES WITH NORMAL KARYOTYPE AND INCREASED NUCHAL TRANSLUCENCY

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Objective
Nuchal translucency is assessed by ultrasonography at 11 to 13 + 6 gestational weeks, and it is widely accepted that this is a handy marker of major genetic syndromes, including trisomy 21. First-trimester screening of nuchal translucency may reveal increased thickness of this structure even in fetuses with a normal karyotype. This paper aims to assess the clinical value of using high-resolution chromosomal microarray and to analyze the possible association between increased nuchal translucency and various abnormal chromosomal copy number variants detected by this innovatory technique in pregnancies with normal fetal karyotype and without morphologic anomalies.

Methods
This paper is a systematic review of the English literature published between 2010 and January 2019. We searched PubMed, Google Academic, and Web of Science databases for studies describing different copy number variants detected by chromosomal microarray in normal karyotype fetuses with increased values of nuchal translucency. Relevant articles were selected by using the MeSH keywords: nuchal translucency, normal karyotype, genomic microarray, copy number variants, submicroscopic chromosomal abnormalities, array CGH. Nuchal translucency was considered increased if the values exceeded 3.5 mm of thickness.

Results
In all the included studies, nuchal translucency was over 3.5 mm and the karyotype analysis showed 46, XX or 46, XY. High-resolution microarray was performed on fetal blood samples by cordocentesis. The most common abnormal copy number variants detected were 12q21q22 deletion, 22q1.2 deletion, 22q11.2 duplication, and 10q26.12q26.3 deletion. Also, 2.1% not otherwise specified results of chromosomal microarray were detected in a group of pregnancies with normal karyotype fetuses and increased nuchal translucency. High-resolution microarray also detected the PTPN11 S502P mutation that was previously unreported but is suspected to cause the Noonan syndrome. Also, using the chromosomal microarray technique was detected a high rate of heterozygosity for spinal muscular atrophy. The pooled prevalence for variants with no clinical significance was 1.4% (95% CI, 0.5–4.0).

Conclusion
Even the studies seem to be controversial regarding the value of chromosomal microarray in the detection of abnormal chromosomal copy number variants in fetuses with normal karyotype and increased nuchal translucency, the majority opinion is that the use of genomic microarray is able to detect submicroscopic chromosomal abnormalities. A normal result of the chromosomal microarray associated with normal fetal karyotype, lack of any morphological anomalies and increased thickness of nuchal translucency usually provides an uneventful outcome of the baby, without an increased risk for developmental delay, but a careful follow-up might be developed.

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O1247 - A 3 YEAR CLINICAL EXPERIENCE OF PRENATAL DIAGNOSTIC INVASIVE PROCEDURE WITH 2543 PATIENTS AT TEPECIK TRAINING AND RESEARCH HOSPITAL PERINATOLOGY CLINIC

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Objective
The aim of this study is to analyse the indications of the prenatal invasive procedures and to evaluate the distribution of choromosomal anomalies according to the karyotype and the pregnancy results in patients with detected fetal chromosomal abnormality.

Methods
Indications of prenatal invasive procedures (chorionic villus sampling, amniocentesis, fetal blood sampling) and karyotype results which were performed between January 2016 - December 2019 were analyzed respectively. All invasive procedures including chorionic villus sampling in first trimester, amniocentesis and fetal blood sampling in second trimester were included. It was found that, mean gestational age at the time of chorionic villus sampling was 12.7 (min 11- max 14), mean gestational age at the time of amniocentesis was 18.2 (min 15 - max 30), mean gestational age at the time of cordocentesis is 21.9 (min 18 - max 30) weeks.

Results
Total number of prenatal invasive procedures were 2543 (2025 of all were amniocentesis (79.6%), 270 of all were chorionic villus sampling (10.6%), 248 of all were cordocentesis (9.8%). Indications of prenatal invasive procedure were classified as high risk in scanning tests, ultrasonographic existence of multiple soft markers in fetal anomaly ultrasonographic scan (renal pelviectasis, cyst of choroid plexus, intracardiac echogenic focus, short femur length), existence of major anomaly, maternal age and anxiety, positivity or failure of noninvasive prenatal test, history of previous pregnancy with fetal chromosomal anomaly, hydrops fetalis, existence of at least one of strong soft markers (hypoplasia of the nasal bone, increased nuchal thickness in first trimester, increased nuchal fold in second trimester, mild ventriculomegaly, hyperechogen intestines), other (early intrauterine growth restriction, social indication, etc). The rate of chromosomal abnormality was found to be 23.5% (61/259) with CVS in the first trimester, 6.49% (131/2017) and 2.91% (7/240) with AS and CVS respectively. Total number of chromosomal abnormalities was 199 (7.8%) and the most frequent abnormal karyotype was autosomal aneuploidies (160/199). The most frequent indication for karyotyping in 113 fetuses with trisomy 21 was high risk in scanning tests (51/113 - 45.1%), in fetuses with trisomy 18 and 13 was the existence of major anomaly in fetal anomaly scan (14/33 - 42.4%) for trisomy 18, (6/13 - 46.2%) for trisomy 13. The rate of pregnancy termination was 76.1% (80/105) for trisomy 21, 54.5% (18/29) for trisomy 18 and 61.5% (8/11) for trisomy 13.

Conclusion
The rate of diagnosis using CVS is high due to the high symptom rate of fetal chromosomal abnormality in first trimester. There are not always ultrasonographic findings in trisomy 21 which is the most frequently seen fetal aneuploidy. First and second trimester scans have a great role in detecting the patients who need invasive procedure. Fetal ultrasonographic findings can play a role in guiding to invasive procedures for trisomy 13 and 18. It is beneficial to diagnose patients who have fetuses with chromosomal anomalies to offer the pregnancy termination as an option.

O1298 - NEUROFIBROMATOSIS TYPE 1 AND PREGNANCY CASE REPORT AND REVIEW OF THE LITERATURE

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Neurofibromatosis (NF1) is an autosomal dominant genetic disorder that causes genomic or sporadic NF1 gene mutation as a result of a decrease in neurofibromin protein or loss of function. Although Cafe au late stains and neurofibromas are the most common symptoms, circulatory, skeletal defects and malignancies may accompany this syndrome. In the pathology of the disease, mostly vasculopathy causes perinatal and postnatal complications in women in the reproductive period. In this case, the patient who had bad obstetric results due to NF1 was evaluated in the light of the literature. In the follow-up, intrauterine growth retardation and fetal distress were detected, and she gave 590 g baby girl by cesarean section. There were no maternal complications. Although NF1 is a rare genetic disease, we believe that maternal and perinatal outcomes can be improved with regular follow-up and multidisciplinary approaches in women in reproductive period.

O1299 - FIRST TRIMESTER PRENATAL DIAGNOSIS OF CANTRELL'S PENTALOGY WITH ANENCEPHALIA

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We report the prenatal diagnosis of case of Pentalogy of Cantrell in the first trimester. Sonographic evaluation revealed ectopia cordis, anencephalia, spinal dysraphism and omphalocele at 12 weeks' gestation. The patient decides on elective pregnancy termination. The full spectrum consists of five anomalies: a midline supraumbilical abdominal wall defect, a defect in the diaphragmatic pericardium, a defect in the lower sternum, a defect in the anterior diaphragm, and various intracardiac anomalies (1). The prognosis depends on the severity of the lesions. The mortality rate is high; however, survival and prognosis ultimately depend on the type and complexity of the associated defects.

O1326 - THE USE OF ALPHA FETOPROTEIN IN CURRENT OBSTETRICS; OUR HOSPITAL EXPERIENCES AND REVIEW OF THE LITERATURE

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Objective
Alpha-fetoprotein (AFP) is an important glycoprotein that is released from fetal liver and yolk sac during pregnancy. AFP during the early second trimester remains the most important biochemical marker for fetal open neural defects (NTD). Maternal serum AFP is also a component in the biochemical screening for fetal aneuploidy as well as adverse gestational outcomes. Although AFP may be elevated in a number of rare diseases such as maternal liver tumors, the elevation of AFP is generally attributed to feto-placental origin. In this paper, the details of the use of AFP in current obstetrics will be reviewed and the experiences of our hospital will be shared.

Methods
In this descriptive-retrospective study, 525 healthy pregnant women who admitted to our hospital at first trimester were included. Invasive diagnostic tests were recommended for patients with increased nuchal translucency (NT) value or with combined screening test result 1/270 and above (high-risk group). An increased NT was described as a measure greater than 99th percentile according to gestational age or exceeds a set threshold of 3 mm. Low-risk group underwent only AFP testing in the second trimester. Information on birth weight, birth week and as well as pregnancy complications was obtained from hospital records. Results: The mean AFP MoM value was 1.2 ± 0.45. The number of patients with AFP MoM 2.5 and above was 7, between with 2-2.5 MoM was 19. Open neural tube defect (NTD) was not detected in any of these pregnant women after a detailed ultrasound scan. Preterm delivery rate was 14.2% in the group with AFP MoM 2.5 and over, 15.7% in the group with between 2-2.5 MoM and 14.7% in the group with less than 2 MoM and no statistically significant difference was found between the groups ($p > 0.05$ for each group). In the patient group that applied invasive diagnostic tests due to high risk, mosaism 46, XY [37] / 46, XX [3] was detected in 1 patient after CVS and Trisomy 21 (Down syndrome) was detected in 1 patient after amniocentesis procedure. Demographic and laboratory data was presented in Table 1.

Conclusions
Aneuploidy screening tests should be offered to all pregnant women. The pregnant should be informed about the limitations, false positive and negative rates of the screening tests. Simultaneous or sequential use of screening tests is not recommended. Single AFP value may be used alone successfully in the screening of NTD. Detailed USG screening, genetic consultation and (if indicate) diagnostic testing should be recommended to all pregnant women complicated with increased AFP values.

O1431 - VESICULAR ULTRASOUND PATTERN OF PLACENTA AND COEXISTING NORMAL FETUS; LESSONS LEARNT

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The most common pathology of vesicular ultrasound pattern of placenta is molar pregnancy. Hydatidiform mole coexistent with a twin live fetus (HMTF) is a rare entity, occurring in 0.005–0.01% of all pregnancies. Clinical information is limited and management is difficult due to the risk of pregnancy complications such as fetal death, vaginal bleeding, preeclampsia, hyperthyroidism, and the risk of persistent gestational trophoblastic disease. Recently, we experienced a case of complete hydatidiform mole with a healthy infant delivered at term. This case is interesting due to the molar tissue was disappeared after 9 weeks of gestation.

O1435 - TERMINATION RATES OF DOWN SYNDROME IN TURKEY AND OTHER INFLUENTIAL FACTORS A SINGLE CENTRE PROSPECTIVE STUDY

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Objective
This study aims to present the termination of pregnancy (TOP) rates in Turkey following a prenatal diagnosis of Trisomy 21, while clarifying the religious, educational and economic factors that affect the decision-making process in a secular country of which the 98% of the population is Muslim.

Methods
This prospective single-center study was conducted between January 2016 to July 2019 in a tertiary hospital with 136 pregnant women who were diagnosed with trisomy 21. After receiving written and oral informed consent, the educational, religious, and economic factors that influence the parental decision process were studied.

Results
Mean maternal age was 33.81(17-48), and 6 pregnancies out of 136 were twins (4.4%). 11 pregnancy (8.1%) were obtained by assisted reproductive treatment. The highest karyotyping indication arose due to high risk in combined test in 42 patients (30.9%), and secondly, due to positive non-invasive prenatal test results in 17 patients (12.5%). There were no major/minor sonographic findings in 36 (26.5%) patients, while 58 patients (42.6%) had major sonographic findings. Most common major sonographic findings were cystic hygroma in 17 (12.5%) patients and cardiac malformations in 17 (12.5%) patients. Mean karyotyping week was 15.99±2.50, and amniocentesis procedure was executed in 94 patients (69.1%). 60 families (44.7%) were low-income, and 67 (49.3%) were middle class. 60 father (44.2%) and 75 mothers (55.2%) did not have a high school degree. The total TOP rate was 78.7% with 107 families, and 29 (21.3%) families rejected termination. 16 (14.9%) out of 107 families first decided to keep the pregnancy, but after a thinking period (12.18±7.12 days), they went through with the termination. Additionally, 4(13.7%) out of 29 families who first had decided to terminate the pregnancy, did change their decision, and the mean decision-making time for this group was 9.50±6.13 day. There was no statistically significant difference according to maternal age, gestational week, gravity and parity between the families who wanted the TOP and the ones who continue with the pregnancy (p=0.09, p=0.63, p=0.53, p= 0.21). 3 (2.2%) families out of 136 families were Syrian refugees, and none of them accepted the termination of pregnancy. TOP acceptance rates were significantly higher in families with high and middle-income families than low-income families (p=0.00, p=0.03). TOP rates of non-literate, primary and the middle school graduate mothers were significantly lower than the women with high school and undergraduate/graduate degree (p=0.02, p=0.41, p=0.00, p=0.00, p=0.01, p=0.43). Similarly, TOP rates in families with non-literate, primary school and middle school graduate fathers were significantly lower than in families with fathers who had a high school, and undergraduate/graduate education (p=0.02, p=0.04, p=0.00, p=0.00, p=0.01, p=0.04). 4 (3,7%) of the mothers defined themselves as non-Muslim, and all of them had accepted the TOP.

Conclusion
There are many studies all around the world investigating the TOP tendencies for Down Syndrome. However, there is limited data about the TOP rates and the other influential factors in Muslim countries such as Turkey. This study provides data about the TOP rates in Turkey and other factors that affect the TOP decision.

Obstetrics - Noninvasive prenatal test (Fetal DNA)

O1206 - THE IMPORTANCE OF ASSESSING FOR TRIPLOIDY BEYOND THE FIRST TRIMESTER OF PREGNANCY

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Objective
Triploidy accounts for 1% of conceptions and approximately 10% of miscarriages. This finding is historically associated with first trimester loss, though later losses and live births have been reported. Identifying triploid pregnancies is important because of the associated perinatal complications. Using SNP-based products of conception (POC) testing and non-invasive prenatal testing (NIPT), we examined the incidence of triploidy at the typical time period for NIPT (available from 9 weeks) and later in pregnancy.

Methods
Genotyping results were produced on 40,729 fresh POC samples using SNP microarrays. Additionally, results were obtained on a total of 344,301 NIPT samples received over a one-year period.

Results
For POC samples, 7.3% (2944/40,729) were triploidy, of which, 57.2% (1686/2944) were maternal in origin and 42.7% (1258/2944) were paternal in origin. Samples were categorized by GA: 9-13 weeks, corresponding with the most common GA among women screened by SNP-based NIPT methods, and 2nd/3rd trimester losses. 36.3% (958/2635) were from losses from 9-13 weeks GA; 5.9% (156/2635) were from losses after the 1st trimester. Of the 2nd and 3rd trimester losses, 35.3% (55/156) were paternal in origin and 64.7% (101/156) cases were maternal in origin.
For NIPT samples, 0.06% (207/344,301) were triploidy or vanishing twins. Of these, no clinical outcome data was available for 41.5% (86/207) cases. Of the 58.4% (121/207) cases with outcome information, 16.5% (20/121) were confirmed or suspected triploidy cases based on clinical outcome data (3 confirmatory genetic testing, 17 ultrasound data).

Conclusion
Triploidy is a diagnosis typically associated with early pregnancy loss, but it has been described into the 2nd/3rd trimester and in live births. In this study, over 1/3 of POC samples with triploidy were identified after 9 weeks gestation and almost 6% of these losses were in the 2nd or 3rd trimester. NIPT identified 20 cases of known or suspected triploidy with an average GA of 17.1 weeks (range 13-24 weeks).
As the debate over the appropriate number of conditions to screen for during pregnancy and when POC testing is necessary continues, it is clear that triploidy is a relevant condition for assessment in all patients, through either POC testing or NIPT screening. Due to the significant clinical impact of this diagnosis including the risk of maternal GTD, selecting NIPT and POC testing platforms that are able to identify these pregnancies can improve patient care during and post pregnancy.

This study demonstrates that triploidy is a relatively common finding later in gestation, even into the 2nd and 3rd trimester.

O1250 - RELATIONSHIP BETWEEN THREE DIMENSIONAL ULTRASOUND PLACENTAL VOLUME AND FETAL FRACTION IN WOMEN SCREENED WITH NIPT PRELIMINARY RESULTS

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Objective
To test the hypothesis that placental volume measured by three-dimensional (3D) ultrasound correlated with fetal fraction.

Methods
This study was conducted in Maternal Fetal Medicine Unit of Health Sciences University, İzmir Tepecik Training and Research Hospital. This study included the prospective investigation of 272 pregnant women with a moderate risk were examined with 3D ultrasound by maternal fetal medicine specialist and screened with non-invasive prenatal testing (NIPT) by medical genetics specialist. Pregnant women were underwent placental volume measurement using three-dimensional ultrasound and virtual organ computer-aided analysis (VOCAL) software. On the day of the scan, blood samples of the patients were drawn for NIPT in the genetic laboratory. The association between gestational week, placental volume, placental thickness and fetal fraction was analyzed along with relevant clinical variables.

Results
The median (interquartile range) gestational week, fetal fraction, placental thickness and volume were 15 week (5), 8% (4,38%), 2,27(0,80) cm and 94,211 cm3(81,191), respectively. Based on multivariate linear regression analyses, gestational week correlated well with volume measurements (rho:0,672 p<0,01). A modest association was found between placental thickness related to gestational week (rho:0,399 p<0,01). Fetal fraction was not showed an association with gestational week, placental thickness and volume.

Conclusion
In our study we did not find an association between fetal fraction and placental volumes measured by 3-dimensional sonography. We think that placental apoptosis rather than an increased placental volume may be the main source of the amount of fetal sequences released into the maternal circulation.

O1447 - NON INVASIVE PRENATAL STUDY FOR THE DETECTION OF ANEUPLOIDIES THROUGH FREE FETAL DNA IN MATERNAL BLOOD INCIDENCE OF OUR FIRST 100 CASES IN QUITO ECUADOR

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After decades of research, the noninvasive study of prenatal detection of aneuploidy using cell-free DNA in maternal blood is a reality. Different mass sequencing methodologies are already used in clinical practice. There are several methodologies able to identify fetal chromosomal abnormalities by massive sequencing and analysis of cell-free DNA in maternal blood. Massively parallel sequencing, digital analysis and technology selected regions of Parental SupportTM (PS) are accurate and reliable methods for detecting the most common chromosomal aneuploid cells, such as trisomy 21 (T21), trisomy 18 (T18), trisomy 13 (T13), monosomy X0 (Turner syndrome) and Klinefelter syndrome (XXY) by analysis of free fetal DNA in maternal blood.

Our study aims to identify the results of the first 100 cases of fetal DNA with the Panorama test in Quito-Ecuador. There were 10 in 2016, 35 in 2017, 37 in 2018 and 18 until the hour in 2019. The average age was 37.22 years. The gestational age was 12.66 weeks. There were 4 trisomies 21 (confirmed), 1 trisomy 18 (false positive), 6 no result, 2 healthy twins and the rest low risk. Fetal sex: 10 without results, 52 men and 38 women. The average fetal fraction was 9.8% and the average maternal weight: 139.8 kg.

The fetal DNA test is not accessible for most of the population, but the couples who can do it come out very satisfied to obtain accurate and early results. Unfortunately, there are still several incomplete results or that require a new sample and that causes little satisfaction in the mothers. The test is very recommended for the population at risk and hopefully can lower the price in the coming years.

The population still does not request microdeletions, although the basic test includes 22q11y is more common than the Edwards syndrome and is the most common after the syndrome of Down. In our experience we do not endorse any positive microdeletion.

Obstetrics - Aneuploidy and fetal anomalies - second trimester

O1118 - FIBULAR APLASIA TIBIAL CAMPOMELIA AND OLIGOSYNDACTILY WHICH ARE ASSOCIATED WITH TRANSITOR SUPRAVENTRICULAR TACHICARDIA

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Fibular aplasia, tibial campomelia and oligosyndactily (FATCO) (OMIM 246570) is a very rare syndrome which was first described by Hecht and Scott (1981) , Courtens et al. (2005), reporting a further case. 14 cases have been reported worldwide (our case is not included). All cases with FATCO showed fibular aplasia, shortening and anterior bowing of the lower limbs at the distal third of the tibia with overlying soft tissue dimpling and oligosyndactyly. Mental retardation was not observed. Etiology of FATCO syndrome is still unknown nowadays. We represent 20 week male fetus with right sided fibular aplasia, tibial campomelia and oligosindactily. Femur, humerus, radius and ulna without alteration. In addition transitor supraventricular tachycardia (242 bpm) is noted. The heart anatomically was normal. Unfortunately it was impossible to observe the neonate postnatal, the family made decision of termination.

O1284 - A CASE OF FETUS WITH WALKER WARBURG SYNDROME

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Walker-Warburg Syndrome (WWS) is a rare form of autosomal recessive congenital muscle dystrophy associated with brain and eye abnormalities. A survey in North-East Italy is known to have an incidence of 1.2 per 100,000 live births. Lysencephaly, hydrocephalus, pontocerebellar hypoplasia, microophthalmia, retinal dysplasia, cataract and genital anomalies are the most common accompanying malformations.

In this article, we wanted to present a case of WWS diagnosed in prenatal period.

Case

A 26-year-old patient with a 16-week-6-week pregnancy (G2P1) according to her last menstrual period was referred to us for hydrocephalus. Ultrasonography revealed hydrocephalus, nasal bone hypoplasia, alobar holoprosencephaly, single umbilical artery, echogenic bowel compatible with 17 weeks and 4 days. Amniocentesis was performed for chromosomal sampling with a preliminary diagnosis of WWS. The fetal MRI result for investigation was reported as ventriculomegaly, cerebellar vermian hypoplasia and hypoplasia of the brain stem and right diaphragmatic hernia. The case was evaluated as WWS. Termination recommended. The family did not accept the termination.

WWS is a rare, genetically heterogeneous disease presenting with congenital muscular dystrophy, type II lysencephaly, hydrocephalus, cerebellar malformations and eye abnormalities. Fukuyama type Congenital Muscular Dystrophy (FKMD) and Muscle-Eye-Brain (MEB) disease are the syndromes that should be considered in differential diagnosis. Clinical findings are more severe in the WWS than in the FKMD, and patients are lost in the early period. Septum pellisidum, corpus callosum and cerebellar vermis agenesis are more common in patients with WWS. In addition, the clinical course was not as severe as in the WWS in MEB patients, and in the molecular studies, the MEB disease gene was localized to 1p32-34. Gene mutation studies have shown mutations in protein O-mannosyltransferase 1 and 2 (POMT 1 and POMT 2) for WWS, Fukutin-related protein (FKRP) for Fukuyama, and POMGnT1 protein gene for MEB.
The risk of recurrence in WWS with autosomal recessive inheritance is 25% and only central nervous system malformations can be detected by prenatal ultrasound. In suspected cases, further evaluation by fetal MRI should be done and genetic counseling should be given to the family.

O1471 - A DIZYGOTIC TWIN GESTATION DISCORDANT FOR VACTERL ASSOCIATION A CASE REPORT AND LITERATURE REVIEW FOCUSING ON PRENATAL DIAGNOSIS

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The incidence of congenital anomalies in a twin gestation is as high as 6%. Esophageal atresia (EA) is a rare congenital malformation occurring in 2.37 per 10 000 live births and carries a high morbidity.
The prenatal diagnosis of EA without TEF can be difficult to make, but is suspected on ultrasound (US) with a small/absent fetal stomach bubble and polyhydramnios. A magnetic resonance image (MRI) is beneficial to strengthen the diagnosis. Recently biochemistry of the amniotic fluid (AF) has been used: gamma-glutamyl transpeptidase and alfa fetal protein are elevated in cases of EA.

With a prenatal diagnosis of EA, an intentional search for associated defects should be made since 50% of cases have other congenital anomalies and syndromic associations. VACTERL association is the non-random association of multiple congenital anomalies. The diagnosis is made with at least three of the following: Vertebral defects, Anal atresia, Cardiac defects, Trachea-esophageal fistula and/or Esophageal atresia, Renal anomalies, and Limb abnormalities. There is no definite etiology for this association and occurs sporadically suggesting environmental causative factors. A genetic component is an emerging area of interest in its etiology: primary and secondary mitochondrial dysfunctions.
Overlaps between VACTERL association and mitochondrial disease exist: involvement of multiple organs, high variability of disease expression and multiple modes of inheritance. Teratogens (gestational diabetes, maternal smoking, alcohol and lead exposure) are associated to VACTERL and are known to impair mitochondrial function, suggesting that early prenatal exposure induce mitochondrial dysfunction.
VACTERL association has a frequency of 1-9/100,000. Mortality is an estimated 28%. Survivors undergo numerous surgeries throughout life, therefore prenatal diagnosis is important because prognosis and early neonatal management depend on the severity of the malformations observed. When two of the main VACTERL components are detected during prenatal ultrasound examination, a VACTERL association should be suspected, and pre-and post-natal screening should be performed to look for additional malformations.
A 34-year-old primigravida (G1P0) with a 31.4 week dizygotic twin gestation, one twin with intrauterine growth restriction (IUGR) and the other twin with a prenatal ultrasound reporting absent gastric bubble, polyhydramnios and bilateral pelvicalyceal dilation, arrives at the obstetrical unit with preterm labor. Her medical history is non significant, receiving proper prenatal care with intake of prenatal vitamins and fetal lung maturation. Her pregnancy was interrupted via cesarean section, obtaining twin A without significant alterations and twin B with impairment of passage of orogastric tube placement during immediate neonatal resuscitation. The anomalous twin (B) was further examined and found to have multiple anomalies: butterfly vertebra in T8, VSD and PDA, pelvicalyceal dilation in left kidney, and EA type 1, integrating VACTERL association. The newborn underwent surgical correction for the esophageal atresia with care in the NICU and was discharged after approximately 60 days. Prenatal diagnosis of anomalies in twin pregnancies is important in order to counsel the parents. There should be an intentional screening for VACTERL association when presented with EA (absent/small gastric bubble + polyhydramnios), with aid in the diagnosis using MRI and AF biochemistry.

O1487 - EVALUATION OF INTRACRANIAL TRANSLUCENCY DURING 11 13 WEEK'S SCAN AND ITS RELATIONSHIP WITH POSTERIOR FOSSA STRUCTURES IN DIFFERENT TYPES OF CHROMOSOMOPATHIES

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Objective
The aim of the study was to categorize intracranial translucency findings in prenatally diagnosed chromosomal abnormalities, and to differentiate its distribution among them.

Methods
In this study which was planned as retrospective descriptive case series, first-trimester ultrasound data sets of the fetal brain are obtained from 53 fetuses with abnormal chromosomes (study group), and 135 fetuses with normal chromosomes (control group) in singleton pregnancies. We compared the study group with the control group, after matching them for clinical and sociodemographic parameters, for the positive and negative likelihood ratios, sensitivity, specificity, positive and negative predictive values and diagnostic odds for the normal visualization of the posterior fossa and the measure of the IT.

Results
135 fetuses were ranged in normal (71,8%), and 53 fetuses were ranged in the study group (28,2%). IT was visualized in all chromosomally normal fetuses (100%) and inability to visualize the IT was 23 of 53 in chromosomally abnormal fetuses (43,4%). In fetuses whose IT could be visualized, the mean IT diameter of the fetuses with normal and chromosomally abnormal were 1,85±0,30 and 1,79±0,43 respectively. There was no statistically significant difference between the two groups (p=0,06).

Inability to visualize the IT was 24% for trisomy 21, 55,6% for trisomy 18, 80% for trisomy 13, 75% for triploidy, 100% for deletion (13) (q22). The odds ratio for presence of chromosome anomaly was 9,3 (95% CI 5,5-15,7) for inability to visualize the IT. Sensitivity, specificity, positive predictive value and negative predictive value of inability to visualize the IT for presence of chromosome anomaly were 43,4%, 100%, 100%, 81,8% respectively. False negativity and positivity were 56,6% and 0%, respectively.

Conclusion
According to our trial inability to visualize the fourth ventricle at posterior fossa during 11-13 weeks scan has a high specificity, positive and negative predictive value for the detection of some chromosome defects, especially trisomy 13. But its sensitivity is quietly low. The chance to be abnormal is at least 5-fold. This kind of inspection could play a role in the early diagnosis of major chromosomal malformations. While normal looking posterior fossa could satisfy against those malformations, abnormal findings can alert the inspector.

Obstetrics - Intrapartum ultrasonography

O1114 - PREDICTION OF BREECH PRESENTATION AT DELIVERY BASED ON THE TRANSITION OF FETAL PRESENTATION IN PRENATAL VISITS

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Objective
In case of persistent breech presentation in term pregnancy, cesarean section is often planned with concern of poor fetal outcome following vaginal delivery. Therefore, prediction of non-cephalic birth in earlier timing during pregnancy is important for the planning of delivery. In Japan, fetal presentation is checked using ultrasonography repetitively in routine prenatal visits. Using the medical record on fetal presentation, this study aimed to clarify the transition of fetal presentation during pregnancy and to develop a novel approach to speculate the final presentation.

Methods
This study was conducted under the approval of ethics committee in the University of Tokyo. The data on fetal presentation later than 24 weeks of gestation (WG) until delivery was collected retrospectively by reviewing perinatal records of 1923 women who undertook perinatal management in our hospital from 2015 to 2016. Among them, 1173 women were primiparous and 750 multiparous. The transition of fetal presentation during the period after 24 WG was analyzed distinctively between primiparous and multiparous women. The approaches to predict non-cephalic birth based on the repetitive checking of fetal presentation were explored.

Results
The incidence of non-cephalic birth was significantly higher in the primiparous (4.52%) than that in the multiparous (2.67%, $p<0.05$). Regardless of parity, the frequency of non-cephalic presentation was reduced rapidly after 30 WG, whereas the rate of non-cephalic presentation shift around 30% before 30WG. Among the women showing non-cephalic presentation at prenatal visit, the chance of spontaneous cephalic conversion until birth was higher in the multiparous than the primiparous. This difference was especially remarkable later than 34 WG and was statistically significant at 35 WG (32.0% in primiparous and 60.9% in multiparous, $p=0.038$). Among the women in whom cephalic presentation was detected at least once during 30 to 34 WG, the rate of non-cephalic birth was quite low (1.62% in primiparous and 0.74% in multiparous).
On the other hand, among the women in whom cephalic presentation was not observed during 30 to 34 WG, rate of non-cephalic presentation at delivery was significantly high (50% in primiparous and 36% in multiparous).

Conclusion
The transition of fetal presentation 30 WG and later is especially associated with the final presentation at birth. Early planning for mode of delivery should be considered when non-cephalic presentation persists after 30 WG.

O1233 - INTRAPARTUM MEASUREMENT OF UTERINE SCAR THICKNESS DURING VAGINAL BIRTH AFTER CAESAREAN SECTIO

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Objective
In order to predict uterine rupture during trial of labour after caesarean section (TOLAC) we considered scar thickness measurement in active labour. Also, we tried to correlate scar thickness with successful vaginal delivery after caesarean section (VBAC). In Filantropia Clinical Hospital from Bucharest Romania we offer TOLAC to all women with previous caesarean section evaluated as "ideal" at 38 weeks of gestation.

Methods
We used transabdominal serial ultrasonography to measure uterine scar with full bladder in labour. As inclusion criteria we considered pregnant women with only one caesarean section done minimum 2 years before, with current singleton pregnancy at term (more than 38 weeks of gestation) in cephalic presentation, estimated fetal weight less 4000g, in spontaneous labour with no other associated pathology. Scar was measured at admission (before labour or during latent phase), at 4-6cm dilatation and at fully dilatation and descent.

Results
96 patients met the inclusion criteria. 71 patients had a successful VBAC. Scar was measured systematically at all patients. There was 1 case of uterine rupture and 8 cases of scar dehiscence during caesarean section. In all these situations scar thickness at fully dilatation was less than 1mm. In all successful VBAC, scar thickness at fully dilatation was 1.5mm or more.

Conclusion
Even though recent studies failed to correlate uterine scar thickness before labour with prediction of uterine rupture, ultrasound made in labour and especially at fully dilatation could be a prediction factor for unfavourable prognosis and should be considered in current management of TOLAC. There were no correlations between uterine scar thickness and successful VBAC.

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O1318 - A NEW ULTRASOUND PREDICTION MODEL FOR PROBABILITY OF VAGINAL DELIVERY IN INDUCTION OF LABOUR

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Objective
Our aim was (1) to evaluate a pre-induction ultrasound score for prediction of successful induction of labour by attaining active phase of labour and vaginal birth and compare it with the Bishop score in term nulliparous women, and (2) to formulate a prediction model to calculate probability of vaginal delivery for clinical use.

Methods
96 nulliparous women between 36-41 weeks gestation were recruited. All subjects fulfilled the inclusion criteria of a live singleton pregnancy, vertex presentation, intact amniotic membrane, in the absence of active labour with no contraindication to vaginal delivery. The patients were assessed by our ultrasound score comprising of 3 cervical and 2 fetal head parameters. These parameters were fetal head position, fetal head symphysis pubis distance relation, cervical length, funneling and posterior cervical angle. Each parameter was scored from 0-2, with a maximum score of 10.
A printout of each ultrasound study was produced, and measurements were performed using a scale and a protractor. The final ultrasound score was calculated by using the below pelvic ultrasound scoring system.

Table 1 Parameters of pelvic ultrasound score
Score 0 1 2
Cervical length ≥3.5 CM 2.1-3.4 ≤2
Funneling Absent – Present
Posterior cervical angle ≤900 91-109 ≥110
Fetal head position OP OT OA
Fetal head symphysis distance relation Measurable Touching Not Measurable

A second obstetrician blinded to the sonographic findings assessed the modified Bishop score and recorded the findings. We calculated sensitivity, specificity, FPR, PPV, NPV and accuracy were calculated for both events, achieving active phase of labour and vaginal delivery. SPSS 20 was used for ROC curves plots and calculation of area under curve. Binary Logistic Regression model was prepared and probability of vaginal delivery for various scores was calculated.

Results
Out of 91, 61(67%) achieved active phase of labour and 54(59%) had vaginal delivery. Our pelvic ultrasound score showed better sensitivity and specificity for both achieving an active phase of labour and vaginal delivery in comparison to the Bishop score. At a cut off of ≥ 5, the ultrasound score showed sensitivity of 79.3 %, specificity of 75.8 % for achieving vaginal delivery. Whereas, the Bishop score showed sensitivity of 66.7 % and specificity of 44.2 % respectively. A binary logistic regression model predicted 78.0% of the events correctly. Other consultants of hospital not involved in the study, also utilised our model and found it easily reproducible in successful prediction of probability of mode of delivery.

Conclusion

Our study shows that "Garg Ultrasound Score" can predict success of induction of labour. This proposed pelvic ultrasound score, if validated in larger multicentre studies, could help clinicians provide evidence-based counselling for predicting probability of vaginal delivery. This in turn, may allow women make a more informed decision before undergoing induction of labour.

O1332 - LAPAROSCOPIC SURGERY FOR ADNEXAL MASSES IN PREGNANCY

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Objective
To assess clinical charecterististics and maternal-fetal outcomes of patients who were laparoscopically treated for adnexal mass or torsion with acute abdominal pain during pregnancy.

Methods
Medical records of 12 pregnant women with adnexial mass or torsion who were laparoscopically treated during pregnancy at Baskent University Obstetrics and Gynecology Department between 2011 to 2019 were screened. Demographic features, presenting complaints, operation time, estimated blood loss, postoperative hospital stay, physical examination, ultrasonographic findings, histopathologic findings, route of deliveries and complications were recorded.

Results
Mean age of patients included in the study was 29 (± 4.04) years, mean gestational age at surgery was 11.4 (± 5.7) weeks and birth was 38 (± 2.9) weeks. Mean operation time was 77 (± 32.6) minutes. Mean length of hospital stay was 1.2 days. Median apgar score was 8 at one minute and 9 at five minutes. Mean baby weight at birth was 2377gr. Pelvic pain was the main complaint. All patients underwent low pressure laparoscopic surgery. Mean size of adnexial mass was 6.3 (± 5.5) cm. Among 12 patients, detorsion was performed in 6 patients and cystectomy was performed in 4 patients. Salpingoophorectomy was performed in 1 patients and cyst aspiration was performed in 5 patients. In one patient pathologic report was malignant. No operative complication was observed.

Conclusion
Adnexal torsion and adnexal masses should be kept in mind in a pregnant who presents with acute abdominal pain. Early diagnosis and treatment are important for organ preserving surgery.

Obstetrics - Multiple pregnancy

O1031 - AN ANALYSIS OF THE HIGH CAESAREAN SECTION RATES WITH ROBSON CLASSIFICATION IN TURKEY ACCORDING TO SECTORS HOW TO REDUCE

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Objective
Despite the attempts to reduce caesarean sections (CS), CS rates continue to increase.

Methods
We conducted a causal analysis from the electronic records of 887,683 women sent from public: 554,916 /630 688 (87.98%), private: 297,724/ 565 441(52.65%) and university 35, 043/70.171 (49.93%) hospitals by the implementation of the Robson's mutually exclusive 10-group classification.

Results:
• Robson Group 1 constituted 22.0 % of the women and contributed CS rates with a ratio of 7.4%. Overall CS rate for this group was 32% (62 402/195 211). Rates in public, private, university hospitals were 19.4%, 52.6%, 47.0%, respectively.
• Robson Group 2 constituted 10.3 % of the women and contributed CS rates with a ratio of 7.4%. Overall CS rate for Group 2 was 59.6 % (54 450/91 322). Rates in public, private, university hospitals were 46.3%, 74.4%, 71.6%, respectively.
• Robson Group 3 constituted 22.0 % of the women and contributed CS rates with a ratio of 2.7%. Overall CS rate for Group 3 was 11.2% (25 032/224 300) and rates in public, private, university hospitals were 6.9%, 27.9%, 37.3%, respectively,
• Robson Group 4 constituted 7.6 % of the women and contributed CS rates with a ratio of 2.8%. Overall CS rate for Group 4 was 36.8 % (24 720/67 088) and rates in public, private, university hospitals were 26.3%, 56.6%, 60.0%, respectively.
• Robson Group 5 constituted 25.2 % of the women and contributed CS rates with a ratio of 24.4%. Overall CS rate for Group 4 was 97.0 % (217 314/224 118). Rates in public, private, university hospitals were 97.3%, 96.6%, 95.8%, respectively.
• Robson Group 6 constituted 2.3 % of the women and contributed CS rates with a ratio of 2.0 %. Overall CS rate for Group 4 was 86.0 % (17 510/20 352). Rates in public, private, university hospitals were 78.4%, 91.2%, 95.8%, respectively.
• Robson Group 7 and 8 constituted 1.7% and 1.3% of the women, respectively and contributed CS rates with a ratio of 1.3% and 1.2%.Overall CS rate for Group 7 was 88.0% (13 230/15 037)) and rates in public, private, university hospitals were 86.0%, 80.5%, 87.4%, respectively.; whereas overall CS rate for Group 8 was 97.0% (10 534/11 473) . and rates in public, private, university hospitals were 85.8%, 97.6%, 95.3%, respectively.
• Robson Group 9 constituted 1.3% of the women and contributed CS rates with a ratio of 1.3%. Overall CS rate for Group 9 was 90.4 % (10 288/11 380). Rates in public, private, university hospitals were 89.1%, 91.1%, 86.4%, respectively.
• Robson Group 10 constituted 3.2% of the women and contributed CS rates with a ratio of 2.2%.

Overall CS rate for Group 10 was 70.5% (19 256/27 332) . Rates in public, private, university hospitals were 60.0%, 82.0%, 71.2%, respectively.

Conclusion

The highest percentage of Group 5 is the main obstacle in reducing CS rates. Consensus on the exact and reliable data collection, case selection for induction and pre-labour CS, improvement of the skills in obstetric practices are necessary.

O1047 - CAUSAL ANALYSIS OF MATERNAL DEATHS IN MULTIPLE GESTATIONS

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Objective
Although prevention of iatrogenic multiple pregnancies due to an increase in both perinatal and maternal morbidity/ mortality has been regulated by legislation, a nationwide consensus on how best to facilitate the design of clinical practices to eliminate avoidable multiple pregnancy-related maternal mortality remains challenging.

Methods
We conducted a causal analysis from the electronic records of 1410 maternal deaths in multiple pregnancies through the National Maternal Mortality Registry System between January 2012 and March 2019. The age, gestational age, number of antenatal visits, pregnancy outcome, delivery route, time of death, cause of death, neonatal outcomes and any existing delay (phase 1, 2, or 3) and preventability of maternal death according to the results of the Maternal Mortality Review Reimbursement Committee were evaluated.

Results
Among 1410 maternal deaths, there were 46 twin and two triplet pregnancies constituting 3.5% of the total maternal deaths in the era. Among these, 56.3% (n=27) and 39.7% (n=19) were categorised as direct and indirect maternal deaths, respectively. One case was an accidental death and in one woman the cause of death was not evaluable 11 out of 48 women had conceived through Assisted Reproduction Technology (ART), including two oocyte donations, eight in vitro fertilization procedures and one intrauterine insemination. 11(22.9%) women died before 22 completed weeks of gestation; 5(10.4%) women died between 221/7 and 28 weeks, and 26(54.2%) were between 281/7-366/7and 5 (10.4%) died after 37 weeks or more. Hypertensive disorders (n=10), cardiovascular disease (n=8), pulmonary thromboembolism (n=7) and sepsis due to chorioamnionitis(n=6) were the leading causes of deaths. 6 out of 11 maternal deaths in ART pregnancies were categorized as preventable whereas there were 8 phase 3 delays in 36 spontaneously conceived pregnancies. Among the preventable causes of deaths, phase 3 delays were related with multiple embryo transfer to high risk women, absence of systemic evaluation, hence high risk categorization and informed consent including the risk of death before ART, management of obstetric hemorrhage, delay in the diagnosis and management of cardiovascular disease, failure to recognize the signs of infection and delay in the diagnosis of the aggravation of the systemic diseases, failure in the administration of adjusted thromboprophylaxis, acute hemolytic transfusion reaction, hospital based drug contamination and the delay in the appropriate management of antenatal bleeding.

Conclusion
It remains important to emphasize to all women undergoing ART, particularly those with systemic diseases and older than 35 years, the value of a single embryo transfer in an effort to lower the risk of multiple gestation even after failed attempts and careful assessment for risk factors as 54.5% of the maternal deaths conceived through ART are considered to be preventable. The accumulation of specified homogenous data would facilitate the design of interventions to eliminate avoidable multiple-pregnancy related maternal mortality.

O1050 - PERIPARTUM DILATED CARDIOMYOPATHY. CASE SERIES AND LITERATURE REVIEW

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We present three cases: a) a primiparous woman who developed preeclampsia at 32 weeks and due to preeclampsia she developed a dilated cardiomyopathy 2 days after delivery, b)a primiparous with triplets (IVF) and c) a P2, with history of mitral valve surgery who developed dilated cardiomyopathy from the second trimester. The firs case was a 28 year old, fit and well, non-smoker, but her mother developed also dilated cardiomyopathy towards the end of her pregnancy. She attended the hospital at 28 weeks with significant swelling of both feet, very breathless, with chest pain. She had the investigations for PE which were negative. She developed preeclampsia at 32 weeks and she delivered by caesarean section at 36 weeks. She was on medications during the last 4 weeks of her pregnancy. She had an ECHO of the heart which shows that the left ventricle was slightly dilated and the ejection fraction was <45%. She was on clean from 32weeks till 6 weeks postnatally. She had also an MRI of the heart which was normal. She had a repeated ECHO of the heart 8 weeks later which was normal. The second case, she had significant symptoms of cardiomyopathy from the first trimester. She was on clean from 12 weeks and she had a cardiac ECHO and MRI at 16 weeks which showed that the ejection fraction of left ventricle was <35%. She was referred to a tertiary centre and was advised to reduce the number of triples with the use of KCL. The last case, she developed preeclampsia at 26 weeks and she was on medications for it. She also developed severe dilated cardiomyopathy (her ECHO of the heart was <35%) and she was very breathless. We referred also this case to a tertiary centre for further management

Peripartum dilated cardiomyopathy is a rare condition and occurs between late pregnancy to first three months of postpartum period. Some of the known risk factors in pregnancy is preeclampsia, which can predispose to cardiomyopathy and multiple pregnancy. The diagnosis is elusive and mainly based on the ultrasonographic measurement of the ejection fraction of the left ventricle. In order to diagnose dilated cardiomyopathy the ejection fraction of the left ventricle should be <45%. The symptoms dilated cardiomyopathy are: a) breathlessness, b) swollen ankles and feet and abdomen, c) fatigue, palpitations, d) chest pain, e) mitral regurgitation, f) different types of arrhythmias. The complications of dilated cardiomyopathy if left untreated are: a) heart failure, b) heart block, c) sudden death. The diagnosis is based on: a) history, b) clinical examination, c) ECG, d) holter, e) MRI, f) electrophysiology studies, g) coronary angiography, h) myocardial perfusion scan, i) trans-oesophageal echocardiogram. Dilated cardiomyopathy is treated with medication, like diuretic, anticoagulants to reduce the thrombosis risk, b) devices, like pacemaker, c) life style changes, healthy eating, minimise salt, causation of smoking, reduction of caffeine, d) surgery, like left ventricular assisted devises or heart transplant.

Peripartum dilated cardiomyopathy has an increased mortality rate of 25-50% and these cases, need multidisciplinary team management and if severe tertiary centre.

O1169 - PARETO DIAGRAM FOR MATERNAL DEATHS CONCEIVED WITH ASSISTED REPRODUCTIVE TECHNOLOGY PROCEDURES

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Objective

The scale-up of fertility clinics providing Assisted Reproductive Technology (ART) procedures to overcome infertility and the reach of oocyte donation approaches abroad although prohibited in Turkey may be associated with maternal deaths. Pareto diagram, being useful for decision-making that statistically separates a limited number of input factors as having the greatest impact on an outcome, either desirable or undesirable.

Methods

We conducted a causal analysis from the electronic records of 1410 maternal deaths conceived by ART through the National Maternal Mortality Registry System by implementing a Pareto diagram, based on the concept that 80% of the problems are traced to 20% of the causes The age, gestational age, number of antenatal visits, pregnancy outcome, delivery route, time of death, cause of death, neonatal outcomes and any existing delay and preventability of maternal death according to the results of the Maternal Mortality Review Reimbursement Committee were evaluated.

Results

Among 1410 maternal deaths, there were 37 ART pregnancies constituting 2.6% of the total. 13 women had multiple pregnancies, including 11 twins and two triplets. Six of the women with a mean age of 47.8 (range 39 to 58). had conceived through oocyte donation. 15 women died in the antenatal period before 22 weeks of gestation. Four maternal deaths occurred after second-trimester termination of pregnancy. There were 6 maternal deaths between 221/7 and 366/7 weeks of gestation. Two maternal deaths occurred after 37 weeks and 10 in the puerperium. Cardiovascular disease (n=10), sepsis due to chorioamnionitis (n=5), infection (n=4), pre-eclampsia/eclampsia/HELLP syndrome /acute fatty liver of pregnancy (n=4), obstetric hemorrhage(n=3), pulmonary thromboembolism (n=3), brain disease (n=3), epilepsy (n=2), ruptured heterotopic pregnancy(n=1), tracheal stent dislocation (n=1), breast carcinoma (n=1) were the causes of deaths. 21 of the maternal deaths in ART pregnancies were categorized as preventable whereas there were 9 phase 1 and 15 phase 3 delays. Phase 3 delays were related with the transfer of more than one embryo to women with cardiac disease, delay in the diagnosis and management of the aggravating cardiovascular disease, failure to recognize the signs of infection and delay in the diagnosis/ aggravation of the systemic diseases, failure in the administration of adjusted thromboprophylaxis, delay in the diagnosis and appropriate management of obstetric hemorrhage and delay in the diagnosis of uterine rupture and tracheal stent dislocation.

Conclusion

The contribution of ART to rates of multiple gestations and poor maternal and perinatal outcomes remained substantial, emphasizing the value of a single embryo transfer. The presence of high-risk factors and the possibility of the aggravation of the condition due to the changes of pregnancy should necessitate reconsideration with a perinatologist and related specialists before applying ART as 56.8% of the maternal deaths were considered to be preventable.

O1207 - COLLECTIVE UTILITY OF NIPT ZYGOSITY DETERMINATION AND CHORIONICITY ASSIGNMENT

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Objective
Chorionicity is a primary factor that impacts prognosis for twin pregnancies, and chorionicity assignment early in pregnancy can improve perinatal outcomes. The objective of this study was to compare chorionicity assignment with zygosity determination by a single nucleotide polymorphism (SNP)-based NIPT.

Methods
Twin samples collected between Oct 2017-May 2018 were analyzed by SNP-based NIPT for zygosity (dizygous [DZ] or monozygous [MZ]). Data collected included provider-reported chorionicity (i.e., monochorionic MC, dichorionic DC, "don't know", or unspecified). Provider-assigned chorionicity was correlated with SNP-based NIPT zygosity determination.

Results
A total of 4,885 twins received SNP-based NIPT zygosity determination. Chorionicity was recorded for 3,949 (80.8%) twins: MC (n=553,11.3%), DC (n=2,330,47.7%), and "don't know" (n=1,066, 21.8%). In 41.0% of twins, chorionicity was either "don't know" or unspecified; of those, 30.7% were identified as MZ. Of twins identified as MC, 3.4% were determined as DZ; 12.9% of DC twins were MZ.

Conclusion
This is the first large cohort of twins for which SNP-based NIPT zygosity was correlated with provider-assigned chorionicity. Almost half of twins under the "don't know"/unspecified chorionicity were identified as MZ, for whom early, accurate chorionicity assignment is critical to assess adverse risk outcomes. The 3.4% discordance between "MC" cases identified as DZ, who are at extremely low risk for complications can be considered for decreased surveillance. Conversely, DC twins identified as MZ may benefit from reevaluated chorionicity given the severity of complications associated with MC twins. These data suggest that the use of NIPT-based zygosity in conjunction with ultrasound has significant utility for guiding patient care in twin pregnancies.

O1480 - VAGINAL DELIVERY OF TRIPLETS ACCEPTANCE OF PATIENTS

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Objective

Patients with triplets encounter many problems before and during pregnancy. Patients are often reluctant to vaginal delivery in these cases.

Methods

It is a retrospective study in a University Hospital from 2008 to 2016. Patients with a triplets pregnancy above 23 weeks were included, with an obstetrical outcome was considered acceptable by the obstetrician. We excluded cases with a maternal medical problems, history of cesarean or myomectomy, and placenta previa. We considered age, IVF history, preterm labor, maternal wish for way of delivery, preterm labor, trial of labor and final outcome for delivery.

Results

Eleven patients were included in this study. Mean age is 28 years [22-39]. Prior IVF is reported in 7/11 patients (63%) and ovarian stimulation by oral or injection in 4/11 (37%) with no spontaneous cases of triplets. No major obstetrical problem was reported except preterm labor which occurred in all patients, treated with a mean latency period of 14 days [1 -74]. Two patients had cholestasis. In all cases T1 presentation is cephalic. After discussing benefits and risks of vaginal birth, couples were asked to think about it and give their answer when ready. Only 3/11 (27%) gave their approval. The remaining explained it by 'not wanting the risk' and 5 of them said that they took the advice of the family for that. To be noted that the group who said no were all IVF patients. Among the three patients that accepted vaginal delivery, one patient changed her mind and asked for a cesarean upon admission. The second patient had a spontaneous labor at 35 weeks but finally had a cesarean section at 5 cm dilation because of an abnormal fetal heart in one of the babies who was small for gestational age. The third patient went into labor at 36 weeks and delivered smoothly with external version on T2 and T3. Babies had a normal outcome.

Conclusion

Vaginal delivery is still feared by pregnant women with triplets. Despite an advanced hospital setting and detailed explanations most of them choose cesarean section. IVF history and family advice push toward this option.

Obstetrics - Fetal interventions

O1158 - MINIMALLY INVASIVE TRANSVAGINAL APPROACH TO CERVICAL PREGNANCY BY INTRACAVITARY METHOTREXATE INJECTION

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Cervical pregnancy is a rare type of ectopic pregnancy which is characterized by the implantation of gestational tissue into the endocervical canal under the internal os. It is associated with poor prognosis, high morbidity and mortality rates due to the risk of serious bleeding. Although methotrexate is the first choice in the treatment, there is still no consensus on the most appropriate approach. In this case report, we aimed to report the results of transcervical intracavitary methotrexate injection in 2 cases of cervical pregnancy

Case 1
A 37-year-old G2P0 women was admitted to the hospital, because of menstrual delay and mild hemorrhage. The vaginal part of the cervix was bluish and thickened. The transvaginal ultrasonography showed crown-rump length 3mm (compatible with 5 weeks, 6 days) and fetal heart beat positive cervical pregnancy. Her previous pregnancy was terminated by currettage. 50 mg/m2 methotrexate was injected into the cavity after ultrasound-guided aspiration of sac content by transvaginal route. Following this treatment, massive bleeding did not occur. Immediately after treatment ultrasonography showed an irregular sac located in the cervix and normal cervix was observed at 3 months after treatment.

Case 2
A 38-year-old G3P1Y1 patient was admitted to our clinic with the complaint of bleeding. Ultrasound showed crown-rump length 2.4 mm (compatible with 5 weeks and 5 days), fetal heart beat positive pregnancy in the cervical canal. 50 mg/m2 methotrexate was injected into the cavity after aspiration of ultrasound-guided sac content by transvaginal route. No massive bleeding was observed after the tratment. Immediately after treatment ultrasonography showed an irregular sac located in the cervix and almost resorptive sac is observed after 1 month the treatment.
Minimally invasive transvaginal approach to cervical pregnancy by transcervical intracavitary methotrexate injection is safe and allows to preserve the uterus and fertility in the women of reproductive age.

O1193 - INTRAUTERINE TRANSFUSIONS IN RHESUS HEMOLYTIC DISEASE OF THE NEWBORN THE LAST CHANCE FOR MISSED OPPORTUNITIES

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Objectives
Antenatal treatment with intrauterine blood transfusions has reduced perinatal mortality and morbidity related to Rhesus hemolytic disease dramatically. The aim of this study is to evaluate the antenatal management, the demographic and clinical characteristics and postnatal treatment modalities of the newborns who had undergone intrauterine transfusion (IUT) related to Rhesus hemolytic disease (RhHD).

Methods
The newborn infants with Rhesus hemolytic disease who were treated with IUT at least once in our center between January 2007-December 2016 were evaluated retrospectively. We recorded the clinical features of the patients, treatment requirements and comorbidities. Prenatal, natal and postnatal data were acquired from the patient records and the digital database of our hospital. For the postnatal management of the newborns American Academy of Pediatrics Subcommittee on Hyperbilirubinemia recommendations were accepted.

Results
The study included 82 newborns, with 268 intrauterine transfusion procedures. A single IUT was needed in sixteen percent (n=13) of the patients whereas 57 % (n=47) had received between 2-4 and 27 % (n=22) 5 or more IUTs. The first IUT was performed at a mean gestational age of 25.7±3.8 weeks and the last IUT was performed at 33.4±1 weeks. The first pretransfusion hemoglobin level was 5.5±2.8 g/dL (1.8-12.6). Bradycardia (n=9,11.4%), premature induction of labor (n=6, 7.6 %) and premature rupture of membranes (n=1,1.3%) were IUT related antenatal complications. The mean duration between the last IUT procedure and birth was 18.9±17.5 days. Preterm birth rate was 83% (n=68). Seventeen newborns (21%) were hydropic at birth. Postnatally, 10 % (n=8) of the babies did not require any treatment, 57 % (n=43) received phototherapy only and 33 % (27) of them needed exchange transfusion either once (n=16, 62 %) or more than one (n=11, 38 %). Top up blood transfusions were needed in 77 % (n=63) of the patients. Postnatal mortality rate was 8.5 % (n=7), all patients were hydropic and 4 of them died in first 48 hours.

Conclusion
Intrauterine transfusions reduce mortality and morbidity related to Rhesus hemolytic disease a result of appropriate and timely performed intrauterine transfusion procedures together with the development of antenatal and postnatal care facilities. Early detection of fetal anemia before the development of heart failure and hydrops fetalis, can improve clinical outcome dramatically.

O1235 - FUNCTIONAL STUDY OF THE FETAL HEART IN PATIENTS WITH CHOLESTASIS (PRCOL)

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Introduction
Intrahepatic cholestasis is the most frequent liver disease during pregnancy, it has a worldwide prevalence of 0.7-1% of pregnancies, being greater in Chile and Scandinavian countries (2-5%), and very rare in oriental and black races. It is associated with an increase in adverse perinatal outcomes such as preterm delivery, fetal distress and fetal death. The latter is still without precise cause, however it is suspected to be due to heart failure.

Objectives:
Primary objective: To study the difference in fetal heart function in patients with cholestasis and patients without cholestasis by determining the PR interval of the fetal heart.

Secondary objectives: To study if there are changes in the TEI Index in patients affected with cholestasis and patients without the disease. To study the role of Ursodeoxycolic Acid in the treatment of cholestasis according to clinical, laboratory and echocardiographic parameters

Methods:
PRCOL Trial refers to a multicenter longitudinal cohort study, carried out in 4 hospitals in Chile. Recruitment of patients began in August 2018. The patients were selected according to clinical and laboratory criteria, other associated pathologies were excluded, both maternal and fetal. Follow-up was done with laboratory and echocardiographic parameters and the time of delivery was scheduled according to severity (36 or 38 weeks) based on levels of bile acids (less than or greater than 40 umol / l).

Among the laboratory parameters mentioned in the follow-up are bile acids, total bilirubin, hepatic enzymes and prothrombin.

Regarding the echocardiographic follow-up, PR interval and TEI index parameters were used, performed by single and blinded sonographer in each participating center. Finally, Ursodeoxycholic acid (dose 15 mg / kg daily) was used for treatment and evaluation of clinical and laboratory response in all patients with confirmed cholestasis.

Results
Regarding the preliminary results, of 55 patients affected by the pathology recruited to date, it has been possible to establish that in five patients a PR interval has been confirmed in the PC 95 and in one patient a first-degree atrioventricular block was detected(> 150 msec). Likewise, all the patients who presented alteration of the PR interval were found with bile acids over 40 umol/l. The TEI index has not shown a worsening in patients with cholestasis in any of the groups. And, finally, according to these preliminary results, ursodeoxycholic acid has a favorable effect in terms of the reduction of bili acids, transaminases, bilirubin and PR interval after 2 weeks of onset on average.

Conclusion

In our study, although partial to date, a trend has been seen in the increase of the PR interval with respect to the levels of bile acids in the severe range, although part of the recruitment of affected patients and the beginning of recruitment of control patients were missing. Within the next few months we hope to conclude the recruitment in the different centers and start the comparative statistical analysis, to obtain more solid conclusions.

O1351 - TROMBOPHILIA IN MOTHERS AS A RISK FACTOR OF NEONATAL THROMBOSIS

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Objectives

Neonates are the pediatric population at highest risk for development of thrombosis (VTE), and the incidence of the neonatal thrombosis is increasing.
Our aim to indicate the association between thrombophilia (genetic and acquired) in mothers and neonatal thrombosis

Methods

We observed 26 cases of neonatal thrombosis. In each case, we examined the mother for hereditary and acquired thrombophilia (FV Leiden, Prothrombin gene (G20210A), MTHFR (C677T), PAI-1 polymorphism and circulation of APA (LA, Cardiolipin Antibodies, Beta-2 Glycoprotein 1 Antibodies, Prothrombin Antibodies) and neonates for genetic thrombophilia. As a control we examined 50 pregnant woman with uncomplicated current pregnancy for hereditary and acquired thrombophilia and 50 theirs neonates for hereditary thrombophilia. Results: Neonatal thrombosis of the following localizations was detected: DVT (15), umbilical cord thrombosis (3), renal vein thrombosis (1), Catheter-associated thrombosis (4), ischemic stroke (1), fetal thrombotic vasculopathy (2).

There were no significant associations between prothrombin gene G2021A and Factor V Leiden mutation in two groups. Strongly significantly higher odds for neonatal thrombosis are present in patients with PAI, MTHFR gene mutation (heterozygote and homozygote pattern) and circulation of antiphospholipid antibodies. Higher odds are present for Protein S deficiency.

Table 1. Thrombophilia in mothers (genetic and acquired) and neonates (genetic only)
Conclusions: This case-controlled study demonstrated significantly higher prevalence of genetic and acquired thrombophilia in women and neonates with thrombosis compared with women with normal pregnancies. Furthermore, strongly significantly associations between PAI and MTHFR mutations and neonatal thrombosis are demonstrated. The association between neonatal thrombosis and FV Leiden and Prothrombin gene G20210A mutations are controversial. Our study showed a high prevalence of multigenic (38,5%) and combined thrombophilia (30,8%) in thrombosis group compared with 12% and 6% in the control group.

Fetal thrombotic vasculopathy is a disorder characterized by thrombosis of the fetal vessels and/or vessels of the fetal surface of the placenta leading to vascular obliteration and hypoperfusion. In our study both cases of FTV was associated with combined thrombophilia and septic complication. FTV associated with high incidence of hypoxic-ischemic brain injury and antenatal fetal death or early neonatal death – severe perinatal outcomes.

FTV should be considered as one of the possible causes of renal and other venous thrombosis in newborns.
Thus, pregnant women with genetic or acquired thrombophilia belong to a high-risk group for the neonatal thrombosis. Our study included a small number of patients, to evaluate a more accurate relationship required to perform randomized controlled trials and to determine potential benefits of administration of LMWH in order to provide prophylaxis of neonatal thrombosis in risk groups with genetic and acquired thrombophilia.

All patients with fetal growth restriction and severe fetal hypoxia (including cases of diagnosed maternal thrombophilia) should be excluded and screening of newborns for thrombosis and thrombophilia is recommended.

Obstetrics - Fetal MRI

O1066 - A CASE OF FETAL POTTER SEQUENCE WHO WAS DIFFICULT TO DIAGNOSE THE PRIMARY DISEASE BECAUSE OF DELAY OF FIRST VISIT OF MOTHER

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Not receiving prenatal care is one of the high-risk factors for the pregnant woman and the fetus. We present a 17-year-old primigravid woman whose fetus turned up with a serious congenital abnormality at the initial visit 25 weeks gestation. She had no idea for possibility of pregnancy, and she found herself pregnant by the fetal movement 2 weeks before the initial visit. At the initial visit, a giant fetal intraabdominal cystic mass, bilateral hydronephrosis and oligohydramnios were suspected, and the syst was estimated approximately 800 ml or more by ultrasound. Abdominal circumference of the fetus was difficult to measure and estimated fetal weight could not be calculated. Single umbilical artery made it difficult to establish whether the giant cyst was the fetal bladder or other organ. Although magnetic resonance imaging (MRI) was performed, it was difficult to make a definitive diagnosis. The cyst was punctured and aspirated to reduce the volume of the mass and perform ultrasound and MRI again. We diagnosed persistent cloaca because of the finding that one cavity was made by luminal structures with different wall which are thought bladder, vagina, and uterus. In addition, squamous cells were detected from the content fluid of the cyst. We diagnosed Potter sequence caused by anuria with persistent cloaca. On the other hand, lower urinary tract obstruction (LUTO) was thought as a differential diagnosis, but we couldn't diagnose fetal gender by ultrasound nor MRI prenatally. Despite aspiration of the content fluid, the cystic mass became enlarged day by day. At 28 weeks of gestation, 2274 g of neonate was born. The neonate died 23 minutes after birth because of respiratory failure due to lung hypoplasia. The neonate had male-like external genitalia, but the testes were not palpable. Furthermore, the neonate was diagnosed with atresia of anus. We clinically diagnosed as persistent cloaca with female pseudohermaphroditism or LUTO with atresia of anus. However, it was difficult to confirm genetic gender and the underlying disease of the neonate because the mother and her family disagreed a chromosomal examination and autopsy. In this case, if diagnosed early in pregnancy, we may have been able to make a more accurate diagnosis and provide the fetus or neonate with the more appropriate treatment. We reaffirmed that not having a pregnancy check-up is one of the high-risk factors.

O1083 - EARLY DEVELOPMENT OF HUMAN GANGLIONIC EMINENCES ASSESSED IN VITRO BY USING 7.04 TESLA MICRO MRI

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Objectives
Ganglionic eminences are temporary structures which appear during the 5th week post-fertilization on the floor of telencephalic vesicles and dissapear until the 35th week of gestation. The aim of this descriptive study of morphological research is to depict the ganglionic eminences within the embryonic and early fetal brains by using micro-MRI.

Methods
Six human embryos and fetuses ranging from 21 mm crown-rump length CRL (9 gestational week GW) to 85 mm CRL (14 GW) were examined in vitro by micro-MRI. The investigation was performed with a Bruker BioSpec 70/16USR scanner (Bruker BioSpin MRI GmbH, Ettlingen, Germany) operating at 7.04 Tesla.

Results
We describe the morphological characteristics of the ganglionic eminences at different gestational ages. The acquisition parameters were modified for each subject in order to obtain an increased spatial resolution. The remarkable spatial resolution of 27 μm/voxel allows visualisation of millimetric structures of the developing brain on high quality micro-MR images.

Conclusion
In our study we give the description of the ganglionic eminences within the embryonic and early fetal brains by using micro-MRI, which have not been previously documented in literature. Micro-MRI provides accurate images, which are comparable with the histological slices.

O1187 - EX VIVO ASSESSMENT OF THE FETAL BRAIN A COMPARISON OF 7 TESLA MRI AND STEREO MICROSCOPIC AUTOPSY

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Introduction
Performing classic dissection techniques on small fetuses cerebral tissue is a difficult process to achieve, especially when a certain degree of maceration is involved as it is the case of arrested pregnancies.

Objective
To compare the diagnostic accuracy of post mortem magnetic resonance imaging (pm-MRI)operating at 7 Tesla intensity of the magnetic field with stereo-microscopic autopsy in describing the normal and pathological cerebral structures in the first and second trimesters of pregnancy.

Methods
Thirty-two human fetuses aged between 12 and 19 weeks of gestation were examined using 7 Tesla MRI. A Turbo High Resolution T2 protocol was used accordingly to the weight and crown-rump length of the fetuses. The subjects were selected from spontaneous and therapeutic abortions. A number of ten cerebral structures were systematically described. The images were analysed by a pediatric radiologist and two embryologists. After scanning, all fetuses were submitted to autopsy which was performed by a fetal pathologist, blinded to the imagistic findings.

Results
Using the stereo-microscopic autopsy as gold standard, pm-MRI presented a sensitivity of 100% [CI 95 % 79.41-100] in detecting structural cerebral anomalies for a specificity of 88.24% [CI 95% 63.56-98.54], a positive predictive value of 88.89% [CI 95% 68.52-96.71] and a negative predictive value of 100%. Pm-MRI demonstrated a high accuracy of 93.94% [CI 95% 79.77-99.26] to identify cerebral anomalies, in a group with a malformation frequency of 48.48% [CI 95% 30.80- 66.46].

The Cohen's kappa coefficient of agreement was k=0.879 [95% CI 81-95], highlighting a very good concordance between the two methods, also supported by the McNemar test p=0.1573.

Conclusion
Pm-MRI at 7 Tesla has a great potential in describing the cerebral structural abnormalities in the first and second trimesters of pregnancy, very closed to the gold standard accepted nowadays.

O1242 - RISK OF OBSTETRICAL HYSTERECTOMY IN CASES AT HIGH RISK OF ACCRETA SPECTRUM DISORDERS. PREDICTION BASED ON ULTRASOUND AND MRI FINDINGS

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Objective
The objective of our study is the correlation of 2D/3D ultrasound and MRI findings in cases of patients at high risk of accrete spectrum disorders with obtretric hysterectomy.

Methods
Twenty five cases of previa and increate/precreta placentas were study. For the ultrasonographic examination 2D/3D imaging were used and the data were collected in ISUOG preforma. MRI scans were performed with a 1.5T unit (Gyroscan NT Intera, Philips Healthcare). All patients were instructed to empty their bladder about 15min before entering the scanning room; then, all received orally 500ml of water. A short MRI protocol (< 30min) was designed with respect to the safety of mother and fetus. All MRIs were separately reviewed by two radiologists expert in genitourinary MRI who were aware of patients' age and gestational age but were blinded to any other clinical or histological information.

Results
Most common MRI findings were : placental heterogeneity (any degree) (88%), prominent intraplacental vascularization(61%), lumpy placental borders,(59%) , abnormal flow-void vascular network abutting the uterine serosa or extending to the vesicouterine interface or parametrial fat (52%) , signs of bladder invasion/ elongation (tenting) of the bladder dome (38%), myometrial thinning with or without disruption of the low T2 signal of the outer myometrium (36%) intraplacental dark bands on T2-W images (36%).

Most common ultrasonografic finding were abnormal placenta lacunae (90%), loss of clear zone(88%), bladder wall interruption (35%), myometrial thinning (35%), Focal exophytic mass (65%), subplacental hypervascularity (61%).

Conclusion
Ultrasonographic and MRI findings in pregnancies high risk for placenta accreta spectrum disorders are similar and have the same sensitivity and specificity for prognosis of the surgical outcome. Low cost and real time examination are the advantages of ultrasound whereas MRI gives more information in case of posterior and fundal placenta.

Obstetrics - Fetal Surgery

O1410 - FETAL SURGERY FOR SACROCOCCYGEAL TERATOMA OVERCOMING THE BARRIERS

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Sacrococcygeal teratoma (SCT) is the most common solid tumor in the fetus seen in 1 in 35,000 to 40,000 births.1,2 Ultrasound is the preferred diagnostic modality.3 The American Academy of Pediatrics Surgical Section classifies it according to the extent of the tumor where Type I is predominantly external and Type IV is located in the presacral space and mostly malignant.1 Tumor Volume to Weight Ratio (TFR) >0.12 before 24 weeks is best used to predict poor outcome.4 Other poor prognostic indicators are gestational age of <30 weeks, placentomegaly, hydrops, tumor rupture, tumor size>10 cm, solid tumor, increased vascularity and tumor volume growth rate greater than 150 cm3/week.2 Fetuses >28 weeks exhibiting high-risk signs are delivered and managed. Those less than the age of viability and have signs of hydrops are candidates for fetal surgery.2 Fetal surgery may result in 43% survival as opposed to 33.3% overall perinatal death rate in observed cases.2,5 Aside from a fetal anomaly scan, prenatal counselling is done emphasizing maternal risks of infection, hemorrhage, damage to nearby organs and loss of fertility.6 We present a case of a 34-year old nullipara with a 5-year history of infertility. She conceived naturally followed by an unremarkable prenatal course until a small solid sacrococcygeal teratoma type I was seen on routine ultrasound at 20 weeks. Subsequent congenital anomaly scan showed mild cardiomegaly, small pericardial effusion, rapid tumor growth of about 400 cm3 in 2 weeks (with TFR = 1) and placenta previa totalis. Progression of hydrops and continued rapid growth was seen on admission. The healthcare team presented the option of fetal surgery. Problems encountered were lack of prior experience in fetal surgery, lack of recommended instrument, ethical issues (maternal versus fetal safety) and the advanced stage of hydrops. The family and the team arrived at a decision to do the fetal surgery.6 Unfortunately, complications were encountered resulting in the delivery of the previable fetus. Lessons learned and recommendations shall be discussed.

Neonatology – Chorioamnionitis

O1430 - A SCOPING REVIEW ON THE NEUROPROTECTIVE EFFICACY OF ANTENATAL MAGNESIUM SULFATE TREATMENT IN PREGNANCIES WITH CHORIOAMNIONITIS

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Objective
Chorioamnionitis is associated with fetal brain injury and subsequent cerebral palsy. Although antenatal magnesium sulfate treatment has been shown to decrease cerebral palsy rates in preterm infants, the number needed to treat is relatively high. This may be due to reduced efficacy in subgroups of pregnancy comorbidities, such as increased intrauterine inflammation. In an effort to reveal knowledge gaps and future study perspectives, the present scoping review aimed to evaluate the relevant literature on the neuroprotective effects of antenatally administered magnesium sulfate in the setting of preterm chorioamnionitis.

Methods
We used "magnesium, or magnesium sulfate, or magnesium sulphate" and "chorioamnionitis, or intrauterine inflammation, or neuroinflammation" as keywords for searching PubMed, Google Scholar, and web of Science Core Collection databases. Only peer reviewed clinical studies on human subjects published in English as a full-text article were included.

Results
Some recent cohort studies suggested that magnesium sulfate is not neuroprotective in pregnancies complicated by chorioamnionitis. An association between histological chorioamnionitis and magnesium sulfate treatment has also been reported, although this was not replicated in another retrospective cohort study. In a meta-analysis investigating participant characteristics for magnesium sulfate neuroprotection, rate of clinical chorioamnionitis was similar across pregnancies with or without magnesium sulfate treatment.

Conclusion
Several observational cohort studies have revealed a possible association between antenatal magnesium sulfate treatment and chorioamnionitis, probably leading to decreased fetal neuroprotection. However, some data do not support such a relationship. Properly designed translational and clinical studies investigating the effects of magnesium sulfate on chorioamnionitis and vice versa are needed.

Neonatology - Neonatal sepsis

O1033 - IMIPENEM MONOTHERAPY OF MULTIPLE BRAIN ABSCESSES CAUSED BY SERRATIA MARCESCENS IN PRETERM NEWBORN

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The brain abscesses are possible but very uncommon complication of bacterial sepsis and meningitis in neonate. We report a case of multiple brain abscesses in preterm neonate as a complication of Serratia marcescens sepsis.
The female preterm weighing 1990 g was delivered by ceasarian section at 32. weeks of gestation. Apart from moderate RDS, the baby was in a good condition with no indicators of perinatal infection. On the third day of life, the clinical status deteriorated and the sepsis screen was positive. The baby was intubated and, along with other intensive measures, treated with high doses of vancomycin and imipeneme. Serattia marcescens was isolated in hemoculture. The baby clinicaly improved in the following days, but the cranial ultrasound revealed multiple hypoechoic lesions in parietal lobes bilaterally. Magnetic resonance imaging of the brain showed multiple (five) hypodense lesions with the peripheral enhancement suggestive of intra-parenchymal abscesses. The neurosurgical consilium sugested the conservative treatment with antibiotics and weekly neuroimiging follow-up. The antibiotic treatment was conducted for a total of 8 weeks. The final MRI showed a total regresion of previous abscesses with the formation of small cavitations. The clinical and neurological examination of the baby was normal as well as EEG. The baby was discharged with recommedation of neurological follow-up.

A multidisciplinary team approach, including neurosurgeons, neonatologists and infectious disease specialists, is needed for the desision on treatment of brain abscesses in neonate. Serial imaging is important in the assessment of the efficacy of treatment.

O1051 - ACCURACY OF CEREBROSPINAL FLUID WHITE BLOOD CELL COUNT GLUCOSE AND PROTEIN FOR RAPID DIAGNOSIS OF MENINGITIS IN NEONATES AND YOUNG INFANTS

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Objective
Rapid diagnostic tests (RDTs) on cerebrospinal fluid (CSF) - white blood cell count (WBCC), glucose, and protein - are widely utilized to diagnose neonatal meningitis. No systematic review and meta-analysis (SRMA) on the diagnostic accuracy of these RDTs is published.

Methods
We performed an SRMA on studies (January 1, 1950- December 31, 2016) that assessed the accuracy of CSF WBCC, glucose and/or protein (index tests) in diagnosing meningitis among neonates and infants aged <90 days. Meningitis was defined as positive reference standard test [CSF culture or gram stain or polymerase chain reaction (PCR)]. We followed standard Cochrane Handbook methodology. We used Stata-14 for analysis. We included all study designs, where the authors had either published data showing cross-classification of index test outcome and disease status, or provided these data on request. We excluded studies on well-looking infants subjected to CSF examination; which had reference standard or index tests other than those specified; published in non-English languages and conference abstracts. We pooled studies for sensitivity, specificity, likelihood ratios (LR) and diagnostic odds ratios (DOR) only if their threshold values were within pre-specified ranges: 19-25/mm3 in term and 25-29/mm3 in preterm neonates, 30-40 mg/dl, and 120-170 mg/dl for term and 150-170 mg/dl in preterm neonates for WBCC, glucose and protein respectively.

Results
From 13,211 titles and abstracts, after excluding duplicates and irrelevant studies, we selected 1023 full-text articles for review; further excluded 1003 based on full-text and included 20 studies for meta-analysis [WBCC: n=29,906 (18 studies); glucose: n=8,352 for glucose (10 studies); and protein: n=8,538 (11 studies)]. Area under Hierarchical Summary Receiver Operator Characteristic (HSROC) curves of CSF WBCC, glucose and protein were 0 89 [95% confidence interval (CI): 0 86, 0 91], 0 68 (95% CI: 0.64, 0.72), and 0 71 (95% CI: 0.67, 0.75) respectively. The pooled sensitivity of WBCC (n=9,191, 8 studies), glucose (n=1,370, 8 studies) and protein (n=8,419, 8 studies) was 77% (95% CI: 69%, 84%), 62% (95% CI: 43%, 78%), and 62% (95% CI: 50%, 73%) respectively. The pooled specificity was 77% (95% CI: 50%, 92%), 73% (95% CI: 38%, 92%) and 92% (95% CI: 79%, 97%) respectively. The pooled LR+ were 3.3 (95% CI: 1.4, 8.1), 2.3 (95% CI: 0.8, 6.9) and 7.8 (95% CI: 2.8, 21.7) respectively. The pooled LR- were: 0.30 (95% CI: 0.22, 0.41), 0.52 (95% CI: 0.28, 0.96) and 0.41 (95% CI: 0.30, 0.56). The pooled DOR were 11 (95% CI: 4, 32), 4 (95% CI: 1, 23) and 19 (95% CI: 6, 62) respectively. On meta-regression, study design, year of publication, diagnostic threshold and reference standard used were not statistically significant.

Conclusion

Overall, CSF WBCC had the best ability to diagnose meningitis in neonates and young infants, followed by protein and glucose. On pooling studies with threshold values within a pre-specified range of commonly used cut-off values, the pooled estimates of sensitivity, specificity, LRs and DOR were sub-optimal.
Our study was not funded by any source.

PROSPERO registration number: CRD42017060045.

O1120 - INCIDENCE OF HEALTH CARE ASSOCIATED INFECTIONS IN NEONATAL INTENSIVE CARE UNIT OF UCCK KOSOVO

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Introduction
Health care-associated infections (HAIs) represent one of the commonest complications of healthcare. They complicate 5-10% of admissions to acute care hospitals in industrialized countries with average rate in EU of 7.2%.

Antimicrobial resistance (AMR) is another challenge closely related with HAIs. Inappropriate and irrational use of antimicrobials is the most important cause of emerging resistant microorganisms, their spread and persistence in the community and hospitals. Intensive care units (ICUs) represent the epicenter of HAIs in all settings. In developing countries 2/3 of patients develop HAIs.

Objective
The aim of this survey was to reduce morbidity, mortality and costs from healthcare-associated infections in Neonatal Intensive Care Unit (NICU) at Kosovo teaching hospital. Objectives were to estimate and identify the incidence, mortality, risk factors, causative organisms and their antimicrobial susceptibility patterns; identify targets for quality improvement. Methods: Study took place at the NICU, University Clinical Centre of Kosovo (UCCK). ECDCD and Centers for Disease Control and Prevention criteria were used as standard definitions for HCAIs. All neonates admitted for more than 24 hours in ICU were enrolled in the study. They were observed five times per week. A prospective cohort study was performed during 5 months period, starting in September 15, 2017- February15, 2018. The dataset included: age, gender, LOS in ICU, MV days, underlying disease or conditions, therapy and clinical outcome. The following main infections were under surveillance: bloodstream infections, pneumonia, urinary tract infections and surgical site infections. Samples were processed at the department of Microbiology at NIPHK. The blood cultures have been processed in BacT/Alert automated system. Antimicrobial susceptibility was determined by the disk diffusion method according to the EUCAST criteria.

Results
Total number of admitted and treated patients in NICU was 348, representing 5303 bed days. Total number of clinical microbiology samples taken from patients was 295, of which positive growth was retrieved from 82 samples.

Of 348 babies admitted in the ward, 65 babies acquired a health care-associated infection, with cumulative incidence rate of 18.6%. Total number of registered HAIs was 75. The most common type of HCAI was bloodstream infection (sepsis), representing 79.7%. The CVC-BSI (central venous catheter- bloodstream infections) rate was 18.9 per 1000 CVC days, the VAP(ventilator associated pneumonia) rate was 10.3 per 1000 device days, and CA-UTI (catheter associated urinary tract infections) rate was 23.2 per catheter days. Total average length of stay in the ward was 15.2 days. Babies who acquired an HAIs had an average length of stay of 27 days. The predominant microorganism isolated from clinical samples was Staphylococcus spp. with 19 cases (36.8%) .

Conclusion
Key recommendations driven by this study are to improve surveillance systems of HAI, enhance infection prevention and control in NICU and establish antimicrobial stewardship program.

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O1122 - NOSOCOMIAL INFECTIONS IN NEONATAL INTENSIVE CARE UNIT – INCIDENCE ETIOLOGY AND RISK FACTORS

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Introduction
Hospital-acquired infections (nosocomial) infections (NI) are one of the leading causes for morbidity and mortality in the neonatal intensive care unit (NICU). NI result in different complications, prolonged and more expensive hospital stay. Their epidemiology changes over the years and studying them may be helpful in their prevention.

Objective
To analyze the incidence, etiology and risk factors of NI in NICU.

Methods
Prospective study in the NICU of Clinic of Neonatology, UMHAT- Pleven, Bulgaria, from 01.01.2018 to 31.12.2018
Inclusion criteria: all newborns with hospital stay above 72 hours, followed up until discharge. Patients' groups: 1 – with proved NI, 2 – without NI, and 3 – with microbial colonization. Studied indicators: weight and gestational age at birth, congenital anomalies, congenital infections, postnatal morbidity, diagnostic/ treatment procedures, outcome at discharge. NI criteria (CDC, 2008) are accepted: NICU stay > 72 hours; at least 3 new-onset clinical and laboratory indicators of systemic inflammation, plus 1 risk factor. Microbial colonization is defined as positive microbiological probe without criteria for NI. All diagnostic tests are carried out at the clinical and microbiological laboratories of UMHAT, Pleven.
The data are calculated using software statistical packages STATGRAPHICS v. 4.0; SPSS v. 13.0 and Microsoft Office 2016 for Windows. The significance of the conclusions is fixed by $p < 0.05$.

Results:
One hundred ninety-three newborns meet the inclusion criteria. NI is proven in 20 of the patients (10.4%), four of them with more than one NI episode. Twenty-five NIs are registered for a total of 3238 hospital days (7.7 NI per 1000 hospital days). Microbial colonization is detected in eight of the patients (4.1%). Groups 1 and 3 compared to Group 2 have similar characteristics: less mature (31.3±4.7 and 30.8±2.4 vs. 35.7±3.5 gestational weeks), with lower birth weight (1650±887 and 1488±347 vs. 2480±778 grams), more often required central venous line – CVL (65 and 63 vs. 22%), longer use of CVL (3±3 and 4±4 vs. 1±2 days) and gastric tube (29±26 and 28±19 vs. 6±11 days), prolonged hospital stay (36±27 and 36±16 vs. 14±12 days) – $p < 0.001$ for all indicators. Group 1 compared to Group 3 has a significantly higher incidence of congenital anomalies (50 vs. 25%), requires longer parenteral nutrition (20±22 vs. 11±8 days) and respiratory support (13±14 vs. 5±4 days). At discharge, 55% of Group 1 are clinically healthy, 25% have residual problems, 20% deceased. Groups 2 and 3 have a comparable outcome – 99 and 100% healthy children, respectively. NI analysis determines very wide range of the time of infection – from the 4th to the 76th hospital day. Seven of the NI cases are clarified etiologically, five of them are caused by gram negative strains, predominantly Klebsiella spp.

Conclusion

According to our data, the incidence of NI among the total NICU population is comparable to the literature data. The most important risk factors are congenital anomalies, the need for prolonged parenteral nutrition and respiratory support. We determined different that quoted in the literature etiology – predominantly gram-negative strains.

O1160 - EARLY ONSET NEONATAL SEPSIS AND RISK FACTORS IN THE PRETERM NEWBORN INFANTS

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Objective
Possible sepsis is one of the most common diagnosis made in the neonatal intensive care unit (NICU). The identification of neonates at risk for early-onset sepsis is frequently based on a constellation of perinatal risk factors that are neither sensitive nor specific. Diagnostic tests for neonatal sepsis have poor positive predictive accuracy. As a result, clinicians often treat well appearing infants for extended period of time, even when bacterial cultures are negative.

Methods
The study was prospectively conducted over a period of 12 mounts between 01.01.2015 to 31.12.2015. The purpose was to identifications the risk factors and bacterial microorganisms caused early-onset sepsis in preterm newborn infants.

Results
The present study included 71 newborn infants diagnosed with sepsis. Out of 653 infants admitted from 01.01.2015 to 31.12.2015., 427 were born at term (TNB), and 227 were preterm infants (PTN). They were divided into two groups: one comprised of at term newborn infants with proven sepsis - 32 cases (7,5%) and second group were preterm newborns with neonatal sepsis - 39 cases (17,3%). Blood culture was positive in 44 newborns (24 PTN and 20 TNB) with sepsis (62%). Out of 24 proven neonatal sepsis, early-onset sepsis was present in 8 PTN (28.6%) , and possible early onset neonatal sepsis were in 4 PTN, or half of the infants with proven neonatal sepsis. Late -onset sepsis in PTN was proven with blood cultures in 16 newborn infants, but in 11 PTN we did not isolate the pathogenic microorganism. In the PTN dominant isolated pathogen in early-onset sepsis was E. coli, while in late onset sepsis were Klebsiella Pneumoniae and Staphylococcus CoN. Premature birth and low birth weight were among the most common neonatal sepsis risk factors. Maternal preeclampsia, PROM and perinatal asphyxia were also significant risk factors for earl-onset neonatal sepsis in the preterm newborn infants.

Conclusion
The clinical diagnosis of neonatal sepsis in the neonate is difficult, because many of the signs of sepsis are nonspecific and are observed with other noninfectious conditions, especially in the preterm newborn infants. Our data suggest that premature birth and low birth weight are a most common sepsis risk factor. Maternal preeclampsia, PROM and perinatal asphyxia were also significant risk factors for neonatal sepsis

O1365 - EVALUATION OF THE EFFECT OF PENTOXIFYLLINE TREATMENT ON MORTALITY AND MORBIDITY IN NEONATAL SEPSIS

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Objective

Neonatal sepsis continues to be an important cause of mortality and morbidity in spite of improvements in the diagnosis and treatment methods. Antibiotic therapy and supportive treatment are very important in neonatal sepsis. Pentoxifylline, a phosphodiesterase inhibitor, is used in neonatal sepsis as an immunomodulatory agent. The aim of this study was to evaluate the effect of pentoxifylline treatment on mortality and morbidity in newborn infants with sepsis who were followed-up and treated in our neonatal intensive care unit (NICU).

Methods

The study was performed in the Medical Science University Ankara Children Hematology and Oncology Training and Research Hospital. A total of 175 patients with proven, clinical and suspected sepsis followed up and treated in the NICU between January 2015-December 2017 were included in the study. Medical records of the neonates with sepsis who were treated with pentoxifylline (34 patients) and without pentoxifylline (141 patients) were recorded retrospectively.

Results

A total of 1137 patients were hospitalized between January 2015 and December 2017 in our NICU, 175 of them were diagnosed with sepsis. Of the patients, 105 (60%) were male and 70 (40%) were female. We diagnosed neonatal sepsis izolated by blood culture in 31 (17.7%) infants. Among 175 patients, 82 (46.9%) were diagnosed with early onset neonatal sepsis (EONS), 78 (44.6%) were diagnosed with late onset neonatal sepsis (LONS) and 15 (8.6%) were diagnosed with very late onset neonatal sepsis (VLONS). Of the patients, 82 (46.9%) were preterm and 93 (53.1%) were born term. The most common clinical signs were respiratory distress symptoms (tachypnea, groaning, retraction) and determined in 66 patients (37.7%). The most commonly isolated microorganisms in early onset sepsis were Klebsiella species in 11 (6,2%) patients, 5 of them were Klebsiella Pneumoniae. The most commonly isolated microorganisms in late onset sepsis were Klebsiella species in 5 (2,9%) patients, 3 of them were Klebsiella pneumoniae.
The mortality rate was 14.8%, and significantly higher in the premature, low birth weight infants, having congenital anomalies, applied inotropic therapy or mechanical ventilation, or pentoxifylline in our study. Premature and low birth weight infants was more applied pentoxifylline therapy. There were 34 patients given pentoxifylline treatment and 5 of them had shock. We thought that pentoxifylline therapy was given late. Mortality was higher in the patients given late pentoxifyline therapy (p=0.029*). One (3%) of the patients given pentoxifylline had seizures. We thought this might be the drug's side effect and it was discontinued.

Conclusion

Although experimental studies revealed that pentoxifylline may decrease mortality in sepsis, we thought that the use of pentoxifylline in the premature or low birth weight infants and in the advanced stages of sepsis had no effect on mortality. In order to determine the clinical efficacy of pentoxifylline in neonatal sepsis and to determine it's clinical efficacy on neonatal morbidities, prospective randomized controlled trials are necessary by experimental studies and more patient's data at the molecular level.

O1369 - RETROSPECTIVE EVALUATION AND FOLLOW UP OF THE PATIENTS HOSPITALIZED IN THE NEONATAL INTENSIVE CARE UNIT FOR URINARY TRACT INFECTION

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Objective
Urinary tract infection (UTI) is among the common infections in the newborn infants. The aim of this study was to determine the demographic characteristics of the neonates who were followed up in the neonatal intensive care unit (NICU), the most common symptoms, causative microorganism, underlying urinary system anomalies and the response to the treatment. The prognosis of the patients, complications and renal damage secondary to the disease following discharge were also identified.

Methods
The neonates whom were hospitalized between May 2015 and October 2018 at University of Health Sciences, Ankara Child Health and Diseases Hematology Oncology Training and Research Hospital in the NICU with a diagnosis of UTI were retrospectively evaluated.

Results
Of the 190 patients included in the study, 125 (65,8%) were male and 65 (34,2%) were female and 56 (29,5%) were premature. The mean age of the neonates on admission was 15,7 ± 8,5 days (1-40 days). Among 190 neonates, 17 patients (8,9%) were diagnosed with nosocomial UTI. Among all the patients, 28 (14,7%) had prenatal diagnosis and 23 (12,1%) had hydronephrosis, 1 (0,5%) had meningomyelocele and 4 (2,1%) had cystic kidney disease. Admission complaint of the patients were as follows: 57 (30%) patients had jaundice, 39 (20,5%) had fever, 38 (20%) had vomiting and 34 (17,9%) patients had only jaundice. There were 174 (91,6%) patients with gram negative and 16 (8,4%) with gram positive bacterial growth by the urine cultures. In 53% of patients diagnosed with nosocomial UTI, 53% had klebsiella, 23,5% had E.coli, 17,6% had coagulase negative staphylococcus. Among the other 173 patients, E.coli was found in 55,4%, klebsiella was found in 34,6% of the patients. There were 25 patients diagnosed urosepsis and all of these patients determined the same pathogen on the blood and urine cultures. Urinary system ultrasonography (USG) was performed in all patients and pathologic USG sign was detected in 120 patients. Hydronephrosis were detected in 19 (10%) patients by both antenatal and postnatal USG. Voiding cystourethrography was performed 82 (43,2%) patients and 75 (91,5%) of these patients had vesicoureteral reflux (VUR). On follow-up, Dimercaptosuccinicacid scaning was performed in 43 (22,6%) patients, and 27 (62,8%) of these patients had renal scar. It was determined that the high-grade VUR alone had a 7 fold (OR: 6,9) more effective on scar development. In 72 (37,9%) of the patients, UTI recurred, and 44 (23,2%) of the patients were rehospitalized for UTI. These 190 patients were followed up for a median of 8 months (4-52) and 13 (6,8%) patients were developed complications. The risk of complications increased by 35 times more (OR: 34,59) in the cases developed renal scar.

Conclusion,
Newborns with UTIs may present with nonspecific findings such as jaundice, vomiting, fever, prolonged jaundice or malnutrition. The neonates with these findings should be examined for urine analysis, urine culture and UTI diagnosis should be kept in mind. It should be noted that early diagnosis and treatment are very valuable in the prevention of long-term complications.

O1374 - RALSTONIA PICKETTI OUTBREAK IN NEWBORN INTENSIVE CARE UNIT

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Introduction
Ralstonia picketti is an aerobe, non-fermantative , gram (-) bacillus. Nosocomial infections may be associated with contaminated commercial solutions used in patient care and laboratories. Altough it is an opportunistic pathogen, immunsupression may cause severe infections. There are few cases of newborn Ralstonia picketti infections in the literature. Four cases of Ralstonia picketti outbreak between 14-30 April 2019 in our NICU are presented.

Case 1: A 1440 gr girl was delivered at 33rd week. She was admitted due to respiratory distress. On the second day of life, she was intubated for increased oxygen requirement, tachypnea and abdominal distension and bloody vomiting that progressed to necrotizing enterocolitis. Owing to abnormalities in coagulation parameters, Vitamin K and fresh frozen plasma were administered. Inotrops were administered for circulatory failure. On 5th day, patient expired from DIC associated with sepsis and multiorgan failure and blood culture grew R. Picketti.

Case 2: A 750 gram male infant was delivered at 31 weeks gestation with severe IUGR. He was intubated and administered surfactant, umbilical vein-artery were catheterized and septic screening was carried out. TPN and antibiotic treatment were started. Echodardiography, on 2nd day of life revealed 2 mm PDA, enlargement in cardiac cavities and impairment in myocardial functions. PDA closure treatment was given. On 7th day, there was increase in oxygen need and septic screening was carried out. Blood culture grew R.Picketti. Free air was detected in abdomen. The patient was operated three times for NEC. Control bood culture was sterile on 6th day of treatment. Patient expired on 20th day of life.

Case 3: A 1340 gr female infant was delivered at 31 weeks gestation with IUGR. She was admitted due to respiratory distress. Umbilical vessels catheterization, septic screening was carried out. She received antibiotic treatment for five days. Umbilical catheter was withdrawn on 12th day of life and R. Picketti growth was detected in the catheter tip culture. In control evaluation, there was no increase in acute phase reactants and no growth in culture. No antibiotics were started. She was discharged on 35th day of admission.

Case 4: A 650 gr male infant was delivered at 27th weeks gestation with IUGR due to heart failure and preeclampsia in the mother. He was intubated, administered surfactant and umbilical vessel catheterization was performed. On 5th day of life blood culture grew R. picketti antibiotic treatment was revised. In follow up, general condition improved and patient was discharged on 70th day of admission.
Discussion: In all cases, there was invasive intravascular intervention during the time of bacteremia. Culture was sent from commercial solutions used in patients with no growth however later on microorganism was isolated from incubator reservoirs.

Conclusion
Ralstonia infection is likely to lead to sepsis in NICU. In the presence of Ralstonia picketti growth, care should be taken for protection of other patients, cultures should be sent from commercial solutions and medical devices. Early diagnosis, suitable antibiotic treatment and early determination of the source of the infection are important for preventing and treating infection.

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O1381 - CLINICAL FEATURES AND ANTIBIOTIC RESISTANCE OF GRAM NEGATIVE INFECTIONS DETECTED IN THE NEWBORN UNIT

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Objective
Gram (-) bacteria are the causative agents of neonatal sepsis and its environment and it is an important cause of morbidity and mortality. Preterm and very low birth weight (VLBW) infants are at greater risk. Multidrug resistance is also associated with higher mortality in newborns In this study, we aimed to determine the antibiotic susceptibility and to evaluate the antibiotic susceptibility in clinical analysis with Gram (-) growth in our unit.

Methods
Between January 2018 and May 2019, 34 patients who had Gram (-) infected blood, CSF, urine, ETA and central catheters were hospitalized at Gazi University Neonatal Intensive Care Unit. Demographic characteristics of the patients showed birth weight and week and days of hospitalization. Antibiotic susceptibilities of gram (-) infections, mortality and clinical status of patients developing antibiotic resistance were investigated.

Results
A total of 53 agents and 48 infections were detected in blood, CSF, urine, ETA and central catheters. The mean gestational weight of the patients was 1465 g (min 550-max 3610), and the mean gestational age was 29 weeks 3 days (min 22- max 38). 23 (68%) of the patients were male. The mean hospitalization day was 68 days (min 5 - max 300). Twenty-seven patients (79%) had prematurity and 15 (44%) were less than 1000 g. Of all patients who had Gr (-) infection during hospitalization, 12 (35.2%) were ex.

The most common Gr (-) infection was VIP, followed by UTI, CLABSI, late sepsis, and meningitis. (Table 1) The most common growth of Gr (-) microorganisms in our unit; Klebsiella spp. (25) followed by E.Coli (9). Klebsiella (10) and E.Coli (3) were ESBL (+). (Table 2) Amoxicillin-clavunate resistance was found to be high and only eight of the agents were susceptible to E. coli (4) and Klebsiella (4). Aminoglycoside resistance was higher in gentamicin than amikacin. Amikacin resistance was only against Acinetobacter in one infection. Colistin resistance was detected only in Serratia (2) and ciprofloxacin resistance only in Pseudomonas (3). (Table 3)

Although aminoglycoside resistance was not high in 2018, in 2019 Gentamicin-resistant ESBL (+) Klebsiella spp. infection detected in eight patients and and six of them were ex. Six infection were detected in four patients followed up for Ralstonia Picketti growth. No resistance was found in the antibiograms. Although one patient had Ralstonia growth in his blood culture, the patient recovered without any treatment.

Conclusion

Despite advances in supportive care and antibiotic use, nosocomial sepsis is one of the most important causes of neonatal mortality and morbidity. Although Gram (+) agents are the most common causes of nosocomial infection, there is a risk of Gram (-) bacteremia, severe sepsis, septic shock and death.

In order to select the appropriate empirical treatment for nosocomial sepsis, each unit should determine the factors according to their infection and resistance rates, focus on forming a common language when starting and ending antibiotherapy. Standard treatment controls such as hand hygiene and avoiding unnecessary invasive preparations are best practices for hospital cleaning.

O1386 - COMMUNITY ACQUIRED VIRAL OR BACTERIAL PNEUMONIA IN A TERTIARY NICU

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Introduction
In newborns, community-acquired lower respiratory tract infections, especially in winter, are the leading causes of admission to neonatal intensive care units. Although most of the cases are viruses, they may be accompanied by bacteria in some cases.

Objective
In this study, we aimed to determine the viral and bacterial agents in newborns with pneumonia in intensive care unit of our hospital.

Methods
This prospective observational clinical study was conducted between October 2015 and October 2018. In these three years, viral and bacterial agents were screened by the Multiplex Real-time PCR method in nasopharyngeal fluid samples of newborns who were clinically and radiologically diagnosed as pneumonia and hospitalized in the neonatal intensive care unit. Congenital pneumonia and mechanical ventilator-associated pneumonia were excluded.

Results
A total of 152 newborn infants included the study. The mean gestational weeks of the patients were 38 week (27 were preterm), the average birth weights were 3145 g. The most common cause of hospital admission was cough with 79 babies (51.9%), following by fever, nasal congestion and apnea.

Viral or bacterial agent was detected in 107 babies (70.3%). Viruses were detected as 101 (66.8%); 33 (21.7%) with RSV-A, 26 (17%) with RSV-B were the most common viral agents. In preterms the most common viral agent was Rhinovirus with 6 (22%). Bacterial agents were 12 (7.8%), the most common bacterial agent is Haemophilus influenza with 6 patients. Two of them were only preterm.

Seven (4.6%) infants had mixed (viral and bacterial) infection and 19 (12.5%) had multiple viral agents.

Conclusion
Screening of respiratory viral-bacterial infections by multiplex real-time PCR method in nasopharyngeal fluid samples is a reliable method with rapid results. Therefore, early identification of the pathogen may prevent unnecessary use of antibiotics.

O1401 - DIAGNOSTIC UTILITY OF DELTA NEUTROPHIL INDEX FOR GRAM NEGATIVE LATE ONSET SEPSIS IN NEWBORNS

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Objective
The predominant pathogens of neonatal late onset sepsis (LOS) are coagulase-negative staphylococci, followed by gram negative bacilli and fungi. Prompt diagnosis of LOS is essential to improve treatment and to reduce mortality and long term neurodevelopmental sequelae. Generally gram negative pathogens are responsible for more severe illness and deaths than gram positive agents. Delta neutrophil index (DNI), which reflects peripheral immature granulocytes, is the difference between leukocyte subfractions identified by myeloperoxidase and nuclear lobularity channels. In this study, we aimed to determine the diagnostic value of DNI for the detection of gram negative late onset sepsis in neonates and compare its efficacy with C-reactive protein (CRP) and other hematological indices.

Methods
This retrospective observational study was conducted at a tertiary hospital and in newborns with gram negative LOS (n=42) and in age and weight matched healthy controls (n=49). Patients with perinatal asphyxia, patients undergoing surgery and patients with positive blood cultures for organisms considered to be contaminants were excluded from the study. DNI, white blood cell and platelet counts, mean platelet volume (MPV), platelet distribution width (PDW), CRP measurements and blood cultures were performed at the onset of symptoms. The diagnostic accuracy of markers was examined by ROC curve analysis both individually and in combinations. In all analyses, 0.05 was considered as the significance level.

Results
There were no significant differences between the groups in gestational age, birth weight, gender, mode of delivery, Apgar score at 1 minute, frequency of intrauterine growth retardation, or exposure to antenatal steroids. The most commonly isolated microorganism was Klebsiella pneumoniae (59.5%). The mean DNI value was significantly higher in gram negative LOS group compared with the control group (8 ± 10, 0.4 ± 0.5, respectively, $p<0.0001$). In addition, the levels of CRP, MPV and PDW at the onset of sepsis were significantly higher and platelet counts were significantly lower in gram negative LOS group than the control group ($p<0.001$). DNI had a sensitivity of 81%, a specificity of 98%, a positive predictive value (PPV) of 97% and a negative predictive value of 86% with a cut-off value of 1.6% in the gram negative LOS group. Furthermore, the combination of DNI and CRP showed the highest sensitivity (98%), specificity (100%), and positive predictive value (100%).

Conclusion
DNI is a reliable and objective hematologic marker for gram negative neonatal LOS. Besides, it can be checked by complete blood count, of which results can be obtained within minutes and does not require additional cost and labor. The diagnostic capability of DNI may be increased by assessing CRP measurements simultaneously.

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O1434 - CULTURE PROVEN LATE ONSET SEPSIS IN PRETERM INFANTS BORN BEFORE 32 WEEKS OF GESTATION IN A TERTIARY CARE HOSPITAL OVER 10 YEARS A RETROSPECTIVE STUDY

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Objective
The aim of our study was to assess the incidence of late-onset sepsis (LOS), distribution of causative organisms and risk factors for LOS in infants born before completed 32 weeks of gestational age (GA).

Methods
A retrospective cohort study included preterm infants with less than 32 weeks of GA admitted to level 3 neonatal intensive care unit at University Hospital Sveti Duh Zagreb, Croatia, between January 2007 and December 2016. Excluded were infants with congenital anomalies or chromosomal diseases and these who were transferred to another hospital or died within the first week of life. LOS was defined as the first episode of a positive blood culture for a bacterial or fungal organism obtained after 72 hours of life. Minimum of 2 positive blood cultures were required to define Coagulase-negative staphylococci (CoNS) sepsis. Other data collected from medical records included GA, birth weight (BW), gender, mode of delivery, duration of antibiotic use, duration of mechanical ventilation, duration of parenteral nutrition, duration of supplemental oxygen, occurrence of chronic lung disease, pneumonia or necrotizing enterocolitis (NEC) and mortality rate before discharge. Chi-square and Mann-Whitney test were used for the statistical analysis. Stepwise logistic regression analysis was used to examine risk factors associated with LOS.

Results
Out of the 359 infants, 239 (66.6%) were included in the study. Median GA was 29.9 (28.1-30.8) weeks, 78 (32.6%) had BW < 1000 g while 161 (67.4%) had BW <1500 g. Thirty two percent (n=76) were born from multiple pregnancies and 118 (49.4%) were born vaginal. Proven LOS was found in 58/239 (24.3%) of infants. Eighty four percent of all LOS cases occurred in infants with BW < 1000 g. The rate of LOS was 35.9% (n=28) for infants with BW < 1000 g, 21.7% (n=18) for infants 1000-1499 g and 15.4% (n=12) for those ≥ 1500 g (p=0.009). Gram-negative bacteria were isolated at a rate of 56.9%, gram-positive bacteria at 29.3% and Candida species at 13.8%. The most commonly infecting organisms were Klebsiella species (n=24, 41.4%) followed by CoNS (n=12, 20.7%). Mortality rate before hospital discharge was higher among infants with LOS compared to those without LOS (13.8% vs. 5.5%, p=0.047). In the univariate analysis risk factors significant for proven LOS were BW, duration of antibiotic use, duration of parenteral nutrition, duration of mechanical ventilation, duration of oxygen therapy, occurrence of pneumonia and NEC. Results of multivariate analysis demonstrated that the duration of antibiotic use for more than 12 days (OR 8.94, 95%CI 4.40-18.12; p<0.001) and NEC stage 2 or more (OR 6.47, 95%CI 1.34-31.13; p=0.020) were independently associated with the risk of proven LOS.

Conclusion
Incidence of proven LOS in our study was comparable to data from developed countries. Gram-negative bacteria were the most common cause of LOS in our cohort of preterm infants less than 32 weeks of GA similar to data from developing countries.

Neonatology - Problems of the premature neonate

O1003 - DOES VITAMIN K DEFICIENCY AGGRAVATE OSTEOPENIA IN PRETERM INFANTS CASE REPORT AND LITERATURE REVIEW

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Objective
Metabolic Bone Disease a common disease among prematurely born infants who are deprived of the intrauterine supply of minerals. On the other hand, levels of Vitamins D and K, that are both important in maintaining bone health and inhibiting inflammation, fallen in preterm with post-surgical gut, especially when associated with severe cholestasis. Low bone mineral density could be associated with high serum concentrations of undercarboxylated osteocalcin and low serum concentrations of vitamin K.

Methods
We present a case of Severe MBD in an extremely preterm infant with surgical NEC who developed morbid hypophosphatemia while kept NPO. Despite required phosphate infusions, his phosphate levels were suboptimal. He had recurrent episodes of prolonged bleeding that responded immediately to plasma and Vitamin K infusion. Vitamin K mediates the γ-carboxylation of glutamyl residues on several bone proteins, especially osteocalcin; thus, Vitamin K deficiency could aggravate MBD.

Results
Patient' Vitamin K level was evaluated by measurement of undercarboxylated osteocalcin, and vitamin D level was measured by 1,25 dihydroxy-vitamin D. Both levels were significantly lower compared to the healthy infants of the same gestational age.

Conclusion
Literature in older children supports the idea that optimal vitamin K status is associated with decreased bone turnover, even though it is not associated with the bone mineral content. Supplementation with vitamin K could carry an additional therapeutic advantage for post-surgical infants.

O1095 - EXTREME PREMATURITY – CLINICAL ETHICAL OR SOCIAL PROBLEM

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Introduction
Babies born between 22 and 27+6 gestational weeks (GWs) are extremely premature. Survival rate correlates inversely with the gestational age (GA). These babies are more susceptible to all complications of premature birth, both in the immediate neonatal period and after discharge from the nursery.

Objective
To evaluate early morbidity, residual clinical problems and survivor rate up to discharge at home of extremely premature babies.

Methods
134 newborns treated in NICU of University hospital, Pleven, Bulgaria from 2005 to 2018 are evaluated. Including criteria: life born, GA of 22-27+6 GWs, absence of life incompatible congenital anomalies.
The patients are divided in 2 groups: survivors – Group 1, and deceased – Group 2.

Studied indicators: pregnancy and birth history, anthropometric and maturity indices at birth, status at birth, morbidity, status and age at discharge.

The ICD 10th update criteria of life birth are accepted. GA is determined by postmenstrual age of the mother or by New Ballard score (1991). The adequacy of the anthropometric indices to the GA is determined by Fenton Growth Chart for girls and boys, 2013.
The data were calculated using software statistical packages STATGRAPHICS v. 4.0; SPSS v. 13.0 and EXCEL for Windows. The significance of the conclusions was fixed by $p < 0.05$.

Results
From all the 134 babies: 68 (51%) deceased; 66 (48%) survived – 33 of them (50% of survivors) with long-term complications. About 20% of the all newborns have a history of prenatal corticosteroid prophylaxis. The limit of viability in our center (50% survivor rate) is 25th GW. The survivor rate increases from 0 (in 22nd GW) to 69% (in 27th GW).

More than a half of all deceased (63%) are younger than 7 complete days.

The deceased in the neonatal period suffer predominantly from intraventricular haemorrhage (IVH – 54%) and bleeding (39%). The more common diseases of the deceased after neonatal period are broncho-pulmonary dysplasia (67%) and IVH (42%). Almost all deceased are born in severe asphyxia.

The survivors are more mature (25.8±1.0 vs. 25.0±1.3, p 0.0001), weigh a hundred grams more (p 0.0000) and suffer less from asphyxia (66 vs. 82%, p 0.03) than deceased. We have not established a significant difference between groups according to the sex, way of delivery, number of fetuses in utero.

The Group 2 suffer more often from bleeding (33.8 vs. 9.1%, p 0.0005), IVH (51.5 vs. 36.4%) and intrauterine hypotrophy (16.2 vs. 7.6%) than survivors.

Conclusion

According to our data half of the extremely premature babies die in the NICU and a quarter of them are discharged at home with long term complications. Our treatment should aim to target premature birth not prematurity itself, as the latter is a consequence. The best neonatal medicine would be a therapy that allows uninterrupted development to continue to a healthy child as a result. It is difficult at bedside, in the moment of resuscitation, to predict the individual outcome.

O1154 - THE PLACE OF ERYTHROPOIETIN IN PREVENTION OF PREMATURE ANEMIA IN TUNISIA ABOUT 160 CASES

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Objective

The frequency of premature anemia is increasing with the improvement of extremely-premature-infants management. The incidence is 17 to 25%. Anaemia is maximal between 8 and 10 weeks of age. The treatment of anemia of prematurity was transfusion with red blood cells which leads to many complications. Erythropoietin is used to reduce red blood cells transfusion and to prevent anemia in preterm and very low birth weight infants.

The objective of our study is to determine the risk factors of anaemia in premature infants and to assess the effectiveness and the safety of early initiation of erythropoietin in preventing anaemia in premature infants.

Methods

It is a retrospective comparative study including 160 cases of prematures ≤32 weeks of amenorrhea with birth weight ≤1500g who has been hospitalized between 1st January 2012 and 30th June 2014. The population of infants was divided into two groups: one group received erythropoietin, the other group was not treated. Erythropoeitin was administrated at dose of 250UI/Kg SC three time per week(450UI/Kg/week). The treatment was given for six weeks for a total of 18 doses. All infants received oral iron supplementation.

Results

The annual incidence of prematurity was 6.72%, extremely premature newborns represented 1.2%. The incidence of late anemia was 6 per one hundred premature. The risk factors of early anemia were foetofoetal transfusion and over five-day-artificial ventilation. Predictive independent factors of occurrence of late anemia were the existence of early anemia and significant quantity of blood specimen collections during hospitalization. Forty-three percent of prematures were transfused at least once, with a total of 129 received transfusions. The transfusion took place during the first week of hospitalization in 11.3% of cases. The occurrence of hemorrhage and the significant quantity of blood specimen collections were the predictive factors to transfusions. The preventive therapy was based on martial supplementation and the use of recombined erythropoietin. Martial supplementation was received in 65% of cases; the middle age of treatment beginning was 17days with an average dose of 7.5 Mg/Kg/Day. Preventive martial supplementation leads to a significant reduction of late anemia frequency and the use of transfusions. 79 infants had received the erythropoietin (49.9%), it was associated to martial supplementation in 86% of cases. Erythropoietin has allowed a significant decrease of late anemia frequency and the use of transfusions. The only predictive factor of transfusions despite of the use of erythropoietin was early anemia.

Conclusion

Early administration of EPO is an efficient treatment to prevent premature anemia and to reduce the use of RBC transfusions and the volume of RBCs transfused.

O1248 - NEONATAL OUTCOMES AFTER PERIVIABLE PREMATURE RUPTURE OF MEMBRANES

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Objective
Between mid-1980s and late 2000s several studies indicated increasing survival rates between newborns delivered around the 24th week of pregnancy. Rupture of fetal membranes during this period occurs in less than 1% of pregnancies, but leads to a great dilemma, which obstetric care providers have to face. When a pregnancy is complicated by periviable PROM, treatment options include immediate delivery of the periviable fetus or expectant management with the goal of achieving fetal viability. Continued pregnancy following PPROM at early gestations is correlated with high morbidity among surviving neonates. In this study we collected and evaluated data from neonates, that were born at our institution, following premature rupture of membranes during the periviable period.

Methods
This study was conducted in a tertiary care medical center. The study population consisted of 34 pregnancies complicated with premature rupture of membranes between 20 and 26+5 gestation weeks, from 01/01/2014 to 31/12/2017. We retrospectively evaluated pregnancy and immediate neonatal outcomes of neonates that were born after periviable premature rupture of membranes. Regarding comparisons of proportions, chi-square and Fisher's exact tests were computed.

Results
34 preterm deliveries were analyzed. 20 of the deliveries had gestational age (GA) <25 weeks and 14 had GA ≥25 weeks. Overall death rate was 44.1% and deaths occurred mainly in the group that had GA <25 weeks (92.9% vs. 10%, p<0.001). The most common disorders in total were Infection (52.9%) and Respiratory Distress Syndrome (50%), followed by Necrotizing Enterocolitis (20.6%), Intaventricular Haemorrhage (20.6%) and Acute Kidney Failure (17.6%). Bronchopulmonary Dysplasia was present in 14.7%, while less common disorders were Scleredema (2.9%), Seizures (2.9%) and Anemia (2.9%). Comparison of all disorders, suggested that Infection (7.1% vs. 85%, p<0.001), Respiratory Distress Syndrome (21.4% vs. 70%, p<0.001), Intaventricular Haemorrhage (0% vs. 35%, p=0.026), Necrotizing Enterocolitis (0% vs. 35%, p=0.026) and Acute Kidney Failure (0% vs. 30%, p=0.031) were more frequent in the group that had GA equal or ≥ 25 weeks as compared with the group that had had GA <25 weeks.

Conclusion
Overall, in the presence of premature rupture of membranes, neonates that were born before the 25th week of gestation have a high morbidity risk. Neonates that were born after the 25th week of gestation show an increasing number of adverse immediate neonatal outcomes.

We observed a higher incidence in Infection, Respiratory Distress Syndrome, Intraventricular Haemorrhage, Necrotizing Enterocolitis and Acute Kidney Failure in the group with gestational age equal or more than 25 weeks.

O1267 - OUTCOMES OF PRETERM INFANTS BORN AT 25 32 WEEKS OF GESTATION ACCORDING TO THE PLACE OF BIRTH AND PERINATAL INTERVENTIONS

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Objective:
To compare mortality and serious morbidity rates between outborn and inborn live births at 22- 32 weeks' gestation.

Methods
Outcome data for outborn (born outside a tertiary perinatal center) infants compared with inborn (born in a tertiary perinatal center) infants were analyzed in a population based cohort study during four years in a public hospital in Brasov, Romania. Main outcome measures were infant mortality and serious morbidity rates to hospital discharge.

Results
481 live births free of major malformations were recorded. 53 of 481 (11%) were outborn infants admitted to Neonatal Intensive Care Units; 90 died during hospitalization (14/53 outborns and 76/428 inborn). There were significant differences in rates of antenatal corticosteroids (43% vs. 13%, p=0.001), tocolysis (25%vs.6%, p=0.03) and cesarean section (59% vs. 29%, p=0.01). There were no significant differences in rates of necrotizing enterocolitis (5% vs.2%, p=0.2), intraventricular hemorrhage grade III or higher (14% vs. 21%, p=0.12), bronchopulmonary dysplasia (8% vs. 6%, p=0.42) and retinopathy of prematurity (8% vs. 13%, p=0.31).

Conclusions
Despite significant differences in perinatal intervention rates between centers, outborn infants admitted to Neonatal Intensive Care Units did not have substantially different rates of mortality or serious morbidity compared with inborns.

O1306 - SURFACTANT USE IN LATE PRETERMS AND TERM INFANTS SINGLE CENTRE EXPERINCE IN TEN YEARS

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Objective
Evidence for surfactant use in term and late term neonates are less abundant.

Methods
In light of the paucity of data about surfactant use in this group of infants, we aimed to investigate surfactant use in infants with gestational age of ≥34 weeks (late preterm and term group- LP/T group) in the last 10 years and evaluated their prognosis in NICU.

Results
6373 infants were admitted to Cukurova University NICU in 10 years. 4656 of 6373 infants (73.1%) were ≥34 gestational week (GW). 780 infants were treated with surfactant and 112 of them (14.4%) were in late preterm and term group. The rate of surfactant use in LP/T group was 2.4% (112/4656). Mean gestational week and birth weight of LP/T group were 35.6±1.8 (34-41) GW and 2632±653 (1100-5100) g respectively. 58 (52%) infants were male

Surfactant therapy was used for respiratory distress syndrome in 48 infants (43%), for pneumonia in 44 infants (39%), for hypoxia in 20 infants [14 infants with diaphragmatic hernia, 2 infants with meconium aspiration syndrome and 4 infants with congenital thoracal anomalies]. Infants had ventilatory support for 9.3±11(1-66) days and hospitalized for 16.7±16.7 (1-96) days.72 infants (64%) were discharged, while 40 infants(36%) died.

Conclusion
Surfactant use in late preterm and term infants is low compared to preterm infants and mostly used for respiratory distress syndrome, pneumonia and intractable hypoxia due to diaphragmatic hernia, meconium aspiration syndrome and congenital thorax abnormalities.

O1320 - PHOSPHODIESTERASE INHIBITOR (SILDENAFIL) USE IN THE TREATMENT OF NEONATAL PERSISTENT PULMONARY HYPERTENSION 2 YEARS OF CLINICAL EXPERIENCE

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Objective
Persistent pulmonary hypertension (PPHT) in the newborn is associated with morbidity and mortality, which may be secondary or idiopathic to many conditions. PPHT results in inadequate pulmonary relaxation after birth and shunt from the pulmonary to systemic circulation of oxygen-free blood. The main treatment is the treatment of underlying problem, as well as promising treatments such as oxygen support, mechanical ventilation, nitric oxide, phosphodiesterase inhibitors, prostaglandin analogs, endothelin receptor antagonists and extracorporeal membrane oxygenation. The optimal treatment approach is controversial. In this study, the findings of 28 babies who were diagnosed with PPHT and treated with sildenafil were retrospectively analyzed.

Methods
Twenty-eight infants diagnosed with PPHT between 01.02.2017 and 07.02.2019 were evaluated retrospectively. The diagnosis of pulmonary hypertension was confirmed by the presence or absence of an underlying congenital heart disease from the ductus arteriosus or patent foramen ovale to the right or left shunt, with pulmonary artery pressures measured echocardiographically equal to or higher than systemic arterial pressure in clinically suspected cases. Sildenafil was administered orally at a dose of 1 mg / kg / day.

Results
The mean duration of sildenafil use was 26.4 ± 4 days (7 to 70 days). There was no decrease in systemic arterial blood pressure and oxygen saturation in any of the patients. Eighteen of the patients were male (58%) and 10 were female (42%). Mean gestational age was 32.4 ± 4.4 weeks (25.3-39 weeks) and birth weight was 1800 ± 890 g (990-3800 g).

Conclusion
There are not enough studies in the literature regarding sildenafil use in the treatment of persistent pulmonary hypertension. Although there are limited data in our study, considering that inhaled NO use is not always available in our country, we think that Sildenafil can be administered safely and effectively.

O1335 - THE RESULTS OF ADMINISTRATION OF INTRAVITREAL ANTI VGEF IN THE TREATMENT OF RETINOPATHY OF PREMATURITY

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Objective
To evaluate the efficacy of intravitreal bevacizumab in the treatment of retinopathy of prematurity (ROP)

Methods
Twelve eyes of 6 patients who were diagnosed as ROP and treated with intravitreal bevacizumab (AVASTIN®) between January 2019 and March 2019 were evaluated retrospectively. After obtaining informed consent from the family, 625 micrograms of intravitreal bevacizumab was administered to all eyes and regular follow-up was performed.

Results
The mean birth week of the patients included in the study was 26.8 weeks (25-31), mean birth weight was 849 grams (705-975), and the mean injection week was 8,6 weeks (5-12). The mean follow-up period was 16 weeks (9-24). We treated four eyes of two patients with aggressive posterior ROP and eight eyes of four patients with zone 2 disease due to threshold disease. During follow-up, ROP regression was observed in all eyes at the first week post-injection and no asymmetric response was observed in any infant's eye. A second intravitreal injection of bevacizumab was applied to two eyes of a patient who had reactivation during follow-up. During the follow-up period, none of the babies required additional conventional laser photocoagulation therapy. None of the patients had ocular and systemic side effects.

Conclusion
Intravitreal bevacizumab injection with close follow-up and appropriate timing is an effective treatment modality in ROP. Large clinical trials with long-term follow-up are required for systemic and ocular side effects.

O1336 - EVALUATION OF THE POSSIBLE ASSOCIATION BETWEEN NEONATAL MORBIDITIES AND AMNIOTIC FLUID PH AND ELECTROLYTE LEVELS IN INFANTS OF PREECLAMPTIC MOTHERS

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Introduction
Amniotic fluid (AF) is a compound bio-environment with a changing content by gestational time. AF pH can be affected by both maternal and fetal conditions such as preterm ruptures of membranes, gestational age, antenatal steroids, prematurity and fetal distress. However, there is no study that evaluated AF analysis in preeclampsia.

Objective
The aim of this study was to determine the possible role of amniotic fluid pH and electrolytes for prediction of neonatal morbidities in preeclamptic mother infants.

Methods
This was a prospective controlled cohort study. During C-section, 1 ml of AF was aspirated before incision of membranes. AF pH and electrolytes were analyzed by blood gas machine and biochemistry laboratory concurrently. Maternal and neonatal demographic features and clinical outcomes, presence of respiratory morbidities were all recorded.

Results
AF pH, Na and gestational age were found to be independent risk factors for preeclampsia. Subgroup analysis revealed that in early onset preeclampsia (EOP) group mechanical ventilation duration, duration of 02 therapy, sepsis and IUGR were higher than healthy infants born before 32 GW. Also, in EOP group AF pH and K were higher compared with the healthy group.

Conclusion
To our best of knowledge, this is the first study that suggests the possible role of AF analysis for prediction of neonatal morbidities in preeclamptic mother infants. However, more studies including larger number of infants are required to confirm the role of AF analysis to support our data.

O1338 - CAN INTRAVENOUS PARACETAMOL TREATMENT BE THE FIRST OPTION FOR PDA CLOSURE IN PRETERM INFANTS

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Introduction
PDA is a common problem especially in extremely low birth weight infants. Indomethacin and ibuprofen are used as medical treatment for PDA closure. However, these medications may cause some side effects, both of them may not use in PDA treatment due to severe clinical problems of babies. Surgical closure is applied in newborns where it is an obstacle or failure to administer medical treatment. However, some complications can be seen during or after surgical closure.

Objective
To evaluate the safety and efficacy of paracetamol treatment in medical closure of PDA

Methods
Sixteen preterm infants with hemodynamically significant PDA who were hospitalized in our hospital in our newborn intensive care unit between September 2018 and June 2019 were evaluated retrospectively. Patients with ductus diameter› 1.5 mm and / or ratio of left atrial aorta (LA / Ao)› 1.5 were found to have hemodynamically significant PDA. One course of paracetamol treatment was administered as 60 mg / kg / day (4 doses, 3 days) in all cases. The patients who had a still open duct after one course of paracetamol were treated with the second dose of the same dose. Liver enzymes (ALT, AST) and total bilirubin levels were measured to evaluate hepatotoxicity.

Results
Sixteen preterm babies between 25 and 33 weeks of gestation were included in the study. It didn't open again. No side effects developed during treatment.

Conclusion
Although this study includes small number babies, we think that IV paracetamol treatment can be used as the first choice for medical closure of PDA. Because it is cheap, easily accessible, effective and has few side effects. However, randomized controlled trials are needed to confirm and generalize these results.

O1363 - TURKISH NATIONAL REGISTRY ON TREATMENT OPTION AND ITS TIMING IN PATENT DUCTUS ARTERIOSUS INTERPDA TRIAL

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Objective

Regarding the management of patent ductus arteriosus (PDA) in preterm infants, no consensus has been reached on which PDA to treat, when to treat, or how to treat. A prospective, multicenter (24 units) trial was conducted to compare the impacts of conservative approach and medical treatment options on ductal closure, surgical ligation, prematurity related morbidities and mortality in Turkey.

Methods

Infants with 24 0/7-28 6/7 weeks of gestation were enrolled and their PDA management data were recorded through an online registry system via electronic case report forms.

Results

Among 1193 enrolled infants (mean gestational age of 26.7±1.4 wk and mean birthweight of 926±243 g), 33% (n=397) had no PDA, whereas 21% (n=252) and 46% (n=544) had small or moderate-to-large PDA, respectively. 24% (n=130) of infants with hemodinamically significant PDA were managed conservatively in contrast to 76% (n=414) who received treatment at a mean age of 4±2.6 days. Preferred treatment options were ibuprofen (iv;36%, oral;31%), and paracetamol (iv;26%, oral;7%). 62% (n=80) of conservatively managed infants did not require any rescue treatment during their hospitalization. The rates of late-onset-sepsis, necrotizing enterocolitis (NEC), retinopathy of prematurity, bronchopulmonary dysplasia and surgical ligation were similar between conservatively managed and medically treated infants who lived longer than 7 days ($p>0.05$), whereas infants who were medically treated had a higher mortality rate ($p=0.005$). Infants who were treated with oral paracetamol had a higher rate of NEC in comparison to other treatment options ($p=0.04$).

Conclusion

In preterm infants born <29 weeks of gestation with moderate-to-large PDAs, medical treatment did not reduce surgical ligations or prematurity related morbidities, but was associated with a higher rate of mortality.

O1366 - OPPORTUNITIES FOR PARENTS TO BOND WITH THEIR PRETERM INFANTS IN NICUS ARE HIGHLY INSUFFICIENT IN TURKEY

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Many studies show that early contact such as visiting, touching, holding and skin to skin contact with the infant have many positive outcomes, e.g. better oxygen saturation levels, lower heart rates, pain relieving etc. However, when a preterm infant is hospitalized in the neonatal intensive care unit (NICU), mother and infant are often separated and not able to bond and build up a relationship as strong and quick as parents and infants outside NICUs.

In our study, we aimed to find out, if mothers in Turkey have the opportunity to be in contact with their infant either with regular visits, touch or kangaroo care. We conducted an online questionnaire during December 2018 and January 2019 and received 222 replies from mothers, whose infants were born between 24th and 35th gestational week and had been in NICUs due to premature birth either in public, private or university hospitals.

We showed that 16.4% of mothers were not allowed to visit their babies in the NICUs every day of the week. 35.2% of mothers could visit their babies only for less than 20 minutes per day. 16% of the mothers were not allowed touch their babies, and 35% of the mothers were not allowed to hold their babies during the first month or longer after their birth. 10% were permitted to hold their babies for the first time 2 month or later after birth. Only 14% were allowed to touch their babies the day they were born.
The higher the infant's birth week, the earlier their mothers were allowed to touch or hold them. For example, none of the mothers of infants born in 24th or 25th week were allowed to hold them earlier than 20 days after birth, whereas 29% of mothers with infants born in 34th to 35th week were permitted to hold them within the first three days. 86% of mothers we not allowed to see their babies whenever they want. 50% of mothers reported that skin to skin contact was not possible while their infant was in the NICU.

The data shows that the opportunities for parents to bond with their preterm infants in NICUs are highly insufficient in Turkey. We demand more opportunities for more frequent contact of mother and infant, including longer visiting hours, early and often touching and regular skin to skin contact starting from the first days after birth. This will enhance the physiological and neurological development of the baby and the psychological well-being of the parents.

O1378 - EPIDIMIOLOGICAL STUDY OF NEONATAL REFUGEES IN GREECE

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Introduction
Pregnant female refugees who have immigrated to Greece as a result of civil war in mild east countries are giving birth mostly in public hospitals. In context of family medicine, they should be screened in scheduled appointments in the prenatal period, however as still do not attend official screening registries and health management in camps and community health units. As in most cases the prenatal monitoring has been disrupted, the risk of delivery complications and neonatal morbidities still remains high.

Objective
Descriptive study in neonatal refugee population for purpose of evaluating the delivery complications and neonatal morbidity and mortality

Methods
In this prospective study, data were obtained for refugee live births that occurred in our hospital, between September 1, 2016 and December 31, 2018. Data for 137 neonates were analysed for gestational age, delivery type, prematurity, somatometric features. For 34 refugee neonates who hospitalised in NICU furthermore analysis for maternal morbidities, neonatal morbidity and mortality rates as well as for simple correlations was conducted.

Results
Overall, 137 refugees with median gestational age 39 weeks (2 IQR) were included and 34 neonates (24.8%) with median postmenstrual age 259 days (21 IQR) were admitted to NICU from which 22 (64.7%) were premature (<37w pma). Cesarean section was undertaken for 47 (34.1%) of all refugee live births and for 13 (38.2%) of the hospitalised in NICU neonates while the median for hospitalization was 4 days (2.5 IQR). Median neonatal birth weight was higher among non- hospitalised (3140 g, 610 IQR) than mean birth weight among hospitalised refugees (2533.27g, 729.87 SD) while from the later 4 (11.8%) were IUGR. Gestational hypertension was recorded for 3 (8.8%), gestational diabetes for 5 (14.7%), pre-eclampsia for 2(5.9%), chorioamnionitis for 2 (5.9%), PROM for 7 (20.6%) neonates admitted in the NICU. Neonatal morbidity in NICU was recorded as RDS for 8 (23.5%) neonates, from which prenatal steroid administration performed for 5 (14.7%), as jaundice for 20 (58.8%) and infection for 15 (44.1%). Maternal morbidity in an overall percentage of 29.4% was correlated with prematurity in 70% (CI 95%, 1.3-68.2, P 0.01, OR 8.17), RDS in 40% (CI 95%, 0.45-23.5, P 0.19, OR 3.2, no statistical significance) and infection (suspected and confirmed sepsis) in 60% (CI 95%, 0.43-15.2, P 0.27, OR 2.4, no statistical significance) of the hospitalised neonates. The neonatal mortality was recorded as a percentage of 2.9% (one death due to major complications).

Conclusion

Maternal and neonatal morbidities remain in high proportion for refugees. Caesarean rates are fairly higher than these reported in USA (32.8%) and in Europe (25%). Prematurity and IUGR constitute the main reason for admission to NICU and in association with maternal morbidity we approximately assume that these correlations could be the impact of nutritional inadequacies and poor prenatal care among pregnant refugee women in Greece. The low neonatal mortality rate could be attributed to high quality health care was achieved in NICU.

O1385 - DIRECT EFFECT OF CAFFEINE ON DIAPHRAGMATIC MUSCLES

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Methylxanthines are used for reducing apnea of prematurity (1). The mechanism is not completely understood, but it is thought to increase chemoreceptor responsiveness to CO2 in central nervous system (2, 3). Besides, effect of methylxanthines on diaphragmatic contractility has also been found in experimental studies (4). A study of premature newborns has showed caffeine increase diaphragmatic activity and tidal volume (5). But there is limited data about caffeine direct effect on diaphragma.

Objective
We aimed to show the direct effect of caffeine on diaphragmatic contractility.

Method
The babies under 32 weeks with respiratory support were enrolled in this study if caffeine treatment was decided to receive. Evaluation of muscle contraction was made by ultrasound before and 30 minutes after caffeine loading dose. Right and left sides of diaphragma thickness were measured by two clinicians on B mode ultrasound by anterior subcostal view. The velocity before and after caffeine administration was calculated, dividing excursion frequency (parameter) for inspiratory time, respectively. Movement of the diaphragm at inspiratory and expiratory phases was also observed on M mode and the difference between the two phases was measured.

Results
There isn't any statistically significant difference in both sides diaphragma thicknesses before and 30 minutes after caffeine loading dose. The changes between expiratory and inspiratory movement on M mode examination were not also improved. The outcome (bpd, death) was not found related with any measurement.

Conclusion
This study does not support the direct effect of caffeine on diaphragma, but more studies are needed to prove it.

O1387 - LUNG ULTRASONOGRAPHY DECREASES RADIATION EXPOSURE IN NEWBORNS WITH RESPIRATORY DISTRESS A PROSPECTIVE OBSERVATIONAL STUDY

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Objective
Respiratory distress is reported in nearly 80% of babies born at 28 weeks' gestation increasing to 90% at 24 weeks' gestation. Fifteen percent of term infants and twenty nine percent of late preterm infants also have respiratory distress. Chest X-ray is commonly used as first line imaging method to diagnose the reason of respiratory distress in NICUs. Lung ultrasound is a new diagnostic tool for lung imaging, and this method has been used more common recently in NICUs.
We aimed to determine the decrease in the number of chest X-rays in newborns with respiratory distress, with the use of lung ultrasonography.

Methods
We designed a prospective observational study. A total of 21 newborns with respiratory distress were included in the study. We used bed side ultrasound as the first line technic for lung imaging. X-ray were taken in cases with increasing respiratory distress in spite of treatment according to diagnosis depending on USG findings. We calculated decreased number of chest X ray for every patient and evaluated the estimated decrease in radiation exposure.

Results
21 preterm and term neonates with median 36 weeks (29-40) gestational age and birth weight 2640 gr (660-4100) were enrolled in the study. Fourteen (66%) of these babies were male, 95% (n=20) were born by cesarean section. Seven of them diagnosed as respiratory distress syndrome (white lung, pleural line abnormalities), 9 patients as transient tachypnea of the newborn (double lung point) and, 5 babies as congenital pneumonia (consolidations with irregular borders and air bronchograms, associated with pleural line abnormalities) by lung USG. Lung ultrasonography were performed 47 times for all study group but chest X-rays were performed a total of only 26 times simultaneously. In 4 patients, who were evaluated with only ultrasonography, X-ray were not performed.

Conclusion
Lung ultrasonography screening is a first line imaging technique for newborns with respiratory distress in our NICU. We observed that usage of lung ultrasonography decreased the number of chest X-ray and radiation exposure in newborns with respiratory distress.

O1390 - INFLUENCE OF INTENSIVE CARE UNIT LIGHT ON PREMATURE INFANTS ON FUNCTIONAL TO BRAIN MATURATION ASSESSED BY AEEG

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Objective
Amplitude-integrated EEG (aEEG) presents a valuable tool for functional brain maturation of preterm infants. However the effect of enlightenment on functional brain maturation of premature babies hasn't been investigated. We aimed to do this with aEEG.

Methods
33 babies,30-35 gestational weeks, are involved in the study. They were randomly distributed into three groups in which different lighting protocols were applied. In group1,the babies' incubators were covered for 24 hours. In group2 the babies' incubators were open for 24 hours. In group3 the babies' incubators were covered for 12 hours and open for another 12 hours. The babies are evaluated with aEEG recordings done on the third (first measurement) and tenth days (second measurement) along with the Burdjalov scoring. Anaysis of aEEG recordings was performed, based on sleep-wake cycles (SWC), upper and lower margin amplitude, narrow and broadband of SWC and bandwidth of SWC.

Results
At first,the narrow band lower amplitudes in group one were higher than those of the other groups (p:0,042), but the difference was not significant in the second measurement (p:0,110). The Burdjalov scores were higher in group1 and group3 on tenth days, though not statistically significant (p:0,871). When the babies were re-evaluated according to the gestational weeks, the Burdjalov scores of the two groups under 34 weeks(30-31 weeks, 32-33 weeks) were similar, whereas 34-35 weeks were higher when compared to those of the two groups.

Conclusions
The difference observed between groups in terms of narrow band lower amplitude in the first measurement, may reflect the effect of intrauterine environment rather than enlightenment at the same gestational age; because it was made on the third day. However the fact that all groups have similar results on day 10 suggests that other factors in the intensive care setting may diminish the effect of enlightenment. Burdjalov scores are associated with maturation, and high scores found in the 34-35 week group suggest that the 34-week maturation might be a threshold for SWC and development in our group sample.

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O1404 - COMPARISON OF 2014 2017 PERIOD TO 1997 2000 PERIOD FOR PRETERM MORTALITY AND MORBIDITIES IN A TERTIARY NICU

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Objective
Preterm birth is the most important cause of perinatal mortality and morbidities. The survival of preterm infants has been increased with the expansion of neonatal intensive care units (NICUs) and technical equipments, the formation of teams and introduction of less invasive treatments. Premature infants face to serious problems in their postnatal lives due to their different physiological and anatomical features. In this study, we aimed to compare the mortality and morbidities of preterm infants born at 240/7-316/7 weeks in last 4-years period with the 4-years period 20 years ago (1997-2000).

Methods
Infants born at 240/7 to 316/7 weeks or transferred to our NICU at first week of life between January 2014 and December 2017 were evaluated retrospectively. The results were compared with the results of 20-years ago. Infants who were transferred after first week of life or had congenital major anomaly were excluded.

Results
During the last 4 year period, 227 among 321 preterm infants admitted to our NICU were enrolled. The mean gestational age and birth weight were 29±2 weeks and 1158±372 g, respectively. Majority of infants were AGA (78%) and was born via cesarean section (89%). Sixty-eight percent of mothers received antenatal corticosteroids. The survival rate was 84% and the mean duration of hospitalization was 35.5±23.5 days. The incidences of respiratory distress syndrome (received surfactant), patent ductus arteriosus (PDA), necrotizing enterocolitis (NEC), intraventricular hemorrhage (IVH) (≥ Grade 3) and bronchopulmonary dysplasia (BPD) (moderate-severe), retinopathy of prematurity (ROP) and nosocomial sepsis (culture proven) were 44%, 21%, 12%, 7.2%, 7.2%, 7% and 21%, respectively. Sixty percent of infants with PDA received medical treatment whereas 40% managed conservatively. The incidence of rehospitalization was 13%, and the most common cause was apnea of prematurity. Thirty-five percent of infants received RSV immunoprophylaxis. When the results were compared to 1997-2000 period; NICU admissions have increased twice, the mean gestational age of infants was lower, but the incidence of cesarean section was still high. The incidence of surfactant use was increased by time whereas the incidence of NEC was lower and the conservative management for PDA was more preferred in 2014-2017 periods. On the other hand, the incidences of nosocomial sepsis, ROP, BPD and the rate of survival were similar in both periods.

Conclusion
Time period comparison helped us to update our knowledge about the preterm infants admitted to our NICU. Results demonstrated that although more conservative strategies have been used by time, no any change was observed in main morbidities due to increased survival rate of more preterm infants.

O1439 - NEONATAL DEATHS IN NICU OVER A 6 YEAR PERIOD

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Objectives
Neonatal mortality is an important index for the evaluation of the perinatal healthcare system. Although rapid advances in perinatal and neonatal care during the past few years contributed in decreasing the neonatal mortality rate worldwide, it remains a matter where more improvements could be implemented. The present study aims to determine in-hospital mortality rates and the factors related in a single unit.

Methods
This study involves retrospective analysis of collected data of infants who died in the NICU of the General Hospital of Athens "Alexandra", a Level III NICU with an on-site delivery service, between January 1, 2013 and December 31, 2018. Infants born at ≥22 weeks estimated gestational age who were born alive were included. Stillborn infants and infants who died in the delivery room were excluded. Variables that were recorded were: gestational age, birth weight, sex, singleton and multiple birth, age at death, principal cause of death, circumstances of death.

Results
A total of 2.549 neonates were admitted in NICU during the study period, while 108 of them died. Of those who died, 63 (58.3%) were male and 45 were female (41.7%). Neonatal hospital mortality rates for the years 2013, 2014, 2015, 2016, 2017 and 2018 were 6.9%, 3.7%, 6%, 3.2%, 3.2% and 3.4% respectively. 46 (42.6%) neonates died during night shift, from 8pm to 7am. 55 (50.9%) neonates died during the first 24 hours of life. Prematurity, low birth weight, respiratory distress syndrome, cardiorespiratory arrest, congenital anomalies and sepsis accounted for most of neonatal deaths. 40-70.5% of neonates who died weighted between 400-1000gr and 64.2-82.6% weighted <=1.500gr. Only 9.2%(n=10) had a birth weight >= 2.500 gr. 23.5-57.1% of neonates were <=26 weeks.

Conclusion
The neonatal mortality rates in our NICU are in accordance with mortality rates in other developed countries. Prematurity and low birth weight are the two most frequent causes of death, which could be attributable to the large number of preterm births in our hospital as it is worldwide Males were more likely to die than females and most neonates died during the first week of life, which is in accordance with results in other NICU's worldwide. Local data should be used to inform and monitor the implementation of interventions to improve newborn health.

O1441 - NEONATAL FOLLOW UP PROGRAM IN GEORGIA – FIRST EXPERIENCE

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Objective

The developments in perinatal care has led to increase in survival and also morbidity in preterm and high risk neonates. These cohort need to be followed up on regular base to ensure growth and developmental outcome, for early identification of delays and initiation of adequate stimulation and interventions. M. Iashvilis Children's Central Hospital in Tbilisi, Georgia initiated first follow-up clinic for high risk neonates, discharged from NICU of same hospital. Our goal was to assess developmental outcome. On first stage of survey we performed general observation, without grouping patients by problems. Main goal is to reveal possibility of elaboration of national protocol for NICU discharged infants follow-up, establish clear criteria for interventional programs and new services for high risk infants to ensure the best possible outcomes.

Methods

Prospective observational study over 2 year period was set up for neonates discharged from NICU In 2014 - 2018 period. Cohort of 237 neonates was assessed and still is under surveillance. Follow up clinic elaborates specific protocol for this purpose based on resources and needs of patients.
Enrollment criteria's were: Birth weight< 1800 gr, gestational age< 35 weeks , Small for date (<3rd percentile) and large for date (>97th percentile), Perinatal asphyxia - Apgar score 3 or less at 5 min and/or hypoxic ischemic encephalopathy, Mechanical ventilation for more than 24 hours, seizures, infections – meningitis and/or culture positive sepsis. Major morbidities such as CLD, IVH, PVL, Hyperbilirubinemia > 20mg/dL or requirement of exchange transfusion. major malformations, IEM / other genetic disorders. Assessment was performed at 6, 9, 12, 18 and 24 month corrected or chronological age. Main tool for assessment was Bayley Scales of Infant and Toddler Development, Third Edition (Bayley-III).

Results

From 237 high risk newborns assessed at age 6 month (chronological or corrected) – 27 % had moderate to severe global developmental problems (in 2 and more areas of development), 31.5% represented mild to moderate global developmental delays. At age 24 month developmental global delay was observed in 7% of cohort and delay in one area was stated in 27% of observed children. Up to 56% of children from delayed cohort were not offered interventional services in PHC facilities were they undergo immunization process and health check ups. Immunization schedule was not fulfilled according national schedule in 61 % of cases due to "possible complications linked to patient's risks".

Conclusion

More in depth separation of the cohort is needed to understand specific problems for main morbidity groups and elaborate separate plans for follow up. The results represented problems in national health care system due to inability to deal with high risk infants health issues. Possible best option can be fully associated these groups with NICU follow up clinics to ensure continuum of care and quality of service they need to receive. Main hypotheses to be tested in future must be: are outcomes better in case of high risk infants 2 years period observation in NICU follow up programs compared with PHC facilities for general

O1456 - COMPLIANCE WITH THE OXYGEN SATURATION TARGET RANGE IN VERY PRETERM INFANTS AND ITS CONSEQUENCES

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Objective
Following recent recommendations, the oxygen saturation (SpO2) target range for preterm infants was changed from 85 %-95% to 90%-95%.in our NICU. Our objective was to compare the compliance rates to the SpO2 target ranges between pre and post implementation periods and determine its consequences on the incidences of major morbidities such as intraventricular haemorrhage (IVH), necrotising enterocolitis (NEC), bronchopulmonary dysplasia (BPD), retinopathy of prematurity (ROP) etc.

Methods
A pre-post implementation (retrospective-prospective) study was performed in our NICU evaluating infants ≤ 32 weeks of gestation before (Group 1) and after (Group 2) changing the target ranges. Infants with major abnormality and severe cardiovascular disease. were excluded. SpO2 values were collected by using seconds based times series pulse oximetry data of NICU Central Monitoring System Database (collected by Mindray iMec Patient Monitors) till discharge. Oxygen was manually adjusted. Hypoxaemic (SpO2<80%;<%85; <%90); hyperoxic (SpO2> 95%: >98%) and within target range events (SpO2 90-95%) were analysed as well as rates of major morbidities.

Results
Data were analysed for 68 infants (30 before and 38 after the range was changed). The study groups were very similar in terms of demographic, antenatal and natal features. When the infants were receiving oxygen as well as during room air, the frequency of hyperoxic (>95%) events and mean SpO2 levels were significantly lower and within range events were significantly higher in the after change group ($p<0.01$for all). However, hypoxic episodes (<80%) when receiving oxygen was significantly higher in Group 2($p=0,03$). The incidence of NEC and the duration of hospital stay was significantly lower in Group 2 when compared to Group 1. ($p=0,022$ and 0,003 respectively). Although a tendency toward decreasing frequency was observed in mortality, BPD and ROP rates in the after change group, they did not reach significance.

Conclusion
Compliance with the new oxygen saturation target ranges in very preterm infants in our NICU seems to be relatively good and beneficial in terms of reducing some of the morbidities. This beneficial effect can be further improved by increasing the compliance.

O1475 - COMPARISON OF TRANSCUTENEOUS AND ARTERIAL BLOOD GAS PARTIAL CO2 AND O2 PRESSURE MEASUREMENTS IN NEONATAL INTENSIVE CARE PATIENTS

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The recognizing and managing acid base and oxygenation disorders in neonates have a significant effect on mortality and morbidity. In addition, identifying any acid base disorder and understanding its etiology are vital for effective treatment. The gold standard test for detecting any acid-base disturbance is arterial blood gas measurement in neonatal intensive care unit NICU patients. The disadvantage of blood gas measurement is that it is a painful and invasive method. Nowadays, noninvasive transcutaneous methods are also on the agenda for the evaluation of oxygenation in NICU.

Aim of this issue is to discuss the correlation of an alternative method which is noninvasive transcutaneous measurement with invasive arterial blood gas sampling in newborns. This study was generated in Gazi University Hospital NICU over 72 neonates which are 20 VLBW, 22 LBW and 30 normal birth weights.

Neonates are classified and evaluated according to their birth weights, gestational age, way of birth, perinatal risk factors, and intrauterine growth standards, diagnosis of sepsis and needs of transfusion, inotropic drug, respiratory support and phototherapy. Neonates between postnatal 1to 5 days were included into study. Blood sample is taken via umbilical artery catheterization or peripheral artery catheterization. Blood gas and transcutaneous partial oxygen and carbon dioxide levels (TcPO2 and TcPCO2) are measured at the same time. The level of agreement between PO2 and PCO2 measured by TCM4 CombiM Monitor, agreement was illustrated by Bland – Altman scattered plots and ICC statistic method. In general arterial blood sampling and transcutaneous results are found correlated. All groups except inotropic drug used neonates results are between %95 limits of agreement. During application and measurement there was no major side effect. The arterial blood gas and TcPO2 and TcPCO2 results of the patients classified according to their birth weight, type of delivery were discovered to be in concordance. The results of arterial blood gas and TcPO2 and TcPCO2 were determined to be in concordance in hypocapnic, normocapnic, hypercapnic infants and normotensive, hypotensive, hypertensive cases. The results of arterial blood gas and TcPO2 and TcPCO2 were found to be consistent in the group with or without PRBC transfusion. The results of arterial blood gas and TcPO2 and TcPCO2 were found to be compatible in the group with or without respiratory support. According to the prenatal risk factors, arterial blood gas and TcPO2 and TcPCO2 results were determined to be in concordance. As the result of this study, similar results are found with premature and mature neonates. As controversy, in literature there are studies were found unagreement in hyper/hypocapnic patient groups. In patients with and without sepsis, arterial blood gas and TcPO2 and TcPCO2 results were discovered to be in concordance

As a conclusion; transcutaneous carbon dioxide and oxygen monitoring is safe, useful, valid and non-invasive alternative method can be applied in NICU.

Neonatology - Bronchopulmonary dysplasia

O1449 - CONGENITAL PULMONARY AIRWAY MALFORMATIONS CASE REPORT

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This is the case of a 32 year old pregnant woman diagnosed during a second trimester ultrasound with a fetus presenting a congenital cystic adenomatoid malformation type 1 with macrocystic disease, hydrops, and mediastinal shift to the left, ascites, and polyhydramnios. Weekly ultrasounds and corticosteroid therapy for pulmonary maturation and indomethacin 25mg every 8h was prescribed. At 33 weeks she was admitted due to preterm labor. She underwent a C-section and delivered a 2,900g male, with respiratory distress, severe pulmonary hypertension and generalized cyanosis, requiring intubation and ventilatory support. An echocardiogram revealed no other cardiac malformations. A thoracic x-ray showed complete compromise of the right lung and 90% of the left with pulmonary hypoplasia. High frequency ventilation was initiated, with no clinical response, and the neonate died three hours after birth.

Cystic adenomatoid malformations are developmental malformations of the lower respiratory tract and the most frequent (25%) among all subtypes of congenital pulmonary malformations, with a variable history resulting in hydrops (40%) or regression (15% of the cases). Almost 100% of lung cysts can be detected at routine 18-20-week ultrasound or during the ethyological evaluation for polyhydramnios or fetal hydrops.

Complications in utero include mediastinum deviation, superior vena cava, or esophageal compression, leading to hydrops, hydramnios, and pulmonary hypoplasia. In our case, diagnosis was made at 22.1 weeks of gestation, based on postnatal classification as CCAM type one, though lesions ranged from 2-3 cm in diameter, compatible with bilateral macrocystic disease. Ultrasonography reported multiple cystic lesions in both lungs, along with polyhydramnios and hydrops. Prenatally, congenital cystic adenomatoid malformation (CCAM), is classified as macrocystic (<5mm, 26% incidence) or microcystic (>5mm diameter, 74% incidence). Congenital pulmonary airway malformation volume ratio (CVR) is a sonographic indicator for risk of hydrops. A CVR <1.6 suggests a low risk for hydrops in the absence of a dominant large cyst, as opposed to a CVR > 1.6 with a dominant large cyst which translates a high risk for hydrops. Postnatally, CCAM is classified in five types due to various parameters.

The CVR was not reported and weekly follow up was performed, despite the diagnosis of polyhydramnios and hydrops no surgical intervention was made.

Ultrasonography and clinical presentation were compatible with CCAM type three, where polyhydramnios and hydrops are common, as well as progressive respiratory distress, all present in this case. Without prenatal intervention, bilateral disease and hydrops are indicators of poor outcome, risk of perinatal death approaches 100%.

Several interventions for CCAM are available, including amniocentesis, steroid therapy, thoracoamniotic shunts and laser ablation among others. Approach depends on the type of anomaly, macro versus microcystic disease, steroids being the only medical treatment reported to reverse hydrops and improve outcome, though in this particular case showed no benefit. In conclusion, the diagnosis presented was not compatible and didn't show the prognosis reported in 95% of the cases for congenital pulmonary airway malformation type one, which didn´t allow for further intervention.

Neonatology - Lung injury and long-term lung function

O1121 - IS THERE A RELATIONSHIP BETWEEN LAMELLAR BODY COUNT AND CORD BLOOD VITAMIN D LEVEL IN TERM AND LATE PRETERM INFANTS

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Objective
Many recent studies suggest that vitamin D deficiency has a detrimental impact on lung development in neonatal period, but the mechanism of this association has not been clearly understood. The aim of this study was to investigate the effect of vitamin D deficiency on surfactant synthesis and whether it has a role on lung maturation.

Methods
Umbilical cord blood samples and gastric aspirates were immediately obtained in the delivery room from the infants, of ≥34 weeks' gestation. Family consent was taken. Vitamin D level was measured from umbilical cord blood and lamellar body counts(LBC) from gastric aspirate. All babies were monitored from birth and Silverman scoring was performed every 30 minutes. Infants with a score of ≥4 were admitted to the neonatal intensive care unit (NICU). Infants were divided into two groups: admitted to NICU because of respiratory problems and not admitted to NICU. Vitamin D level and lamellar body counts were compared in two groups.

Results
46 babies in the NICU group and 27 babies in the control group were analyzed. Mean gestational ages (36.3 ± 1.4 in the NICU group and 37.9 ± 1.3 weeks in the control group) and mean birth weights (2761 ± 491 and 3138 ± 419 g, respectively) were significantly lower in the NICU group. ($p < 0.01$). Lamellar body counts (109 × 103 ± 20 × 103 and 191 × 103 ± 27 × 103 / µl, $p < 0.001$) and vitamin D levels (7.9 ± 1.1 and 14.3 ± 0.8 ng / ml, $p = 0.017$) were both lower in the NICU group. No significant relationship was found between the lamellar body counts and vitamin D levels ($r = -0.031$, $p = 0.79$).

Conclusion
Vitamin D deficiency in pregnancy has detrimental consequences on placental development. It may be a cause of preterm birth that leads to development of respiratory distress syndrome. Measuring LBC from amniotic fluid, tracheal aspirate or gastric fluid can be used to determine surfactant level which is related lung maturation. Since lung maturation and lamellar body counts are directly proportional with gestational weeks, we aimed to select infants of ≥34 weeks gestation in which lung maturation is relatively mature. In this study, vitamin D and LBC were found to be lower in infants with respiratory distress supporting vitamin D's role in lung development. Maternal vitamin D deficiency may have a negative role on surfactant synthesis in infants.

O1388 - TIDAL BREATHING PARAMETERS MEASURED BY STRUCTURED LIGHT PLETHYSMOGRAPHY IN NEWBORNS IS IT FEASIBLE IN NICU

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Introduction
Measurement of lung function helps in diagnosis, monitoring and treatment of respiratory diseases but conventional techniques such as spirometry are not possible in newborn babies. Structured Light Plethysmography (SLP) is a novel, non-contact, bed side respiratory assessment technique. It provides non-invasive tidal breathing measurement in patients difficult to cooperate such as newborns.

Objective
To determine the normal values for tidal breathing parameters measured by Structured Light Plethysmography (SLP) in term and late preterm newborns without respiratory pathology.

Methods
Infants between 2-5 days of life without having any respiratory symptoms were eligible for this observational study. Infants with all known disorders likely to cause tachypnea, major congenital anomalies, sepsis, hypoglycemia and perinatal asphyxia were excluded. Study infants were divided into 2 groups according to gestational age as term and late preterm infants. Five minutes of tidal breathing was recorded using SLP (Thora-3Di, Pneuma Care Ltd) in each infant. Various tidal breathing parameters including timing indices; respiratory rate (RR), inspiratory time (tI), expiratory time (tE), total breath time (tTot), flow-based parameters; time to reach peak tidal expiratory flow over tE (tPTEF/tE), time to reach peak tidal inspiratory flow over tI (tPTIF/tI), tidal inspiratory flow at 50% of inspiratory volume divided by tidal expiratory flow at 50% of expiratory volume (IE50) and regional parameters; left–right hemi-thoracic asynchrony in degree (HTA), thoraco-abdominal asynchrony in degree (TAA), relative contribution of the thorax to each breath in percentage (rCT) were obtained from every detected breath.

Results
A total of 57 infants underwent SLP measurements in the study. Evaluable recordings from 42 term and 11 late preterm infants were analyzed after exclusions. Median (IQR) gestational age and birthweight of the infants were 38 (37-39) and 3195 (2790–3585) respectively.
Median (IQR) values for timing indices in whole study infants were presented as follows: RR 49 (43-58), tI 0.51 (0.50-0.60), tE 0.67 (0.53-0.77), tTot 1.23 (1.03-1.40).
Flow based parameters in study infants calculated as median (IQR) were as follows: IE50 1.29 (1.13-1.53), tPTEF/tE 0.44 (0.38-0.52), tPTIF/tI 0.44 (0.40-0.47).
Regional parameters as median (IQR) were rCT 38.67 (28.21-43.60), rCRHTX 18.78 (14.56-22.19), rCLHTX 20.32 (13.94-22.89), HTA 6.92 (5.35-9.04), TAA 17.96 (12.98-36.44) in the study population.
There were no differences in tidal breathing parameters except a regional parameter, 'hemi-thoracic asynchrony' between term and late preterm infants. HTA was significantly lower in term neonates than late preterms.

Conclusion
SLP was found to be feasible to obtain measures of tidal breathing parameters in newborns and it could be performed successfully even in the first days of life.

Neonatology - Neonatal Nutrition

O1075 - EFFECTS OF PROBIOTICS ON NEONATES WITH HYPOXIC–ISCHAEMIC ENCEPHALOPATHY AFTER THERAPEUTIC HYPOTHERMIA

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Objective
Hypoxic–ischaemic encephalopathy (HIE) may lead to dysfunction of heart, lung, kidney, brain and intestine. In Japan, therapeutic hypothermia (TH) is now used as a standard treatment for moderate to severe neonatal HIE. However, guidelines for enteral feeding during and after TH in patients with HIE have not been evaluated. Our concern was that delayed enteral feeding would provide harmful effects to enterobacterial flora. Therefore, this study aimed to examine the effects of probiotics on infants with HIE treated with TH.

Methods
This retrospective cohort study was conducted at the neonatal intensive care unit (NICU) at Juntendo University Shizuoka Hospital, Shizuoka, Japan. Infants with HIE treated with TH, admitted to the unit from May 2012 to June 2018, were included in this study. The inclusion criteria included gestational age at birth to be 36 weeks and birth weight to be 1800 g. All infants started enteral feeding after TH on day 4. The collected data included the clinical course, body weight measured over time and duration of NICU stay. Results between the probiotic group (group P: enteral feeding started with probiotics, B. brave, 5 × 109 CFU/day) and no probiotic group (group NP: enteral feeding started without probiotics) were compared.

Results
The two groups included 10 infants each. Significant difference was not found between the groups in terms of mean gestational age at birth, birth weight, perinatal Objective and severity of HIE. Moreover, the start time of enteral feeding after birth, day of reaching full enteral feeding (150 mL/kg/day), day on which appropriate body weight was achieved, duration of hospital stay and weight increment per day did not differ significantly between the two groups. However, infants in group P with median body weight were significantly heavier at the time of discharge than those in group NP ($p < 0.05$).

Discussion
In this study, we examined the effect of probiotics on enteral feeding and body weight gain in infants with HIE who were treated with TH. Significant effects were not found on the day when full enteral feeding was achieved and the duration of hospital stay, but the results of this study suggested that daily supplementation of probiotics helps such infants to gain weight. Further studies are necessary to clarify the effects of probiotics on infants with HIE after TH treatment.

O1261 - FEEDING MODE AND GASTRIC EMPTYING TIME IN NEONATES WITH GESTATIONAL AGE

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Objective
To evaluate gastric emptying time during continuous and intermittent milk feeds in very premature neonates, based on antral cross-sectional area (ACSA) measurements.

Methods
A randomized prospective clinical trial with crossover design was conducted with 31 preterm neonates with gestational age (GA)<30 weeks, hospitalized in our NICU over a one year period. Gastric emptying time was assessed twice in every neonate: during intermittent (group A) and continuous feeding (group B) by measuring ACSA changes with ultrasound (U/S) during a 2-hours observation period, at 7 specific time points: every 10 minutes for the first half hour and thereafter every 30 minutes; the last one in 120 minutes after the milk feed administration.

Results
All study neonates had mean birth weight (± SD) of 982 (± 28) grams and a mean GA (± SD) of 28.3 (± 1.5) weeks. In 11 neonates during continuous feeding we haven't measured gastric emptying, as ACSA didn't reached the half of the initial value which is necessary for the measurement. Statistically significant difference was found with regards to the mean gastric emptying time between group A and group B [37.8±15 minutes vs 57.7±29 minutes (P=0.0032)]. In the last U/S measurement (at 120 min), group A had mean ACSA value 0.1cm2 and group B had 0.8cm2, and this difference was statistically significant (P<0.001). Median ACSA value measured at 120min, was expressed as percentage, of ACSA value measured immediately after administering feeding milk and was found 3% (range 0-25%) for group A and 50% (range 15-80%) for group B. No complications or signs of feeding intolerance were recorded for the neonates of both groups.

Conclusion
In very preterm neonates, gastric emptying time seems to depend on the mode of oral feeding method. Our study results show that gastric emptying time is shorter when feeding these neonates intermittently. It is noteworthy, in neonates who were fed with the continuous feeding mode, no gastrointestinal complications were noted despite the fact that gastric residual reached the 80% of gastric feeding volume according to ACSA values calculated. Further studies are necessary to verify our findings as similar results may suggest changes in the nutritional practices of this very susceptible neonatal population.

O1263 - CAFFEINE AND GASTRIC EMPTYING TIME IN VERY LOW BIRTH WEIGHT NEONATES

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Objective
Primary objective of our study was to investigate the effect of caffeine on the gastric emptying time of very low birth weight (VLBW) neonates. Secondary objectives were a) to assess the effect of caffeine on gastric emptying time in very preterm neonates in association with their birth weight (BW) and b) to evaluate the occurrence of gastrointestinal complications during caffeine treatment.

Methods
This randomized cross-over clinical trial was conducted during over a 6 months period at a tertiary-level 26 bed NICU in Greece. We studied 22 preterm neonates appropriate for gestational age with BW less than 1500gr and the need for caffeine treatment after excluding neonates with congenital anomalies, intrauterine growth retardation (IUGR) or necrotizing enterocolitis (NEC) stage II or III. Gastric emptying time was checked twice for each neonate, with ultrasound assessment of changes in antral cross sectional area (ACSA). All neonates were sequentially allocated to the caffeine group and the control group (without caffeine treatment). Complications from the gastrointestinal tract were documented throughout the study.

Results
All study neonates had mean BW (±SD) 1077 (±229) g and mean gestational age (GA) (±SD) 28.6 (±2.1). The mean gastric emptying time (SD) between caffeine treatment group [41.7 (4.4) min] and control group [31.5 (3.1) min] had not significant statistical difference (P=0.065). However in the neonates with BW 1000-1500g, the gastric emptying time was significant longer during caffeine treatment [53.1 (±5.8) min] as compared to the gastric emptying time during no caffeine treatment [32.6 (±3.9) min] (P=0.003). More gastrointestinal complications were recorded (6 versus 1) during caffeine treatment, but the difference was not statistically significant (P=0.09).

Conclusion
Our study showed that VLBW neonates who received caffeine had no significant delay in the gastric emptying time, nor statistically significant difference in the number and the severity of the gastrointestinal complications during the first weeks of life. Despite these findings, the effect of caffeine treatment on gastric emptying time seems to be in association with BW, as in our neonates with BW 1000-1500g a delay of gastric emptying time was observed. It is obvious that further and larger studies are needed to confirm our interesting findings.

O1316 - PROPHYLACTIC FUCOSE CAN ALLEVIATE LPS INDUCED CHOLESTATIC LIVER INJURY IN NEONATAL RATS

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Objective
Cholestasis is a common disease of the liver in premature infants and no specific preventive treatment is currently available. Fucose, one of the monosaccharide building blocks of human milk oligosaccharides, may prevent cholestatic hepatic injury by various mechanisms. The aim of this study was to investigate the protective effect of fucose treatment after endotoxin induced cholestasis in a rat model.

Methods
Wistar rat pups were divided into four groups as: Group I, control group; Group II, fucose-supplemented group; Group III, lipopolysaccharide (LPS)-administered group and Group IV, LPS - exposed and fucose-supplemented group. Fucose was administered via intraperitoneal (i.p.) injection every other day between 5ththrough 17th days. LPS was administered on the 19th day to establish endotoxin-induced cholestasis model. On postnatal day 21, biochemical analysis was performed, and animals were sacrificed to evaluate liver cell damage and apoptosis by immunohistochemical assessments.

Results
Fucose supplementation significantly improved the biochemical parameters that deteriorated in LPS administered group, significantly increased the expression of bile salt export pump, reduced the number of apoptotic cell death and greatly prevented LPS-induced cholestatic hepatic injury.

Conclusion
Given our results, fucose may be useful in reducing hepatic injury and possessing clinical relevance for the preventive treatment of inflammation induced cholestatic injury in newborns.

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O1465 - IMPORTANCE OF THE BABY FRIENDLY HOSPITAL INITIATIVE FOR NEONATAL WARDS (NEO BFHI)

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Objective
Breastfeeding is the optimal way of premature infants' feeding as it contributes to their growth, development and overall health outcomes. The Baby Friendly Hospital Initative for Neonatal Wards (the Neo-BFHI) is a program developed by the Nordic and Quebec Working Group focused on breastfeeding support for preterm and ill infants. The Neo-BFHI includes Three Guiding Principles, the expanded BFHI's Ten Steps and compliance with the International Code of Marketing of Breast-milk Substitutes (Code). The Neo-BFHI was launched in Croatia in 2013 as well in many other countries. Recently, the results of the first international study measuring compliance with the Neo-BFHI policies and practices in neonatal wards were published which allow to identify the challenges for the Neo-BFHI implementation on the country level. The aim is to present the Croatian results reported in the first international study measuring compliance with Neo-BFHI policies and practices.

Methods
A cross-sectional survey in 36 countries was carried out in 2017. All thirteen Croatian neonatal intensive care units (NICUs) participated in the study (response rate 100%), of which 5 units were level 2 and 8 level 3. Out of 13 NICUs, 11 were in hospitals designated as Baby-friendly. Compliance was measured with the Neo-BFHI's Self-Assessment questionnaire which included a set of indicators for the14 components of the Neo-BFHI (the three Guiding Principles, Ten Steps and the Code). Croatian data was extracted from a benchmark report. Results were reported as a country overall score and scores obtained on 14 components. Country scores for the level 2 and level 3 NICUs were compared.

Results
The median Croatian overall score was 77, which was the same as the median international overall score. When compared with the international scores for each of the 14 components of the Neo-BFHI, the lowest scores in Croatia were obtained for Guiding Principle (GP) 2 about family-centered care (67 vs. 82), Step 4 about kangaroo care (50 vs. 80) and Step 7 about rooming-in (33 vs. 67). Level 3 NICUs achieved less favorable scores on those 3 components compared to level 2 NICUs. In the majority (77%) of Croatian NICUs the estimated daily duration of kangaroo care was less than 4 hours. Sixty nine percent of our NICUs reported a free 24/7 maternal visiting policy while 85% were restrictive regarding paternal visiting. The country scores obtained on GP 1 and Steps 1, 2, 5, 6, 8 and 10 were above the international scores. Compliance with the Code was high.

Conclusion
Croatian NICUs achieved relatively high compliance with the Neo-BFHI policies and practices. However, more efforts are required to increase the involvement of parents in care for their infants and to better support breastfeeding in neonatal wards. A benchmark report prepared for each neonatal ward presenting the results for their ward, their country and international, will help each unit to identify the obstacles in the Neo-BFHI implementation and plan how to fully integrate the BFHI into their unit.

Neonatology - Nutrition of the Very Preterm

O1278 - EFFECT OF SAFE INDIVIDUALIZED NIPPLE FEEDING COMPETENCE (SINC) FEEDING PROTOCOL ON WEIGHT GAIN TRANSITION TO ORAL FEEDING AND THE LENGTH OF HOSPITALIZATION IN PREMATURE INFANTS RANDOMIZED CONTROLLED STUDY

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Objective
The purpose of this randomized trial is to test the effect of Safe Individualized Nipple-Feeding Competence (SINC) feeding protocol on preterm infants' weight gain, the transition to oral feeding and the length of hospitalization.

Methods
This was single-blinded, parallel group randomized controlled trial. The trial was conducted in the Selcuk University neonatal intensive care unit in Konya. Data were collected February 2018- March 2019 from 76 infants. 76 preterm neonates (28–33 weeks gestation) were randomly assigned to the intervention (n= 37) and control groups (n=39). The intervention group received SINC feeding protocol and the control group received standart feeding method. Primary outcomes are weight gain, the transition to oral feeding and the length of hospitalization from birth to discharge. The data were assessed by Pearson $\chi 2$ analyses or Fisher's exact test and by independent t test and Mann-Whitney U test.

Results
There were no significant differences in our primary outcomes at first oral feeding (mean difference: 2.12 days 95% CI: -0.59 to 0.31), the transition to full oral feeding (mean difference: -0.07 days 95% CI: -0.39 to 0.51 days) and the length of hospitalization (mean difference 3.4 days 95% CI: -0.48 to 0.42 days) ($p > 0.05$). There was better weight gain in the intervention group ($p < 0.001$).

Conclusion
Evidence based feeding practices improve outcomes in preterm infants. These provide empowering nursing and improving the quality of care.
Trial registration: ClinicalTrials.gov Identifier: NCT03371927

Neonatology - Neonatal Brain Injury and Neuroprotection

O1138 - AN AUDIT ON NEUROPROTECTIVE MEASURES IN PRETERM INFANTS

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Objective
To assess and compare compliance and completion rates of neuroprotective measures over the years 2016-2018. Preterm neonates and those with low birthweight are at greater risk of early neurological damage leading to long-term sequelae. There are a myriad of factors that contribute which are often subdivided into neuroprotective factors and neurodevelopmental factors. This audit focused on neuroprotective factors.

Methods
Retrospective audit comparing three years of data from 2016 to 2018
Data was collected using the online database BadgerNet and Clinical Portal. Included all patients who were ≤ 29 weeks gestational age or birthweight of <1.5kg. Data was collected on the following: antenatal steroids, antenatal magnesium sulphate, admission temperature, delayed cord clamping, early caffeine citrate use, hypocarbia and prevalence of intraventricular haemorrhage.

Results
Since introduction of neuroprotective measures the overall prevalence of intraventricular haemorrhage has reduced. Prevalence of a full course of antenatal steroids has increased by 18% alongside use of magnesium sulphate, which has increased by 10%. Delayed cord clamping has increased by 27%. Abnormal admission temperature (<36.5 or >37.5) has decreased by 12%. Hypocarbia has decreased by 7%. Early caffeine use is maintained at 92%.

Conclusion
Overall, the rate of adherence to known neuroprotective factors is increasing and this has been reflected in a decrease in the prevalence of intraventricular haemorrhage. This is encouraging given that there is also a trend of babies being born earlier and at a lower birth weight. Further work is needed to include neurodevelopmental factors and data on the long term sequelae of these patients.

O1167 - THE IMPACT OF THE APPLICATION OF NURSING CARE PLAN IN THE MINIMUM MANIPULATION IN THE NEONATAL INTENSIVE CARE UNIT

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Introduction
Minimal manipulation refers to a care grouping in which the newborn is seen as the care center, which leads caregivers to act together, prioritizing the need for newborns 1. Caring for newborns in a Neonatal ICU demonstrates the coexistence with the fragility of living / surviving in the light of complexity 2.

Objective
To verify the impact of the application of the Protocol of minimal manipulation in the control of Intraventricular Hemorrhage in the Neonatal Intensive Care Unit of a private Institution of the State of São Paulo.

Methods
Minimal manipulation protocol was developed in the Neonatal Intensive Care Unit of the Jewish Albert Einstein Hospital in the period of October 2017. Inclusion criteria: newborns with gestational age ≤ 29 6/7 weeks and/or ≤ 1,500g. Strict minimum manipulation was maintained in the first 72 hours of life and could be extended up to the 7th day of life 3-5. The release of the change of decubitus is allowed from the 7th day of life. First Ultrasound of Cranial Fontanelles between the 3rd and 7th day of life of the newborn, to verify hemorrhage 6,7. There was an explanation of the content for the multidisciplinary team and family of the newborn, fixed support material in the unit and fixed identifier in the incubator for visualization of the newborn participants of the protocol.

Results: Grafic

Conclusion
There was a positive impact on the application of the Protocol, even though it did not demonstrate a significant decrease in cases of Intraventricular Cerebral hemorrhage. There was a decrease between grade I and III. The incidence of intraventricular cerebral hemorrhages decreased from 40.6% (CI 95%: 29.5%-52.8%) In 2016 to 39.5% (95% CI: 26.4%-54.4%) at 2018. Grade III and IV Hemorrhages showed a decrease from 84.4% to 83.7%. Considering the non-measurable results on the implementation of the Protocol, we can observe the involvement of the nursing team that conducted the protocol orientation and there was great adherence to the multidisciplinary team and the newborn's family. The awareness of the multidisciplinary team regarding the importance of minimal manipulation. The support material that was essential support for conducting the implementation of the Protocol. The identifier fixed in the incubators for visualization reinforced the orientation of the multiprofessional team and the family of newborns.

O1315 - IDEAL POSTNATAL DIET TO ACHIEVE THE BEST NEURODEVELOPMENTAL OUTCOME IN THE FETAL GROWTH RESTRICTION MODEL

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Objective
Fetal growth restriction (FGR) describes the state when a fetus is unable to achieve genetically pre-determined potential of growth due to several pathologies. Postnatal management of FGR requires close monitoring of the nutritional status of these infants, however, whether negative effects of FGR can be alleviated by postnatal diet and the ideal postnatal diet to achieve the best neurodevelopmental outcome in the presence of FGR remains unclear. Our aim is to investigate the ideal postnatal diet for the best neurodevelopmental outcome in an animal model of FGR.

Methods
Female Wistar rats were fed a diet containing either 10% (low protein, LP) or 20% protein (standart protein, SP) diet starting after breeding and were maintained on their respective diets throughout pregnancy. In order to establish an intrauterine growth restriction model both groups received 300 µg/kg intraperitoneal lipopolysaccharide (LPS) on embryonic days (E) 18 and E19 in addition to dietary protein restriction.
After birth, rats were further assigned into three groups and fed a diet containing either, LP, SP or 50% protein (high protein, HP). Neuro-behavioral development of offsprings were evaluated on postnatal day (PN) 30. Pups were sacrificed on PN 35 and hippocampus, dentate gyrus and prefrontal cortex were evaluated histologically.

Results
Antenatal LP group displayed lower birth weight and lower brain weight in the offspring as well as lower neurobehavioral scores compared with antenatal SP group. Histologic examination revealed increased apoptosis in antenatal LP group when compared with antenatal SP group. Postnatal SP and HP diet in antenatal LP group lowered apoptosis and increased neuronal density in dentate gyrus when compared with postnatal LP group. Postnatal SP diet in antenatal LP group significantly improved speed and total distance scores in water maze test when compared with postnatal LP and HP groups.

Conclusion
Brain injury due to FGR can be alleviated by postnatal SP diet. Postnatal HP diet was not associated with better histologic outcome in the prefrontal cortex and dentate gyrus in antenatal LP group. Moreover, in antenatal SP group, postnatal HP support resulted in unfavorable histologic results in the hippocampus, prefrontal cortex and dentate gyrus compared to postnatal SP diet. Although, postnatal HP support was associated with a successful catch-up growth in short term, better neurodevelopmental scores in the offsprings were achieved by postnatal SP diet rather than postnatal HP support.

O1350 - "ARE WE THERE YET " "NOT YET!" REFERRAL AND TRANSPORT PROCESSES TAKING WAY TOO LONG FOR THE SAFETY OF JAUNDICED NEWBORNS' BRAINS WHAT COULD BE DONE

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The aim of this retrospective research was to vocalize numerically that the amount of serum total bilirubin (STB) levels of jaundiced newborns who are referred to our hospital from other clinics increase significantly and reach dangerous levels while waiting in the emergency rooms (ERs) and during transport.
Computer files of the patients accepted to our neonatal intensive care unit (NICU) between January 2017 and June 2019 were scanned, demographic data and laboratory results were recorded. Patients who were hospitalized for hyperbilirubinemia but turned out to have neonatal sepsis or those who developed hyperbilirubinemia during their period of hospitalization for another reason were excluded.

1077 patients were accepted for unconjugated hyperbilirubinemia, 523 (48.6%) of these were either from our own out-patient clinics or ER and 554 (51.4%) were accepted from centers all around the city. 593 were males (%55.1) and 484 were females (44.9%). Fifty newborns (4.6%) were hospitalized within the first 24 hours of life. There were only 2 patients, both from our clinic, with TSB levels >30 mg/dl, who were both referred to tertiary clinics for exchange transfusion. 208 newborns had STB levels ≥20 mg/dl, and among these 13 had TSB ≥25 mg/dl. Patients were evaluated separately as those from our clinic and referred patients. The first STB measured which was used as phototherapy indication and STB level with which the patient was accepted to NICU were compared. In both groups, increases in STB values as the patients went through the hospitalization procedures were statistically significant (both $p<0.001$). When the differences between the first and second measurements were compared among the groups, the rise in the STB levels of the transport group was significantly higher than that of our out-patient group ($p<0.001$). TSB levels of 87 patients had increased more than 20% during hospitalization process and among these 76 patients (87.4%) were referred from another hospital.

The time it takes for patients from our clinic to be diagnosed with hyperbilirubinemia and accepted to NICU is fairly uniform; however same cannot be told for those being referred from other clinics, the period being as long as 6-8 hours for some. These patients wait in the ER for the Provincial Health Directorate Transfer Unit to find a suitable NICU, an ambulance to pick them up and deliver them to their destination, during which (with the exception of one or two centers) nothing is being done to lower the initial STB level, contrarily increasing the risk of acute bilirubin encephalopathy and kernicterus. This "study" has many flaws; however, the main objective is to draw attention to the period wasted while waiting for transfer to the referred unit and the increasing STB levels which were never before verbalized as statistical numbers.

The use of modalities to allow newborns with hyperbilirubinemia receive phototherapy while waiting for and during transport (e.g. portable LED phototherapy devices, biliblankets, etc.) should be made widespread as the first step of neuroprotection. Campaigns (national and worldwide) for hyperbilirubinemia awareness should be initiated.

O1394 - MATERNAL PROGESTERONE THERAPY INDUCES MYELINATION IN THE FETAL BRAIN

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Objective
To study any possible effects of maternal progesterone therapy on important proteins and receptors in fetal brain tissue of rats.

Materials and Methods
Fifteen female Speaque-Dawley rats were used in this study, which were divided in three groups. 17-α-OH progesterone caproate 7mg/kg, i.m. was applied once a week to Group A, from first day of pregnancy. Micronised progesteron 4mg/kg p.o. was daily applied to Group B, from first day of pregnancy. Group C was control group and olive oil was given daily from first day of pregnancy. After 21 days pregnancy period, 152 newborn rats were born by vaginal birth. 60 of them, including 4 from each mother, were taken study and decapitated from first day of their birth. Their brain tissues were obtained and ER, PR, MBP, PLP, OLIG2, PDGFR were studied by immunohistochemistry.

Results
Groups A and B had significantly more expression of ER, MBP, PLP, OLIG2; and less expression of PDGFR; compared to Group C. None of the groups had PR expression.

Conclusion
There are very few studies concerning the effect of maternal progesteron therapy on fetal organ systems. Our study revealed significant effects of progesterone therapy on fetal brain receptors and proteins, which have particular roles on embryogenesis and brain tissue development. In the light of these results, long term effects of maternal progesterone therapy on fetus remains to be studied; including possible effects on metabolism, cognitive functions, sexual behaviour, neuron migration and differentiation and increased myelination. Maternal progesterone therapy causes statistically significant changes on expressions of several proteins and receptors in brain, which have important roles in central nervous system development.

O1411 - SERUM GLIAL FIBRILLARY ACIDIC PROTEIN (GFAP) AS A BIOMARKER FOR PRETERM NEONATAL BRAIN INJURY: A PROSPECTIVE LONGITUDINAL CASE CONTROL STUDY

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Objective
Preterm birth (< 37 weeks gestation) is a significant public health problem worldwide. Consequences of prematurity are numerous, with the preterm neonatal brain injury (NBI) being one of the most severe. The underlying mechanism of NBI involves an initial insult to the vulnerable, developing fetal brain that is usually either of hypoxic–ischemic, hemorrhagic or infectious in nature and activates a cascade of events leading to further brain injury. Neonatal brain injury increases the risk for serious long-term neurodevelopmental impairment, including motor, cognitive, neurologic and sensory disability. Intraventricular hemorrhage (IVH), periventricular leukomalacia (PVL) and hypoxic-ischemic encephalopathy (HIE) are subtypes of brain injury which can affect infants born at any gestational age, however, infants born <34 weeks gestation are more prone to IVH and PVL. We sought to determine whether neonatal glial fibrillary acidic protein (GFAP) levels on the first 3 days of life could identify in preterm infants (<34 weeks gestation) NBI.

Methods
This is a prospective longitudinal case-control study of all liveborn, nonanomalous preterm (<34w) neonates who were born at a single tertiary hospital and were admitted to the NICU from November 2016 – January 2018. Neonates with major congenital malformations, chromosomal or genetic abnormalities were excluded from the study. For GFAP, the residual unused portion of serum from daily routine clinical laboratory tests was used during the first 3 days of life. Most of these samples were obtained from peripheral or umbilical vessels. Residual serum was aliquoted and stored at -35 C until assayed. After neonatal discharge, we reviewed the results of head scans from ultrasound or magnetic resonance imaging. Preterm infants with NBI were then compared with normal ones at the same gestational age within 1 week, similar birthweight and mode of delivery, matching in a 1:1 fashion. Head imaging scans were all performed in the same hospital and were evaluated by 2 pediatric radiologists.

Results
During our study, 29 cases with NBI with gestational age 29.6±3.0 weeks and birth weight of 1225±475gr were compared with 29 control infants (gestational age: 29.9±2.5 weeks; birth weight: 1303±428gr). The incidence of caesarean delivery was 91.4% in both groups. The lowest detection limit (0.05ng/ml) of the kit used was set as reference for the statistical analysis. The frequency of samples with GFAP level more than 0.05ng/ml was higher on day 1 (X2-test, p=0.01), day 2 (X2-test, p=0.04) and day 3 (X2-test, p=0.05) in the NBI group.

Conclusion

Level of GFAP differs during the first 3 days of life between normal and neonates that will later develop NBI. The ability to predict NBI with a blood test for GFAP shortly after birth opens the possibility for rapid identification of infants for early intervention and provides a benchmark for the determination of future neuroprotective strategies.

O1415 - NEUROLOGICAL OUTCOME OF LATE PRETERM SMALL FOR GESTATIONAL AGE INFANTS COMPARED TO APPROPRIATE FOR GESTATIONAL AGE THROUGH FIRST YEAR OF LIFE DO THEY REALLY DIFFER

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Background
Late Preterm Infants (LPIs) are at increased risk for morbidity and mortality. Small for gestational age (SGA) refers to restricted size at birth. Although SGA preterms are prone to neurodevelopmental delay, only few studies have reports on neurological outcome during the first years of life, with differing results. High-risk infant follow up programs provide early identification and referral for treatment of neurodevelopmental delays/impairment.

Objective
The aim of this cohort study was to compare SGA/LPIs with AGA/LPIs neurological/neuromotor outcome within first year of life corrected age (CA), and investigate their optimality scores.

Methods
The Hammersmith Infant Neurological Examination (HINE) was performed in a cohort study of 35 LPIs follow up in the NICU at 6 months period time. The infants were examined at 3,6 and 12 months CA respectively and scored with the optimality score system including 26 items assessing cranial nerve function, posture, movements, tone and reflexes.

Results
SGA/LPIs at 3-6 to 12 months had a global score of 55 (51-58) to 61 (56-66) much lower than AGA although non statistically significant. There were also no statistically significant differences for all subscores for all time periods. All SGA/LPIs had suboptimal scores while for AGA ranged from 84.2% to 71.4% at 3-6mo and 12 months respectively.

Conclusion
SGA/LPIs have poor neurological outcome at 3-12 mo corrected age, suggesting for closer follow up and early intervention programs. Larger, prospective studies focusing on SGA/LPIs are needed to assess neurological outcome and their association to neurodevelopmental impairment throughout follow up.

O1426 - REGION SPECIFIC INHIBITION OF APOPTOSIS AND TUMOR NECROSIS FACTOR ALPHA FOLLOWING MAGNESIUM SULFATE ADMINISTRATION IN THE ENDOTOXIN EXPOSED CAPRINE PRETERM FETAL BRAIN

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Objective
Magnesium sulfate is currently the standard antenatal treatment for neuroprotection in early-preterm fetuses. However, its exact mechanism of action on the fetal preterm brain is not clear. We aimed to investigate the region-specific effects of magnesium sulfate on caspase-3, caspase-8, and tumor necrosis factor-alpha (TNF-alpha) expressions in the preterm goat fetus brain, using an endotoxin-induced experimental chorioamnionitis model.

Methods
With (n=5) or without (n=5) maternal granulocyte colony-stimulating factor (50 microg for 5 days) followed by high-dose (20 mg) intra-amniotic endotoxin, magnesium sulfate was administered at doses of 0.14 g/kg loading and 0.035 g/kg maternal bodyweight maintenance every 4 h for a 24-hour-period, corresponding to a cumulative maternal dose of 0.35 g/kg bodyweight. Preterm delivery was induced by cesarean section at 0.80 gestation. Brain tissues of the kids from 9 areas (frontal cortex, parietal cortex, occipital cortex, cerebellum, thalamus, corpus callosum, periventricular white matter (PWM), pons, and medulla spinalis) were then harvested. Immunohistochemistry and Western Blot were used to evaluate the specimens for apoptosis and TNF-alpha expressions.

Results
Compared to non-endotoxin controls, immunohistochemical TNF-alpha positive cell counts were significantly decreased ($p<0.05$) in the occipital cortex, cerebellum, corpus callosum, and PWM. With Western Blot, however, there were significant ($p<0.05$) decrements in TNF-alpha expressions only in the frontal cortex and PWM. Caspase-3 immunostaining was significantly lower ($p<0.05$) in all of the 9 brain regions, whereas caspase-8 staining was decreased ($p<0.05$) only in the PWM and corpus callosum, compared to controls.

Conclusion
The neuroprotective effects of magnesium sulfate on preterm fetal brain are complex and seem to involve region-specific inhibition of TNF-alpha and apoptosis. Inhibitory effects were consistently shown at the PWM, emphasizing the critical role of this area in inflammation-mediated preterm fetal brain injury.
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Neonatology - Hemodynamic monitoring of the sick neonate

O1405 - HEMODYNAMICS EFFECTS OF MIDRIATIC EYE DROPS

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Introduction
Eye-drops containing 2.5% phenylephrine and 0.5% benzalkonium chloride are used prior to ophthalmologic examinations for retinopathy of prematurity (ROP). These eye-drops which have parasympatholytic and sympathetic effects, has potential to cause side effects as well as desired mydriatic effect.

Besides the local side effects of these drops, such as paleness of the skin and allergic reactions, they are reported to cause severe side effects such as tachycardia, increased blood pressure, feeding intolerance, respiratory distress, and even possible necrotizing enterocolitis development in two cases in the literature.

Objective
In this study; we aimed to observe the cardiovascular effects of these two mydriatic drugs via autonomic nervous system.

Methods
Between December 2018 and January 2019, 20 patients hospitalized and went under ophthalmologic examination in our unit were included. Vital signs (heart rate, respiratory rate, SpO2, blood pressure arterial values), cerebral and mesenteric tissue saturation of the patients were recorded before ROP screening and after the application of mydriatic eye drops (2.5% phenylephrine and 0.5% Benzalkonium chloride).
Left ventricular functions of the patients were evaluated by echocardiography before the application and 30 minutes after the drops were applied 3 times with 15 minutes intervals and the data were compared statistically.

Results
Heart rate was significantly increased after application of the drops ($p = 0.024$). There was no significant difference between the NIRS values, and no differences were found in the echocardiographic evaluation before and after the administration.

Discussion
These drugs, which have the potential to cause serious side effects from their impact on the autonomic nervous system if they are included in the systemic circulation, have been shown to increase heart rate and blood pressure arterial values in previous studies, but their effects have not been evaluated with echocardiography and NIRS so far.

In this study, although there was an increase in heart rate in accordance with the literature, arterial blood pressure values were not increased and mesenteric and cerebral tissue saturations were not affected. Also no significant effect of the drops was observed in echocardiography findings.

It was thought that, maneuvers such as pressure on the nasolacrimal canal and wiping out the excess amount of the drop limit the formation of side effects by preventing the passage of the drops into the systemic circulation. The increase in heart rate was thought to be due to pain itself caused by application of the drops rather than the effect of systemic passage.

Conclusion

In this study it has been firstly shown that mydriatic eye drops have no significant effect on cardiac functions, cerebral and mesenteric hemodynamics. But also studies with a higher number of patients are needed.

O1458 - EXPERIENCE REPORT CASE NEONATAL TEAM PERFORMANCE IN THE GRIEF APPROACH

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The high level of complexity of Neonatal Intensive Care Units requires the presence of a specialized team that broadly addresses the aspects of the child and his family during the period of hospitalization. (1) Early death of a child breaks with the life cycle logic and its sudden form can make the development of the loss even more difficult and intolerant for parents. (2) With the loss of a newborn, parents need to complete their bond with the infant and gradually distance themselves from it so that they can attend to their needs and family life, progressing through the grieving process. (3) Even with all the feelings of sadness and anguish experienced, there is also fulfillment, since the team did its best to care for the newborn and his/her family. (4) The objective is to report the holistic approach to grief in the Neonatal Intensive Care Unit at a private institution in the city of São Paulo in June 2019. The study reports a case of a family that went through the grieving process and was attended with a holistic approach by the multidisciplinary team. Newborn with diagnosis of Left Heart Hypoplastic Syndrome, with Restrictive Atrial Canal. Third child of German mother, and Brazilian father. Newborn in the 2nd day of life, Immediately Operatory Procedure of selective pulmonary artery banding and stent implantation in the Arterial Canal. Procedure with difficulty of adjustment of the bandages with need of rebanding twice, and implant of stent of 7mm. After 2 hours of the procedure, newborn presented bradycardia Cardiac Frequency 50bpm with Oxygen Saturation of 32%. Initiated neonatal resuscitation maneuvers. A telephone call was made to the parents to return to the neonatal unit. Upon entering the unit, the mother found newborn during the resuscitation process. The doctor informed her about the conditions of the newborn and immediately the mother interrupted the procedure and removed the newborn from the doctor hands. With the baby in her lap asked for help to remove all devices. Slowly with the help of the nursing and medical staff, the devices were removed, one by one, by the mother. She asked to change the baby's diaper and let it nestle into her lap. The baby remained with her in her arms until removal to the mortuary. As the protocol of the institution provides for routines defined for the event, there was cultural adaptation and activities for the maternal embrace at the time of loss. The team was understanding and with humanized care for a better experience for the patient and family. The moment of neonatal grief is still a challenge for the neonatal team and confronts the cultural identity of the parents. The performance of the multidisciplinary team was essential, especially for the mother of the baby, who was outside her country of origin. The parents were embraced and had privacy, their needs met, their individuality respected, in a holistic and humanized environment.

Neonatology - Neonatal resuscitation

O1064 - PIERRE ROBIN SEQUENCE (PRS) PRENATAL DIAGNOSTIC LIMITATION LEADING TO MANAGEMENT CHALLENGES AFTER BIRTH

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Pierre Robin Sequence or Syndrome (PRS) is a rare congenital craniofacial deformity cluster that equally affects males and females with a prevalence of 1:8,500 -14,000 births. It is characterised by micrognathia (hypoplastic mandible), glossoptosis (posteriorly placed / rotated tongue) that is often associated with a perinatal emergency due to airway obstruction. Cleft palate is found in about 90% cases of PRS. Other concerns include failure to thrive and speech difficulties. Unfortunately, the diagnosis of PRS still remains mostly clinical only after birth.

Case
26-year-old primigravida was delivered by an emergency Caesarean Section due to fetal distress at term in a private nursing home in the outskirts of the city, following a straightforward pregnancy with normal antenatal scans. A 2.45Kg baby boy showed no signs of birth asphyxia however developed respiratory distress within few minutes of delivery and hence was transferred to a tertiary hospital. At admission, the baby had stridor, suprasternal and subcostal retraction, cyanosis and oxygen saturation was 67% on air. Symptoms improved when nursed in prone position with saturations of 95%. PRS was diagnosed due to micrognathia, retrognathia, microstomia with cleft of the soft palate and uvula. Mum failed to breast feed on repeated attempts due to tongue fall-back resulting in reduced saturation. Nasogastric tube was inserted and expressed breast milk was fed. Septic screen was negative, echocardiogram and ultrasound brain were normal. Respiratory distress worsened at 1 month and 2 days of age when chest X-ray showed bilateral patchy lung opacities suggestive of aspiration pneumonia. CPAP and antibiotics were initiated. Baby was thereafter intubated and kept on ventilatory support for 5-days due to clinical deterioration. Direct laryngoscopy under anaesthesia during EUA revealed normal trachea with no tracheomalacia or tracheoesophageal fistula.

Baby is to be nursed in lateral or prone position. Stay-suture on tongue to avoid fall-back risks further aspiration due to limited tongue movement as it affects deglutination. Palatoplasty for cleft closure is planned at 9 months of age. Bilateral Distraction-Osteogenesis (DO) taking advantage of the mandibular growth can be considered at 6 years of age. Close monitoring of the pattern of Facial Growth will be done with X-ray lateral Cephalometry. If necessary, Orthodontic treatment will be offered. If the retro and micrognathic mandible does not correct itself adequately, then advancement of the mandible by Bilateral Sagittal Split Osteotomy along with correction of the chin position may be considered after growth completion ie, after 18 years of age.

Suspect PRS in micro or retrognathia and / or polyhydramnios on antenatal ultrasound with prompt referral to Fetal Medicine Unit (FMU) for further detailed imaging, management plan and counselling. Diagnostic limitation of antenatal ultrasound in detecting craniofacial malformations leaves both parents and clinicians unprepared for such emergency after birth. Mortality in PRS remains high at 30% due to such unforeseen emergency and urgent MDT involvement from senior clinicians is essential and life-saving.

O1164 - STUDY OF OVARIAN DAMAGE IN PIGLETS IN AN EXPERIMENTAL MODEL OF NEONATAL ASPHYXIA

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Objectives
Little data is currently available regarding the effect of perinatal asphyxia on the ovarian histology and function. The current study aims at investigating the impact of asphyxia during the early perinatal period on the structure of ovaries through histology/ pathology and biochemistry indices.

Methods
35 Landrace/ Large White female piglets, aged 1-4 days old will finally be the study subjects of the present research protocol. So far, 22 experiments have been performed and the study is still in progress. The piglets are allocated in 4 groups (A, B, C, N). Group A, B and C will consist of 11 piglets each, which will share common initial steps of preparation and stabilization. Group N includes 2 piglets undergoing minimal procedures before harvesting the ovaries. Following the initial steps, group A piglets will have their ovaries surgically removed under general anesthesia (control group), with no further intervention. Group B piglets will undergo asphyxia and have their ovaries removed at the time of cardiovascular compromise. Group C piglets will undergo asphyxia and after cardiovascular compromise will be resuscitated as per the neonatal life support guidelines (ILCOR 2015). The latter will have their ovaries removed after a period of stabilization. Ovaries are kept in formalin solution 4% and sections are stained with H-E for histology. Blood and urine samples are also obtained at predefined time points.

Results
The quantification of the pathological findings and the statistical analysis of the data are currently under evaluation as the study is still in progress. The histological indices examined are the presence of balloon cells, apoptosis, stroma cells and vacuolization of the oocytes. Preliminary results indicate the presence of all types of lesions in all sample groups at different extent and proportions. More specifically, balloon cells appear to be more prominent in group C samples (5/6, 83%) but also present in group A (3/7, 43%) and less common in group B (1/7, 14%). Apoptotic cells are present in groups A, B and C at a similar ratio whereas abundant stroma cells were noted in 5/7 (71%) of group A and B samples and 3/6 (50%) of group C samples. Finally, presence of vacuoles in the oocytes was noted in the majority of the samples of all groups but the extent of the lesions appears to be different between the groups with marked vacuolization being noted in 2/7 (28.5%) of group A, 4/7 (57%) of group B and 1/6 (16.7%) of group C samples.

Conclusion

The preliminary results available so far indicate that asphyxia in the early postnatal period potentially alters the histology of ovaries reflecting a degree of hypoxia-induced damage that could hypothetically have long-term complications and implication on the reproductive ability of perinatal asphyxia victims. Moreover, histological lesions appear to be more prominent in group B compared to group C samples, indicating that effective resuscitation might reverse some of the damage caused by asphyxia. More results are awaited, both histological and biochemical to lead to further conclusions.

O1192 - RH HEMOLYTIC DISEASE OF THE NEWBORN TEN YEARS EXPERIENCE IN AN ONGOING PROBLEM

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Objective

Rhesus mediated hemolytic disease is still a major public health problem, especially in developing countries. The aim of this retrospective study is to evaluate the demographic and clinical characteristics of the newborn infants with Rh hemolytic disease (Rh D), morbidity and mortality rates and treatment modalities in a ten year period.

Methods

The study included 260 newborn babies with positive direct Coombs test and/or a history of antenatal transfusion, whose mothers were evaluated at least once in our perinatology clinic antenatally between January 2007 – December 2016. All the babies were admitted to our Neonatal Intensive Care Unit. Prenatal, natal and postnatal data were acquired from the patient records and the digital database of our hospital. American Academy of Pediatrics Subcommittee on Hyperbilirubinemia recommendations were accepted for the postnatal management of the newborn infants.

Results

The mean gestational age of the patients were 36.9±2.7 weeks (24.9 - 41.1weeks), 126 babies (48.8 %) were male and 107 patients (41.2%) were born prematurely. The majority of the mothers was multigravida (n=224, 87.2%), almost half of the women had more than three pregnancies (n=121, 47.1 %) and 76.3% (n=196) of them were multiparous. The history of anti-D prophylaxis in previous pregnancies was obtained from the mothers and out of 191 mothers with a reliable history 51.3% (n=98) had not received anti-D prophylaxis. Intrauterine transfusion rate was 31.7 % (n=82). Twenty three of the newborns (8.8%) were hydropic at birth. Exchange transfusion was performed in 15% (n=40) of the newborns, 51.2 % of the newborns (n=133) had received phototherapy only and 33.5% of the patients (n=87) did not need either phototherapy or exchange transfusion. The mortality rate was 3.8%, 9 out of ten patients who died were hydropic.

Conclusion

Rhesus hemolytic disease is an ongoing problem in our country like other developing countries because of high rate of multiparity, low rate of anti-D immunglobulin prophylaxis and inappropriate antenatal care. The multiparity rate was high and almost half of the pregnant women had not received anti-D prophylaxis. Although it is a preventable disease in the presence of appropriate antenatal follow up and care facilities Rhesus hemolytic disease is still an important cause of neonatal mortality and morbidity.

O1203 - THEORETICAL KNOWLEDGE AND SKILL RETENTION AND EVALUATION OF STRESS LEVELS 3 AND 6 MONTHS AFTER THE NEONATAL LIFE SUPPORT SEMINAR PRELIMINARY DATA

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Introduction

In Greece Neonatal Life Support course (NLS) is organized by the Hellenic Society for Cardiorespiratory Resuscitation (HSCPR), based on the guidelines of the European Resuscitation Council (ERC). It aims at training in resuscitation healthcare professionals involved in perinatal care of the newborn. It is a one-day , 10-hour duration seminar and provides theoretical knowledge and technical skills to which they are tested in order to be certified. It is known from other life support seminars that theoretical knowledge and technical skills decline over time, but there are no data for the NLS seminar. Moreover, investigation of the levels of stress the seminar causes to the trainees and association as to how this may affect their performance during the seminar or in the ensuing period has not been reported.

Objective

To study the degree of theoretical knowledge and skill retention of newly certified NLS providers at 3 and 6 months after the seminar, and the investigation of the levels of stress the seminar causes to the trainees and association to how this may affect their performance during the seminar or in the ensuing period

Methods

68 newly certified NLS providers volunteered to participate after signing informed consent. Demographic data were recorded, the STAI I & II questionnaires were answered and theoretical knowledge and technical skills (airway opening, bag-mask ventilation, chest compressions) were evaluated on the day of the seminar, at 3 and 6 months later without preparation.

Results

Significant difference was observed in the score of the written test (median at the end of the seminar was 86.0, at 3 and 6mths it was 80.0 $p<.001$). Regarding technical skills, at 3mths 100% of the study population performed correctly the first 5 lung inflation breaths of the algorithm for airway management and the

2-handed chest compression technique. At 6mths 100% of the participants still performed correctly the 5 lung inflation breaths. As to the selection of the 500ml self-inflating bag-and-mask for lung inflation, 80.5% and 90.2% at 3 and 6 mths respectively, did not perform correctly. In STAI I (evaluates anxiety from a specific situation) the median score was 41.0 in the baseline test, and 37.0 at 3 and 6mths with this difference being statistically significant (p=.042). In STAI II (evaluates anxiety as a personality trait) the median score was 37.0 at all times (p=.534)

Conclusion

The theoretical knowledge declines over time. In technical skills, the degree of retention varies. The stress level on individuals who are involved in neonatal resuscitation is increased during the seminar but decreases at 3 and 6 months. The idiosyncratic stress does not change between training and checking intervals.

O1392 - COMPARISON OF THE EFFECTS OF DIFFERENT UMBILICAL CORD MILKING METHODS ON HEMATOLOGICAL PARAMETERS IN TERM INFANTS A RANDOMIZED CONTROLLED STUDY

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Objective
Delayed umbilical cord clamping for at least 30 seconds results with better neurological and hematological outcomes in term infants
Umbilical cord milking has suggested being an alternative for delayed clamping. This study aimed to evaluate the effects of different umbilical cord milking techniques on hematological parameters in term neonates.

Methods
A total of 150 term neonates were included to this randomized controlled trial. Neonates were randomized to 5 groups of early cord clamping, delayed cord clamping for 60 seconds and 3 times / 4 times / 5 times umbilical cord milking. The newborn infant was hold at introitus level in vaginal deliveries and at mother's leg level in cesarean deliveries. The umbilical cord was clamped 25 cm away from umbilicus. Hematological changes at 24th hours of life were the primary outcome and the development of hyperbilirubinemia, polycythemia or respiratory distress was assessed as the secondary outcomes.

Results
The median gestational age and birth weights of neonates were 39 (37-40) weeks and 3280 (2140-4850) grams respectively. There were no significant differences in terms of umbilical cord hemoglobin (Hb) and hematocrit (Hct) levels ($p>0.05$) but Hb and Hct levels at 24th hours of life were significantly lower in early cord clamping group ($p<0.05$). Hb and Hct levels at 24th hour were significantly higher in delayed cord clamping and 4 times umbilical cord milking groups ($p<0.05$).
All the hematological values were detailed in Table 1. There were no differences between groups in terms of hyperbilirubinemia, polycythemia and respiratory distress development.

Conclusion
To the best of our knowledge, this is the first study that evaluates different umbilical cord milking techniques on hematological parameters. Umbilical cord milking seems to be an effective alternative for delayed umbilical cord clamping that is independent from different techniques. Umbilical cord milking may be associated with better hematological parameters than early cord clamping.

Neonatology - Early origins of adult disease

O1016 - EFFECTS OF A HIGH FAT DIET EXPOSURE IN UTERO ON THE METABOLIC SYNDROME LIKE PHENOMENON IN MOUSE OFFSPRING THROUGH EPIGENETIC CHANGES IN ADIPOCYTOKINE GENE EXPRESSIONS

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The links between obesity in parents and their offspring and the role of genes and a shared environment are not completely understood. Adipocytokines such as leptin and adiponectin play important roles in glucose and lipid metabolism. Therefore, we examined whether the offspring from dams exposed to a high fat diet (HFD) during pregnancy (OH mice) exhibited hypertension, insulin resistance and hyperlipidemia along with epigenetic changes in the expression of adipocytokine genes. OH mice were significantly heavier than the offspring of dams exposed to a control diet during pregnancy (OC mice) from 14 weeks of age following an increased caloric intake from 8 weeks. OH mice exhibited higher blood pressure and worse glucose tolerance than the OC mice at 24 weeks. Total triglyceride and leptin levels were significantly higher and the adiponectin level was significantly lower in OH compared with OC mice at 12 weeks of age. This was associated with changes in leptin and adiponectin expression in white adipose tissue. There were lower acetylation and higher methylation levels of histone H3 at lysine 9 of the promoter of adiponectin in adipose tissues of OH mice at 2 weeks of age as well as at 12 and 24 weeks of age compared with OC mice. In contrast, methylation of histone 4 at lysine 20 in the leptin promoter was significantly higher in OH compared with OC mice. Thus, exposure to an HFD in utero might cause a metabolic syndrome-like phenomenon through epigenetic modifications of adipocytokine, adiponectin and leptin gene expressions.

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O1127 - BODY MASS INDEX IN CHILDREN BORN BETWEEN 23 AND 28 WEEKS OF GESTATIONAL AGE

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Introduction
Since Barker et al. reported in 1986 that low birth weight infants are at risk of future cardiovascular diseases, many diseases have been reported to have an association with being born with low birth weight and are now established as components of the Development origin of health and disease (DOHaD) theory. Because of progress in neonatology, more immature infants are surviving their infant periods and mortality of them is decreasing. Although, this trend is associated with long-term negative health and development outcome, there are few reports about the possible future health consequences of their extremely premature birth. Previous studies mostly studied infants whose gestational age (GA) was over 30 weeks and few patients with less than 29 weeks of GA are included. Moreover, many studies do not analyze intrauterine growth restriction (IUGR), who has more effect on future development, separately.

Objective
To estimate body composition in preterm infants born less than 29 weeks of GA

Methods
Data source is Neonatal Research Network Japan (NRNJ) data, which includes 24244 infants born between GA 23-29 weeks and/or under 1500 grams. We analyzed BMI by GA, with interaction for IUGR, separately by gender and presence of multiple pregnancy, adjusting for complications during pregnancy and hospital stay (pregnancy induced hypertension (PIH), chronic lung disease (CLD), late circulatory collapse (LCC) intraventricular hemorrhage (IVH), and necrotizing enterocolitis (NEC)), using a linear regression model.

Results
A total of 19510 infants were born between 23 to 28 weeks of GA and eligible for this study.
In single pregnancy, the effect of both IUGR and GA, and their interaction, and IVH were seen in BMI score at 18 and 36 months in boys. There were effects of IUGR and GA and their interaction and IVH, LCC in BMI at 18 and 36 months were seen in girls. However, in multiple pregnancies, there were no effect of IUGR in BMI at 18 and 36 months in both boys and girls. Among them, there were effects of GA and IVH in BMI both at 18 and 36 months.

Discussion
It is no longer reasonable to discuss body composition without both gestational age and presence of IUGR in infants born at 23 to 28 weeks of GA. Moreover, presence of IVH is associated with reduced BMI in infants born at 23 to 28 weeks of GA.

Conclusion
This study revealed that in preterm infants born under 28 weeks of GA, GA is an important factor in future BMI, and presence of IUGR is important in single pregnancy infants.

O1423 - ASSESSMENT OF PRENATAL EXPOSURE TO ENDOCRINE DISRUPTORS AND CORRELATION WITH POSSIBLE HEALTH IMPACTS

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Objective
In modern life, humans are exposed continuously to a wide variety of chemicals. The scientific community focuses on investigating the possible health impacts of this constant exposure. In this study we assess the prenatal exposure to endocrine disruptors, which are present in several everyday products, and correlate it with the health impacts of pregnant women and subsequently their infants.

Methods
Hair and amniotic fluid samples were collected during 1st or 2nd trimester of pregnancy. The participants also completed questionnaires concerning maternal and infants somatometric characteristics, lifestyle habits and health status. The samples were analyzed so as to estimate the burden of pregnant women to phthalate metabolites (mEP, miBP, mnBP, mBzP, mEHP, mEHHP, mEOHP), bisphenol A (BPA), bisphenol S (BPS), parabens (methyl-, ethyl-, butyl-, benzyl paraben) and triclosan.

Results
Frequent use of cosmetics during or before pregnancy was associated with higher levels of phthalates metabolites in hair ($p<0.05$). At the same time, frequent use of makeup and hairspray, was also correlated with higher concentration levels of parabens in both hair ($p=0.028$ & 0.036) and amniotic fluid ($p=0.020$ for makeup products) as well as BPA in amniotic fluid ($p=0.032$ & 0.068). Statistical analysis of questionnaires' data and experimental results indicated strong associations between mEHP concentrations in hair and low birth weight ($p=0.021$), while exposure to BPS was associated with increased body mass index of the participants ($p=0.036$). Finally, positive correlation was observed between benzyl paraben levels in hair and infants height ($p=0.026$).

Conclusion
Our results indicate that use of everyday products expose humans to a wide range of chemicals which pose risks for their health. Further studies need to be conducted in order to clarify these health impacts.

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O1474 - SCHOOL AGE OUTCOME OF EXTREMELY AND VERY PRETERM CHILDREN WITH PERINATAL RISK FACTORS ANALYSIS

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Introduction
Neurodevelopmental outcome of extremely and very preterm neonates beyond early life remains a public health issue of major interest. A high percentage of these children, when they reach school age, will have Autistic Spectrum Disorders (ASDs), Attention Deficit Hyperactivity Disorder (ADHD), Specific Learning Difficulties (SLDs) and other Behavioral Disorders such as internalizing and externalizing disorder. Perinatal infection, head scan anomalies and ART techniques considered perinatal risk factors of adverse outcome.

Objective
We aimed to detect the incidence of neurodevelopmental disorders observed in a group of extremely and very preterm children up to school age, and analyze associated risk factors such as perinatal infection, head scan anomalies and ART techniques.

Methods
We retrospectively analyzed medical records of preterm children <=29 wks GA up to 23 wks GA, from the data base system of our preterm follow up program as they were referred from private and NHS NICUs. We focused on the incidence of ADHD, ASD, SLDs and motor disturbances in relation to perinatal infection, head scan anomalies, ART techniques.

Results
In total we included n=66 preterm children with GA <=29 wks. Mean age at evaluation was 70.85 months (SD 38.656 months). Autistic Spectrum Disorder diagnosed in 15.15%, ADHD in 48.48%, Specific Learning Difficulties in 33.33%, CP in 10.6% and Mental Retardation in 10.6%. Perinatal infection reported in 40.7 % of cases with adverse outcome and in 41.66 % of cases with no abnormal outcome. ART history reported in 80% (4/5) of children with typical ASD. Head scan anomalies of any severity had 42.42% of which 42.86% were subtle lesions. Abnormal head scan overall had 50% of cases with normal development and 40.7% of children with adverse outcome. Children with normal development walked at an earlier stage (14 months) compared to all children with abnormal outcome (17 months).

Conclusion
At school age 18.18% of preterm neonates <=29 wks GA will have no neurodevelopmental disabilities, while 81.81% will have a degree of ADHD and/ or SLDs. Perinatal infection in recorded in equal percentages in children with and without abnormality. ART techniques reported more frequently in typical ASD cases. Head scan cannot be used as a strong biomarker for outcome, regarding ADHD and SLDs cases, since half children with normal development had head scan anomalies, while 40% and 60% of children with ADHD and SLDs respectively had normal head scans. Generally gross motor immaturity, characterized as delayed age of independent walking, could be used as biomarker strongly associated with adverse outcome.

POSTER

Abstracts

Obstetrics - Fetal echocardiography and Congenital Heart Diseases

E1060 - PRENATAL ECHOCARDIOGRAPHIC FINDINGS IN FETUSES WITH TRANSPOSITION OF THE GREAT ARTERIES TO PREDICT THE NEED FOR BALLOON ATRIAL SEPTOSTOMY

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Objective
Prenatal diagnosis of transposition of the great arteries (TGA) has been progressing, and the surgical outcome from the arterial switch operation is usually successful. However, some neonates, especially who have intact ventricular septum or small ventricular septal defect (VSD), show severe hypoxemia soon after birth and even die in preoperative period. In such cases, immediate balloon atrial septostomy (BAS) is needed in order to improve mixing of the pulmonary and systemic circulation. We aimed to identify the prenatal echocardiographic features that may predict the need for urgent BAS.

Methods
We reviewed the echocardiograms of the fetuses prenatally diagnosed as TGA and managed at our institution between January 2012 and December 2018, retrospectively. We assessed their ductus arteriosus and foramen ovale on the basis of the past several studies. We measured the diameter of the ductus arteriosus and reviewed the Doppler flow pattern. Regarding the analysis of the atrial septum, we measured the maximal angle of flap of the foramen ovale and calculated the ratio of the maximal bulging of the foramen ovale towards the left atrial wall to the left atrial width, as well as the ratio of the foramen ovale length to the atrial septal length. We also focused on the shape of the foramen ovale.

Results
Among all 22 cases, 12 were included as TGA with intact ventricular septum or small VSD. 6 of them received the urgent BAS within 3 days after birth. The median gestational age at echocardiographic exam was 32 weeks in both fetuses who needed BAS and who didn't. The gestational age at birth and birth weight were not significantly different between the fetuses as well. There was no significant difference in the arterial duct z score, and no one had reverse ductal flow. The flap angle of the foramen ovale and ratio of length of foramen ovale to atrial septum were significantly small in patients who received urgent BAS in comparison with those who didn't. Hypermobility of the foramen ovale, which is defined as oscillation of its flap valve between the left and right atrium, was seen in 3 (50%) cases.

Conclusion: The angle of flap of the FO, and FO to atrial septum length ratio which were obtained by fetal echo cardiogram can be helpful for predicting the need for urgent BAS after birth.

E1061 - THE PRENATAL DIAGNOSIS OF LONG QT SYNDROME

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Objective

Long QT syndrome (LQTS) is a hereditary cardiac disease associated with a high risk of life-threatening events such as syncope, ventricular tachycardia, and Torsades de Pointes. During the neonatal period, LQTS is one of the causes of sudden infant death syndrome (SIDS). It is known that the effective therapies as using β-blocker improve the outcome of patients with LQTS. Since the early diagnosis and treatment may help to prevent life-threatening events, early detection or suspicion of LQTS in utero is clinically important. We analyzed the associations with LQTS and fetal characteristics and evaluated the efficiency of cardiotocography (CTG) and fetal magnetocardiography (fMCG) for the prenatal diagnosis of LQTS.

Methods

Data were retrospectively analyzed using the medical records of women with LQTS who delivered between 2011 and 2019 at National Cerebral and Cardiovascular Center in Japan. Consequently, 31 pregnancies (25women) were included in the present study. According to the diagnosis of their infants, we classified into 2 groups as infants with LQTS (LQTS group) and infants without LQTS (non-LQTS). We investigated how the following data were vary between LQTS group and non-LQTS group; family history of LQTS, symptoms associated with LQTS, β-blocker usage, ICD implant, fetal heart rate (FHR) assessed by CTG, QT interval assessed by fMCG, emergency caesarian delivery, preterm birth, birth weight, arrhythmia of infant. We used CTG that recorded accurately over 30 minutes just before labor onset. Although MCG is performed in only a few centers, we are able to use it to assess the electromagnetic characteristics of fetal cardiac condition. We analyzed them to determine the associations with LQTS and fetal characteristics.

Results

Of 31 pregnancies, 7 cases were excluded because of the lack of final diagnosis of LQTS due to the insufficient examination. LQTS group accounted for 42.9% (n=13), non-LQTS group for 35.5% (n=11). No difference was observed between groups in family history of LQTS, symptoms associated with LQTS, β-blocker usage, ICD implant, emergency caesarian delivery, preterm birth, birth weight. The incidence of a reduced baseline FHR (110-120 bpm) assessed by CTG was significantly higher in LQTS group (LQTS group, n=9; non-LQTS group, n=1; $p<0.05$). 14 fetuses whose mother didn't have ICD were performed fMCG and the incidence of prolongation of the QT interval (QTc-480msec) measured by fMCG was significantly higher (LQTS group, n=4; non-LQTS group, n=0; $p<0.05$).

Conclusion

In fetus recordings, a slightly reduced baseline FHR assessed by CTG and a prolongation of the QT interval assessed by fMCG was significantly associated with fetal LQTS. These findings reveled that CTG and fMCG are useful for the prenatal diagnosis of LQTS and the management of fetuses at risk of LQTS.

E1153 - THE CONTRIBUTION OF ECHOCARDIOGRAPHY IN THE NEWBORN EXPERIENCE OF THE NEONATOLOGY SERVICE

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Echocardiography in neonatology services has become an inescapable investigation for better management of certain clinical situations; including the suspicion of congenital heart disease, persistent fetal circulation or pulmonary arterial hypertension require the use of this examination.

Objective
To evaluate the contribution of echocardiography performed in the department.

Methods
We report through a prospective etiological cohort study, a series of 342 neonatal echocardiograms performed at the neonatology service level between January 2016 and December 2017.

Results
Congenital heart disease affects about 3.2 per 1000 live births. The main indications for echocardiography in the neonatology departments are: respiratory distress (10%), O2 dependence (24%), cyanosis (18%). This anodyne and repetitive examination makes it possible to correct certain diagnoses, to confirm the presence of heart disease and sometimes to initiate vital treatments (prostaglandin if ducto-dependent heart disease), ventricular septal defect was the most frequent heart disease in our series (22.5%) followed by atrial septal defect (13%) and tetralogy of Fallot (10%)

Conclusion
This work shows the possibilities of diagnosis and therapeutic adaptation offered by echocardiography in the neonatology services and especially the need to develop this act in front of any atypical cardiorespiratory evolution or the presence of risk factor.

E1177 - COMPLEX FETAL CARDIAC MALFORMATION WITH ATYPICAL ASSOCIATIONS

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Congenital heart diseases are responsible for about 30-50 % of infant deaths. All severe, complex cardiac malformation can be partially or completely diagnosed prenatally. The prenatal diagnosis is crucial for both surgical managements postnatal or in utero in specialized centers or termination of pregnancy if the malformation is considered to be live incompatible. Double-outlet right ventricle is at the of the frequency list, having an incidence of 2-3% of all congenital heart defect. We present a case of an 18 years old gravida, 22 weeks of gestation which presents in the emergency service of the Bucharest Emergency University Hospital, directed form a provincial hospital for bradycardia and suspicion of fetal malformation. Emergency hospitalization was decided for monitoring and further investigations. The subsequent detailed echographic examination revealed a 22 weeks of gestation fetus with polyhydramnios and a complex cardiac malformation starting with dextrocardia and left isomerism. Apparently with a single right atrium and a hypoplastic left ventricle communicating with the right ventricle trough an important ventricular septal defect. Also, the transposition of the great vessels with an hypoplastic pulmonary artery emergent from the left ventricle was observed. On longitudinal-transversal view no image of the inferior vena cava could be noticed, only an enlarged azygos vein at the right, belonging to the same section plan, parallel with the aorta artery. Particularly, the fetus presented also an absent nasal bone and a ductus venosus agenesis. The patient never conducted any other pregnancy investigations. In the context of sever degradation of the fetal status and the complex associated malformations the termination of pregnancy was indicated and accepted by the patient. Further investigations are in course, respectively genetic assessment, considering that double-outlet right ventricle and conotruncal malformations have a risk of fetal aneuploidy association up to 40%.

E1213 - ISOLATED PERSISTENT LEFT VENA CAVA SUPERIOR SYNDROME CASE REPORT

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We present a rare case of congenital cardiac anomaly, isolated persistent left vena cava superior, and discuss the prenatal diagnosis.

Case
A 37-year-old woman, G4P3, was admitted to our clinic due to the diagnosis of chronic hypertension. She did not know her last menstrual period. Her medical and family history revealed nothing except a suspicion of hypertension. There was no consanguinity with her husband. Blood pressure measurements were all under 140/90 mm hg. Ultrasonographic examination revealed a singleton fetus compatible with 23 weeks of pregnancy. Deepest amniotic fluid pocket was measured as 56 mm. Cardiac examination revealed a normal four chamber view, inter ventricular septum, atrioventricular and semilunar valves. Foramen ovale flap was opening towards left. On the three vessels and trachea view, 4 vessels were observed and isolated vena cava superior diagnosis was done (Figure 1). Examination of the pulmonary veins revealed that two inferior pulmonary veins were opening to the left atrium. Dilated coronary sinus was observed on the atrial side of AV valves just under the 4 chamber view (Figure 2). Consultation was given to the patient with these findings. Spontaneous contractions started at 37 weeks and she gave birth vaginally. The diagnosis was confirmed on postpartum echocardiography. Newborn was discharged with recommendations.

Conclusion
Isolated persistent vena cava superior does not cause significant problems. However, if cardiac intervention is to be performed, the recognition of this situation earlier makes the procedure easier.

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E1214 - SCIMITAR SYNDROME CONCERNING A CASE

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Introduction

Partial anomalous pulmonary venous connection (PAPVC), encompasses a rare and complex group of congenital cardiovascular anomalies that are caused by the abnormal return of one or more, but not all, of the pulmonary veins directly to the right atrium or indirectly through a variety of venous connections from the anomalous pulmonary vein.

Scimitar syndrome is a variant PAPVC. Its defining feature is the anomalous pulmonary venous drainage of right lung, in which all (total form) or some (partial form) pulmonary veins drain into a systemic vein or into the right atrium rather than into the left one. The affected lung and its associated airways, which are drained by the scimitar vein, are often hypoplastic. Other cardiac defects are commonly seen, being typically present an atrial septal defect. Considering the rareness of the syndrome and its unusual form of presentation, we present a case which may consider Scimitar syndrome as a differential diagnosis.

Case

24 year-old-woman undergoing her first spontaneous gestation. The course of pregnancy was normal until second trimester morphologic ultrasound when, despite the fact the exploration wasn't satisfactory enough due to the obesity of the patient, it was objectified dextrocardia. In this way, there were made several coming appointments to complete the study, visualizing right lung hypoplasia, some vessels anomalies and an echogenic mass lesion under the right lung. Afterwards, a magnetic resonance was performed and confirmed all these findings with the suspicion of Scimitar syndrome.

No other remarkable events occurred during the remaining pregnancy. At 40+2 weeks a male fetus of 3690 gr was born by vacuum, Apgar score 8/9 and acid-base equilibrium of 7.15 - 7.23. No reanimation maneuvers were needed but the newborn was admitted to the neonatology unit to complete the study. There were performed several explorations: normal cerebral and abdominal ultrasound, an echocardiography verifying the previous discoveries. Moreover, a computed tomography was made showing dextrocardia, right lung hypoplasia with some vessels disorders, right pulmonary artery hypoplasia, inter-atrium connection and paravertebral eventration at right thoracic lower zone. So far, the neonate undergoes a well adaptation to the extra-uterine life except from his difficulty to gain weight and recurrent respiratory infections.

Conclusion

he initial diagnosis of PAPVC may be made by echocardiography and is typically confirmed by magnetic resonance imaging, computed tomography or cardiac catheterization. This syndrome has varied presentations, from an asymptomatic state to severe pulmonary hypertension and / or heart failure. Those who present early in life usually have associated congenital heart disease also. The outcome depends upon the underlying anatomy and the presence of associated conditions such as pulmonary hypertension, sequestration or hypoplasia. Symptomatic infants with this diagnosis tend to present with more severe disease and have a poorer prognosis than patients who present as adults or children. For this reason is essential to promptly diagnose this pathology in order to manage it as well as possible.

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E1238 - NEONATAL AUTOIMMUNE MEDIATED CONGENITAL HEART BLOCK TWO CASE REPORTS

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Objective
Congenital heart block (CHB) has an incidence of 1/15.000-20.000 births. Maternal risk factors include transplacental transfer of anti-nuclear antibodies to the fetus, metabolic diseases, medications, and viral infections. This transfer, may occur from 11 weeks of gestation, and represents the most common cause, known as autoimmune mediated CHB (ACHB). These autoantibodies attach to and subsequently harm the cardiomyocytes and conduction tissue in susceptible fetuses. We report 2 cases of neonates, who manifested CHB, born to asymptomatic mothers with positive ANA-antibodies.

Case 1
A 48-year-old primigravida following IVF was referred to our centre at 20+5 weeks of gestation age (GA), for fetal Echocardiography (ECHO), due to fetal bradycardia, noticed during routine obstetric ultrasound. ECHO findings, included systolic dysfunction of both ventricles, and complete CHB 2:1 with a ventricular rate of 70 bpm. Mother, who had been completely asymptomatic, underwent further work-up which revealed positive anti-SSA but negative anti-SSB antibodies. She was treated with low molecular weight heparin and oral dexamethasone 4mg/day. At 32+2 weeks, Doppler ultrasound revealed absence of end-diastolic flow velocity in the umbilical artery, severe fetal bradycardia, and symmetrical IUGR. A female neonate weighing 1320gr (<2nd centile) was born by Caesarean section (CS), with an Apgar score of 71 and 85. On admission to the NICU the neonate was intubated for respiratory distress. A dose of surfactant was administered and umbilical catheters were placed. The newborn was transferred to the reference center for congenital heart diseases with a heart rate of 65-70 bpm.

Case 2
A 40 year old (gravida: 5) was referred to the emergency department of our hospital because of fetal bradycardia (70-80 bpm) diagnosed on obstetric ultrasound at 20 weeks of gestation. She had a medical history of high titers, positive of Anti-ENA(++), Anti-Ro(++), and ANA(++) antibodies, without any clinical symptoms. During pregnancy medications included acetylsalicylic acid, hydroxychloroquine, and prednisolone. Fetal ECHO showed CHB; 2nd degree AV block and aortic stenosis hypoplasia, echogenic intracardiac focus, ventricular septal defect but no evidence of fetal distress. She was followed up by ultrasound scans on a weekly basis for the evaluation of fetal heart rate. At 38+6 weeks of gestation, CS was performed and a male neonate with birth weight of 2610 g (2nd centile), and an Apgar of 81 and 95, was born. At NICU, the newborn was intubated for respiratory distress and showed a heart rate of 50 bpm. Isoprenaline 0.02 g/kg/min was administered via UAC and the newborn was transferred to the reference center for congenital heart diseases for pacemaker placement.

Conclusion

ACHB is undeniably a severe, potentially life-threatening disorder strictly defined as the presence of 2 key mandatory features (maternal anti-Ro/La auto-antibodies and a diagnosis of AV block in utero or postnatally). This helps differentiate ACHB from other non-autoimmune CHB which consists of different entities with an unknown and probably heterogeneous etiology.

E1264 - A COMPLEX FETAL CARDIAC DISEASE RIGHT ATRIAL ISOMERISM

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Objective
We present a rare case of right atrial isomerism detected at 23 weeks of gestation.

Case
A 26-year-old patient was referred to our clinic with a diagnosis of fetal cardiac anomaly. It was her first pregnancy. The patient's medical and family history were unremarkable. Her ultrasonographic examination revealed a 23 week old fetus which was consistent with the last menstruation period. Cardiac examination revealed a large AVSD (Figure 1). There was a flow towards right through the foramen ovale. On the 3 vessel trachea view a large vessel was shown in the center, a normally localized vena cava superior on the right and another vessel on the left (Figure 2). When ventricular outflow tracts were examined, a large aorta originating from the right ventricle and a thin pulmonary artery originating nearby was observed (DORV). The findings were consistent with pulmonary stenosis (Figure 3). When the area between the descending aorta and left atrium were examined, inferior pulmonary veins were not seen and confluens vein passing near the left atrium was observed (TAPVR). When atrial appendages were evaluated, both atria were found to be morphologically right atrium (Figure 4). Right atrial isomerism was considered with the present findings. The family was informed. A fetal MRI was requested. However, the family did not accept MRI and preferred the continuation of pregnancy. The baby was born at 34 weeks of pregnancy due to premature contractions. Diagnosis of the heart disease was confirmed after the birth. The infant was died in the neonatal intensive care unit on the 2nd day of birth.

Conclusion
Right atrial isomerism is a rare condition with poor prognosis. Detailed ultrasonographic examination is important for prenatal diagnosis and to give timely consultation to the family.

E1265 - A DOUBLE OUTLET RIGHT VENTRICLE CASE ACCOMPANYING PULMONARY STENOSIS DIAGNOSTIC CLUES

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Objective
We herein report a double-outlet right ventricle case accompanying pulmonary stenosis, which is a rare cardiac anomaly and in which prenatal diagnosis is important.

Case
A 24 years old, G1P0, was referred to our hospital with the diagnosis of complex heart anomaly at 36. week of gestation. Her medical and family history revealed no abnormality and there was no consanguinity with her husband. It was learned that the patient had regular controls in pregnancy but did not underwent second trimester fetal ultrasound examination by an expert. A pregnancy compatible with 36 weeks was detected in the ultrasonography. Deepest amniotic fluid pocket was measured as 91 mm (mild polyhydramnios). The abdominal circumference was 303 mm and was consistent with 34 weeks of pregnancy. Cardiac examination showed atrioventricular septal defect and a slight shift to the right in the axis of the heart (Figure 1). The foramen ovale flap was opening towards left. Although the tricuspid valve appeared to be partially thickened, no significant weakness or stenosis was observed. On the three vessel trakea view, 2 vessels were seen and double-outlet right ventricle and pulmonary stenosis were detected (Figure 2-4). Examination of pulmonary veins revealed that 2 inferior pulmonary veins were opening to the left atrium (Figure 5). Consultation was given to the family and patient was delivered by cesarean section on the 37. week of pregnancy due to start of spontaneous contractions. The diagnosis was confirmed on postpartum echocardiography. He was referred to cardiovascular surgeon for planning the treatment

Conclusion
It is important to establish the diagnosis of DORV in prenatal period for to deliver the baby in a tertiary clinic and to give appropriate counseling.

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E1342 - MANAGEMET OF FETAL ARRHYTHMIA DURING DELIVERY

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Fetal arrhythmia appears in 1 to 2 percent of pregnancies. Some types of arrhythmia are associated with structural or functional heart disease, and may lead to compromise fetal circulation and ending to heart failure and hydrops. However, the most fetal arrhythmias are benign. For the screening assessment of the fetal heart rate, ultrasound four cardiac chambers correct and ventricular outflow tracts views may be sufficient. Some patients have higher risk to develop this pathology (pregnant women with anti-La and anti-Ro antibodies, antecedent of fetus with heart block or fetus with cardiac disease) and close follow-up should be recommended in these cases. The most common fetal arrythmia is the supraventricular tachycardia.

Case
A 28-year-old pregnant patient comes to the clinic for regular check-up in 40+1 week of gestation. She did not have relevant medical or surgical background. This was her first pregnancy with normal evolution so far.

In this medical control an abnormal fetal cardiotocograph record (CTG) was detected. The obstetrician performed a fetal ultrasound, detecting fetal arrhythmia so she referred the patient urgently to the hospital.

In the hospital, the CTG showed fetal heart rate at 140 bpm, diminished variability and few transient increases so it was decided to end the pregnancy due to nonreassuring fetal status. A tolerance test for oxytocin was performed, resulting negative. Induction was continued with vaginal dinoprostone (PGE2). During delivery, there was a loss of variability in the fetal heart rate and few transient increases. With 3 cm of cervical dilatation, determination of fetal scalp pH was normal (7.30). An intrapartum fetal ultrasound was performed and ascites was detected suspecting heart failure, so an urgent caesarean section was indicated for nonreassuring fetal status.

The caesarean section proceeded uneventful. A 3280g girl was born. The amniotic liquid contained meconium. The determination of the umbilical cord artery and vein pH was normal (7.26 and 7.32 respectively). The APGAR at first and fifth minute of life was 9 and 10, respectively. The newborn was transferred to the Neonatal Intensive Care Unit (NICU) for close monitoring.

During her stay at the NICU, the newborn experienced episodes of supraventricular tachycardia at 290 bpm. The echocardiography showed decreased contractility, dominance of right cavities and atrial dilatation. Finally, it was decided to start treatment with flecainide at 3 mg/kg/day with good evolution. As days go by echocardiography was normalized and the baby was discharged with ambulatory follow-up. Vaginal delivery can be carried out in a fetus with arrhythmia as long as the control of fetal well-being can be properly performed. If fetal well-being cannot be evaluated adequately, delivery by caesarean section is the best option. It is also necessary a prepared neonatology team at the time of birth.
The supraventricular tachycardia rarely is mortal during delivery but the fetal heart rate must be corrected as soon as possible.

E1357 - AN EXREMELY RARE SEEN A CASE OF ECTOPIA CORDIS

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The purpose of this study is a rare case of first-trimester diagnosis of ectopia cordis (EC). A 34 years old pregnant woman with gravida 3 parity 2 visited our clinic. According to last menstruation date, the patient was 13 weeks pregnant, she did not have any medical or obstetric pathology, she did not marry to a relative and she has not any use any medicine in history. Fetal cranium, face, neck, spine, thorax, abdominal front, stomach, kidney, bladder, upper and lower extremities were normal. Fetal nuchal translucence (NT) was 2.3 mm. Fetal heart was outside the thorax rib cage and at normal rhythm. With family's consent, chorionic villus sampling has been made an option of termination given to the family. CVS result reported as a normal karyotype. At 14 weeks of her pregnancy patient terminated to another clinic. Ectopia cordis is a congenital disease, characterized by hearts abnormal position than normal mediastinal location. During the embryogenesis a mistake with heart migration, heart partially or completely moves outside the thoracic cage. Babies with ectopia cordis can be diagnosed antenatally 10-12 weeks of pregnancy. Because ectopia cordis is extremely rare, we decided to do a case report.

E1368 - A REPORT OF TWO CASES PRENATALLY DIAGNOSED ABERRANTRIGHT SUBCLAVIAN ARTERY

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Objective

We aimed to present two cases which were diagnosed with aberrant right subclavian artery (ARSA) on detailed second trimester obstetric ultrasonography.

Case 1. A 23-year-old pregnant woman with G2P1 admitted to our perinatology outpatient clinic for routine detailed second trimester obstetric ultrasonography at her 20th gestational week. In the detailed fetal examination, fetal biometry was found to be consistent with 20 weeks and ARSA was detected by color doppler examination of three-vessel trachea section. Genetic counseling, about the presence of isolated ARSA and the accompanying chromosomal anomalies. Amniocentesis showed normal karyotype.

Case 2. A 25-year-old pregnant woman with G2P1 admitted to our perinatology outpatient clinic for routine detailed second trimester obstetric ultrasonography at 22 weeks of gestation. In the detailed fetal examination, fetal biometry was found to be consistent with 22 weeks and ARSA was detected by color doppler examination of three vessel trachea section. Ultrasonographic examination and fetal echocardiography showed no additional major anomaly except single umblical artery and ARSA. Genetic counseling was given to the patient who had low risk of first trimester screening test. Cordocentesis result was normal karyotype.

Result

Aberrant right subclavian artery (ARSA) is the most common aortic arcus anomaly or variation with a rate of 0.5-1.4% in the normal population. Normally, the right subclavian artery originates from the brachiocephalic artery (innominate artery), the first branch of the aorta at the level of the aortic arch. In the case of ARSA, four vessels emerge from the proximal to distal order, right main carotid artery, left main carotid artery, left subclavian artery and ARSA, respectively. The ARSA emerges from the distal part of the aortic arch and passes behind the esophagus and trachea to the right arm. The typical diagnosis of ARSA is not made on gray scala imaging. ARSA is best detected by color doppler in the three-vessel trachea image. The presence of ARSA in trisomy 21 fetuses was first reported by Chaoui. In subsequent studies, the frequency of ARSA in trisomy 21 fetuses was reported to be 14-30% and this relationship was confirmed. ARSA can be found in other aneuploidies. There is no consensus as to whether invasive procedures are required in the presence of isolated ARSA. Other anomalies accompany 20% of fetuses with ARSA. However, ARSA is an independent and important risk factor for trisomy 21. Recently, some centers have started to offer non-invasive prenatal test (NIPT) as an option in isolated ARSA cases.

Our first case was isolated ARSA without additional structural anomalies. The second case was ARSA with no additional structural anomalies other than single umbilical artery. In both cases, normal karyotype was detected after invasive procedure. Due to the possibility of coexistence of ARSA with other anomalies, detailed ultrasonographic evaluation and fetal echocardiography should be performed prior to defining it as isolated in the management, and it should be carefully evaluated whether there is any additional anomaly for fetuses diagnosed with ARSA and to provide detailed genetic counseling to the family about chromosome abnormalities will be appropriate.

E1375 - A CASE OF TUBEROUS SCLEROSIS DIAGNOSED WITH PRENATAL FETAL CARDIAC RHABDOMYOMA

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Objective

To report a case of tuberous sclerosis diagnosed by fetal cardiac rhabdomyoma detected on detailed second trimester ultrasonography.

Case: A 29-year-old woman with G2 P1 Y1, 23 weeks and 3 days of gestation according to her last menstrual period was referred to our perinatology outpatient clinic due to fetal cardiac mass. The patient's antenatal screening tests were low-risk and there was no history other than previous cesarean section. In detailed fetal examination, an echogenic mass (Rhabdomyoma?) in the right atrium, in the right ventricle and in the left ventricle was observed (Figure 1). Fetal cranial MRI showed subependymal nodules in the periventricular white matter and lesions that were compatible with hamartoma in both kidneys (Figure 2). The patient underwent cordocentesis for prenatal diagnosis. Cytogenetic analysis and Tuberous sclerosis complex (TSC) gene panel were evaluated. Cytogenetic analysis in cordocentesis was evaluated as normal karyotype. The patient was diagnosed as tuberous sclerosis after TSC gene panel results (TSC 2 mutation). The karyotype analysis of the parents was evaluated as normal. In the routine follow-up of the patient, fetal bradycardia developed at the 35w6d of gestation, the patient was taken to emergency cesarean section operation and 2630 gr 5-7 APGAR baby girl was delivered. Bradycardia and cyanosis developed after delivery, she was admitted to the neonatal intensive care unit for follow-up and treatment. Postnatal control echocardiography: It was observed that cardiac rhabdomyomas did not cause obstruction of any valve or main vascular structures. The baby with good general condition and normal systemic examinations was discharged on the 15th day after delivery and was called for periodical follow-up visits by newborn pediatric cardiology, oncology, neurology, ophthalmology dermatology and genetic clinics.

Conclusion

Tuberous sclerosis complex (TSC); is a neurocutaneous syndrome with autosomal dominant inheritance that can affect multiple organ systems with low grade hamartomas (brain ~ 50%, skin ~ 50%, heart ~ 30%, kidney ~ 11%). The incidence of the syndrome, first described by von Recklinghausen in 1862, is approximately one in 6000-10000 live births. In most cases, tuberous sclerosis is caused by mutations in the TSC1 (gene encoding hamartin) and TSC2 (gene encoding tuberin) genes on chromosomes 9 and 16, respectively. Newborns with TSC2 mutation have more severe disease and more severe mental retardation than those with TSC1 mutation. Approximately 2/3 of the cases has de novo mutations, while the rest are inherited from one of the parents. Prenatal diagnosis of tuberous sclerosis is possible by investigating TSC1 and TSC2 mutations in cases with positive family history and cardiac rhabdomyoma. Cardiac mass is the most important clinical finding for the diagnosis of tuberous sclerosis in intrauterine and neonatal period. The relationship between rhabdomyomas and tuberous sclerosis varies between 50% and 79%. Since the risk of chromosomal abnormalities of cardiac rhabdomyomas is low, karyotyping is not mandatory. However, genetic counseling to parents is necessary to detect the presence of unknown, undiagnosed tuberous sclerosis in either. The most important finding leading to the diagnosis of tuberous sclerosis in intrauterine and neonatal period is the detection of

E1384 - RIGHT AORTIC ARCH WITH PATENT RIGHT DUCTUS WITH STRUCTURALLY NORMAL HEART A CASE REPORT

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Right Aortic arch refers to a congenitally abnormal position of aortic arch, i.e right of the trachea in 3VT view with or without abnormal branching pattern. Most commonly it is associated with left sided ductus which forms an abnormal U shaped appearance. Presence of right sided ductus with right aortic arch is less frequently documented, and is most commonly associated with other congenital heart diseases, eg TOF, Truncus arteriosus and Pulmonary atresia with ventricular septal defect. Structurally normal heart with right sided aortic arch and right sided ductus is uncommon, clue to diagnosis in foetal ECHO is presence of normal "v" shaped confluence of aortic arch and ductal arch in 3VT view with trachea right of the ductal arch. A 33 year old second gravida, with no antenatal risk factor was found to be having structurally normal heart, and on cranial sweep both ductal arch and trachea were located right of Trachea. To conclude, right aortic arch with right ductus can be associated with structurally normal heart.

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E1478 - CARDIAC AXIS MEASUREMENT DURING THE FIRST TRIMESTER SCREENING ULTRASOUND

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Objective

Cardiac axis (CAx) measurement at the end of the first trimester has been reported as feasible and could potentially screen for cardiac pathology. In this pilot study in a Lebanese population we aim to describe the distribution of CAx measurements as noted for the Crown Rump length measurement (CRL) during the first trimester scan.

Methods

The population studied consisted of 100 consecutive patients consulting for the first trimester screening ultrasound. CRL and NT were routinely assessed as defined by the guidelines by a single operator. An abdominal or vaginal approach was used according to the presentation of the fetus. The images for the 4-chamber view were defined when a single full rib was visible on each side of the fetal lateral chest wall and clear visualization of the heart attaining one-third of the display screen. Color Doppler was eventually used to confirm the location of the septum and the fetal spine was situated at the 6 or 12 o'clock position. The angle between the line for the septum and the anteroposterior line was taken. Measurements were taken twice in case the operator felt it wasn't clear enough and the mean was recorded then. We excluded from the study patients with abnormal NT, cases with abnormalities found during ultrasound and cases who were suspected for cardiopathy during follow-up.
Statistical analysis was performed with Medcalc software. This study was approved by our institution's ethics committee.

Results

Our series included 100 patients with a mean age of 31 years. NT was below the 95th percentile in all of these patients. In all cases the cardiac axis angle could be measured. Two cases were excluded from the study, one because of the diagnosis of trisomy 21 after NIPT screening and the other for a septal defect diagnosed at 21 weeks. Our series included then two additional patients to reach the 100 patients number. The mean for CAx is 48 °, ranging from 39 to 60 °, with a standard deviation of 5.2. The 2.5 percentile was defined at 40 ° and the 97.5 percentile at 59°. the distribution of the CAx according to the CRL is reported in Figure 1 along with the confidence interval for each CRL measurement. Figure 2 represents the CAx as a z-score. Higher CRL was associated with a trend of a decrease of the CAx.

Conclusion

Measuring cardiac axis is feasible in all the cases included in this pilot study. A mean of 48 ° +/- 5.2 is noted. Larger series including pathological and normal cases could help discriminate values that could lead to cardiopathy diagnosis.

Obstetrics - Diabetes and obesity during pregnancy

E1074 - THE ROLE OF EXCLUSIVE BREASTFEEDING IN IMPROVING OGTT RESULTS OF PATIENTS WITH GESTATIONAL DIABETES MELLITUS AT SIX TO TWELVE WEEKS POSTPARTUM

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Objective
Gestational Diabetes Mellitus (GDM) is one of the most common diseases complicating pregnancy and is associated with both maternal and fetal complications. Women with GDM have a high risk of developing postpartum type II diabetes mellitus. Prevention of this progression is speculated to be influenced by lifestyle modifications including breastfeeding, diet, and exercise. The objective of this study was to determine if exclusive breastfeeding during the postpartum period can improve results of 75 gram OGTT done at 6-12 weeks postpartum.

Methods
We compared baseline and postpartum 75 gram OGTT results of 120 patients with GDM in a tertiary hospital. Comparison was done among four (4) subgroups: (a) those that did not breastfeed, (b) those who breastfed for 1-4 weeks, (c) those who breastfed for 5-8 weeks, and (d) those who breastfed for 9-12 weeks. Analysis of variance (ANOVA) was used to compare the means of the four subgroups versus their 75 grams OGTT results.

Results
There was a significant difference in 75 gram OGTT results done at 24-28 weeks age of gestation and done 6-12 weeks postpartum, for values of fasting blood sugar, first hour, and second hour. There was also an observed higher decline in values as duration of exclusive breastfeeding increases.

Conclusion
This study showed that exclusive breastfeeding during the postpartum period is associated with improvement of results of 75 gram OGTT done at 6-12 weeks postpartum compared with those done at 24-28 weeks age of gestation. It was also observed that duration of breastfeeding is inversely correlated with 75 gram OGTT values.

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E1087 - THE ROLE OF EXCLUSIVE BREASTFEEDING IN IMPROVING OGTT RESULTS OF PATIENTS WITH GESTATIONAL DIABETES MELLITUS AT SIX TO TWELVE WEEKS POSTPARTUM

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Objective
Gestational Diabetes Mellitus (GDM) is one of the most common diseases complicating pregnancy and is associated with both maternal and fetal complications. Women with GDM have a high risk of developing postpartum type II diabetes mellitus. Prevention of this progression is speculated to be influenced by lifestyle modifications including breastfeeding, diet, and exercise. The objective of this study was to determine if exclusive breastfeeding during the postpartum period can improve results of 75 gram OGTT done at 6-12 weeks postpartum.

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E1132 - GESTATIONAL DIABETES MELLITUS EARLY DIAGNOSIS

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Introduction
Gestational diabetes mellitus (GDM) is an interdisciplinary problem. The important medical and social significance of this disease is determined by the high frequency of adverse pregnancy outcomes, both for the mother and for the newborn due to a significant increase in the likelihood of various complications of gestation.

Objective
To determine the risk predictors of GDM and develop a model of mathematical prognosis of the disease risk, suitable for use in the first trimester of pregnancy.

Methods
The present study was cohort and prospective. The study and control groups were formed from among 1140 women who stood up in 2018 on the account of pregnancy up to 12 weeks of gestation in the women's consultation in Moscow and were under observation throughout the pregnancy from the time of registration to childbirth. In accordance with including criteria, 357 women were selected. Fasting glucose, glycated hemoglobin, serum iron and hemoglobin levels were determined in patients at 7-10 weeks of gestation. Two groups of patients were distinguished: with developed GDM (n=32) and control group (n=61). The role of markers of tissue hypoxia and Hba1c as predictors of gestational diabetes mellitus was evaluated.

Results
The study materials were statistically processed using the methods of parametric and nonparametric analysis. The accumulation, correction, systematization of initial information and visualization of the results were carried out in Microsoft Office Excel 2016 spreadsheets. Statistical analysis was performed using IBM SPSS Statistics V. 23 (developed by IBM Corporation). Based on the identified factors that have a statistically significant relationship with the presence of GDM, a prognostic model was developed using the binary logistic regression method: P = 1/(1 + e-z) * 100%, z = -54,8 + 0,19*Xage + 0,89*XBMI + 4,3*Xglu + 5,92*XHbAc1 – 0,2*XserI – 0,17*Xhem, where P is the probability of the presence of GDM (%), Xage is the age of the woman (full years), XBMI is the body mass index (kg/m2), Xglu is the serum glucose (mmol/l), XHbAc1 is the level of glycated hemoglobin (%), XserI is the serum iron content in the blood (ng/ml), XHem is the hemoglobin content in the blood (g/l). The obtained prognostic model was statistically significant ($p<0.001$). 50% was used as a separating value - with a value of P equal to or above 50%, a high risk of GDM was recognized, with values below 50% - a low risk of GDM.

Conclusion
In the modern population of healthy Moscow women of optimal reproductive age, the probability of GDM verification is 9%. The risk group is formed by women who have at the time of registration of BMI ≥24.4 kg/m2 and the fact of determining in the first trimester levels of glycated hemoglobin ≥4.85%, hemoglobin ≤109.5 g/l and serum iron ≤10.7 ng/ml. the proposed mathematical model can be used for mathematical prediction.

E1139 - DIABETES INSIPIDUS AND GESTATIONAL DIABETES IN PREGNANCY AND POSTPARTUM

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Diabetes insipidus (DI) is a condition characterized by large amounts of dilute urine and increased thirst. The amount of urine produced can be nearly 20 liters per day. Reduction of fluid has little effect on the concentration of the urine. There are four types of DI, each with a different set of causes. Central DI is due to a lack of the hormone vasopressin (antidiuretic hormone), because a damage to the hypothalamus, pituitary gland or genetics. Nephrogenic diabetes insipidus occurs when the kidneys do not respond properly to vasopressin. Dipsogenic DI is due to abnormal thirst mechanisms in the hypothalamus. Gestational DI occurs only during pregnancy or postpartum period, because during pregnancy, women produce vasopressinase in the placenta, which breaks down antidiuretic hormone (ADH). Gestational DI is thought to occur with excessive production and/or impaired clearance of vasopressinase. Diagnosis is often based on urine tests, blood tests, and the fluid deprivation test. In diabetes mellitus there is a production of large amounts of urine too, that's why is necessary to make differential diagnosis these two types of diabetes. We present here a case of a 30 years old pregnant woman IIGIIP, diagnosed with gestational diabetes and diabetes insipidus in second pregnancy. First pregnancy was finalized at 26 weeks with a C-section for abruptio placentae, but the 700 gr premature baby survived only 4 days. With second pregnancy she was monitorised from first trimester and at 27 weeks of amenorrhea diagnosed with gestational diabetes. She was took in evidence in diabetology clinic and put on Insulin therapy because increased glycemic values. She had also poliuria, polidipsia in the last 4 weeks of pregnancy. She delivered by C-section a healthy 2700gr baby at 37 weeks of amenorrhea, after premature rupture of membranes. In postpartum she presented a symptomatology that suggests diabetes insipidus. At 36 hours after the intervention, started the poliuria, the amount of urine being bigger than the quantity of ingested or administrated fluids, 11 l/ 24 hours in 2 consecutive postpartum days. For differential and etiologic diagnosis were solicitated multidisciplinary consults- endocrinology, nephrology, and diabetology. The glycemic levels were controlled with difficulty, the lactic acid levels were variable too for few days, also the diuresis which decreased slowly in 10 days at 3000 ml/24 h.

In our case it was difficult to establish correct diagnosis and management because the patient was non-cooperative, didn't communicate to her doctor about her previous symptoms to prevent the postpartum situation with large variations in hard-to-adjust glycaemia, short acidosis states and large amount of urine. However, her general condition over the day was good, including breastfeeding her baby.

It is a rare situation- pregnant patient with gestational diabetes and diabetes insipidus and very important is the communication doctor-patient and a multidisciplinary medical cooperation for a correct therapeutically management.

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E1140 - POSTNATAL CARE AND FOLLOW UP IN GESTATIONAL DIABETES

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Objective

Gestational diabetes-GD-represents any hyperglycemia diagnosed during pregnancy that was not clearly overt diabetes prior to gestation. Hyperglycemia in pregnancy is associated with adverse maternal and prenatal outcome, that's why is important to screen, diagnose and treat hyperglycemia in pregnancy. All women with GD should be tested in postpartum period, not earlier than 4-12 weeks after delivery, in order to detect the risk for developing type 2 diabetes. Insulin sensitivity increases in the following days after delivering the baby and the placenta, so it is returning to the pre-pregnancy levels in the next 2 weeks. The frequency for testing is every 1-3 years, according with individual risk factors like high BMI, family history, insulin dependent form of gestational diabetes.

Methods

Our study group consists of 50 patients, diagnosed with GD and delivered in our department in the last 2 years (27 cases in 2017 and 23 in 2018). In 3 of the cases, insulin therapy was required for a good glucose control. They were screened during the postnatal care, at 4-12 weeks, by OGTT with 75 g glucose and by HbA1c level measurement, in the same day. Results were analyzed using criteria for no pregnant no diabetic women. In patients with test results near the margins range, tests were repeated after 3-6 months.

Results

On the basis of abnormal OGTT and/or HbA1c results, recommendations for changes in lifestyle, diet control and exercising were made, in order to decrease the incidence of type 2 diabetes later in life. For our patients, in the most cases, the results at the 6 months and then at 12 months after delivery showed good blood sugar levels. From the 3 patients which needed insulin therapy, 1 patient presented later good glycemia levels in postpartum only with diet control, 1 needed oral anti-diabetic therapy and the last one has remained on insulin therapy.

Conclusion

Because of the increased lifetime maternal risk for type 2 diabetes in women with gestational diabetes, they should be follow-up by laboratory tests. Screening and diagnosis of GDM and treating it effectively not only prevent adverse maternal and perinatal outcome but also future diabetes in both mother and child. This method of investigation OGTT, is simple in execution, patient friendly, accurate in diagnosis and easy to be performed by any laboratory.

E1180 - PREGNANCY OUTCOME IN GENITAL TRACT INFECTION ASSOCIATED WITH DIABETES

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Objective
It is well known the high maternal and fetal risk for complications in pregnancy associated with diabetes. Genital tract infection has a more increased incidence in pregnancy associated with diabetes. The goal of our study was to assess the frequency and the type of complications which can appear at the pregnant patients who were diagnosed with diabetes and antepartum genital tract infection.

Methods
This is a retrospective study, about the pregnant women with preexistent or gestational diabetes who delivered in our obstetric department in a period of 24 months (1st of January 2017 – 31st of December 2018). Vaginal secretion was sampled from all the patients and microbiological study was performed. The pregnancy outcome was analyzed in relation with the presence or the absence of genital tract infection.

Results
During the last 2 years, 7194 women delivered in our hospital. From these, 48 cases were monitored during pregnancy because of their high glycemic values. In this group, for 17 patients the diabetologist recommended insulin therapy. Among pregnant women with diabetes admitted in the delivery room, abnormal vaginal flora was identified at 27 patients, which means more than half of them. Escherichia Coli was present in 19 cases (39,58%), Klebsiella pneumoniae, Proteus mirabilis and Gardnerella vaginalis appeared each in 2 cases (4,16%). Group B Streptococcus and Enterobacter appeared each of them in 1 case (2,08%). Most of the cases had candidiasis, too.
Cases with diabetes and genital tract infections had a high incidence of material and fetal complications comparing with cases without infection. The most frequent complications we can mention are: premature births in 15 cases (31,25%), retroplacental hematoma in 11 cases (22,91%) and the delivery finalized by C-section in 43 cases (89,58%). Neonatal complications included hypoglycemia, hyperbilirubinemia, hypocalcemia and neurological damage especially in the premature new born babies (in 2 cases).

Conclusion
Genital tract infection in patients with diabetes was highly associated with poor perinatal outcome. It is very important to perform the microbiological screening in these pregnancies. Controlling the genital infection and the level of glycemia in these patients could improve the outcome.

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E1208 - RISK FACTORS FOR DEVELOPMENT OF GLYCEMIC ANOMALIES IN THE POST PARTUM PERIOD A SECONDARY ANALYSIS OF THE SOUTH BELGIAN DIABETES IN PREGNANCY STUDY (BEDIP S)

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Objective

To establish which risk factors among clinical, socioeconomic and biological are associated with the development of glycemic anomalies 3 months post-partum (PP).

Methods

This study was performed on the cohort of the BEDIP-S study. We recruited healthy patients carrying singleton pregnancy, screened them for gestational diabetes (GD) with both IADPSG and Two step ADA 2003 criteria and treated according to IADPSG criteria only. Three months PP we prescribed, to all GDM subjects and a subgroup of normoglycemic subjects who agreed to further testing, a screening for glycemic anomalies with a 2 hour 75g OGTT.

Results

Of the 1006 patients included, only 99 patients completed the study until PP, of which 10 had glycemic anomalies in the PP period according to WHO out of pregnancy criteria. Those who were positive in the PP period had a statistically significantly higher BMI (24.6 vs 28.3, p=0.017), had had a higher number of previous pregnancies (2 vs 3.5, p=0.016) were more often of middle eastern-north African ethnicity (24.2% vs 60%, p=0.016) had lower number of revenues in the family (20.65 vs 60 % of families with one revenue or less, p=0.022). From a biological point of view they had a significantly higher amount of fasting triglycerides at first trimester (80.2 vs 127.3, p<0.001), were more likely to have been diagnosed with GDM according to IADPSG criteria (32% vs 70%, p=0.032) but not with two step criteria (p=0.346). Newborns were more likely to have experienced shoulder dystocia (3.4% vs 20%, p=0.025) and had higher birthweight percentile (52th centile vs 85th centile, p=0.025)

Conclusion

Detecting glycemic anomalies in the PP period is paramount in order to intervene and avoid cases of type 2 diabetes in the future. Compliance to PP OGTT is low, as shown by the low number of patients that completed the study, even among GDM positive patients. Apart from the presence of GDM, we singled out other risk factors for PP glycemic anomalies (BMI, higher number of previous pregnancies, ethnicity, only one revenue in the family, triglycerides at first trimester, shoulder dystocia at the moment of birth and higher birthweight centile). Those could help targeting a subpopulation for whom the completion of a PP OGTT is particularly important.

E1230 - DIABETIC KETOACIDOSIS AS THE ONSET OF DIABETES MELLITUS IN A YOUNG PREGNANT WOMAN A CASE REPORT

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Introduction:
Diabetic ketoacidosis is one of the most serious complications of diabetes, and it is defined by the presence of all the following in a patient with diabetes: ketosis (presence of ketones in blood or urine), hyperglycemia (>200 mg/dL) and metabolic acidosis (venous pH<7.3 or serum bicarbonate <15 mEq/L). Physiological changes and pathological conditions related to pregnancy predispose women with diabetes to worsening glycemic control. Despite this, diabetic ketoacidosis (DKA) occurs in only about 0.5 to 3 percent of diabetic pregnant women.

Case
We report the case of a 18-year old woman, 29+1 weeks of pregnancy who comes to the emergency room of our hospital with intense nausea and vomiting, without other systemic or obstetric symptoms. She reported normal fetal movements and normal gestational course until the moment. This was her first pregnancy, and she had no history of previous diseases except from obesity. Nevertheless, she had a large family history of type-2 diabetes. The results of the blood tests showed severe hyperglycemia (518mg/dL) along with hemoconcentration parameters and elevated serum creatinine (1,7 g/dL), and without any sign of an active infection. She was monitored and we started endovenous insulinotherapy as the main suspicion was a diabetic ketoacidosis. The initial CTG showed fetal tachycardia (165 lpm) with a reactive pattern. As soon as the patient was stabilized the fetal heart rate became normal and she reported a clinical improvement. She stayed in our hospital for 5 days. During this time, she was performed more blood tests in order to try to reach a precise diagnosis. She had normal C-peptide levels as well as high levels of HbA1c (10.6%), which suggested the diagnosis of type 2 diabetes. After 5 days of hospitalization with high doses of subcutaneous insulin she was discharged from our hospital with recommendations, treatment and follow-up consultations in High Risk Pregnancy consultation and Endocrinology.

Conclusio
The presentation of DKA is similar in pregnant women to that in nonpregnant people, with symptoms of nausea, vomiting, thirst, polyuria, polydipsia, abdominal pain, and, when severe, a change in mental status.

Severe hyperglycemia can cause an osmotic diuresis resulting in maternal volume depletion. This, in turn, can result in reduced uterine perfusion and, in association with the metabolic abnormalities of DKA, produce life-threatening fetal hypoxemia and acidosis, as well as renal failure. Maternal mortality is less than 1 percent, but fetal mortality rates of 9 to 36 percent have been reported, as well as increased risks of preterm birth. Thus, DKA is a true obstetrical emergency. Other than close attention to fetal heart rate monitoring, DKA is managed similarly in pregnant and

nonpregnant patients. This includes the use of intravenous insulin, volume replacement, monitoring acidosis, and a search for precipitating causes, such as infection or insulin noncompliance.

DKA alone is generally not an indication for delivery. Emergency delivery before maternal stabilization should be avoided because it increases the risk of maternal morbidity and mortality, and may result in delivery of a hypoxic, acidotic preterm infant for whom in utero resuscitation may have resulted in a better outcome.

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E1274 - PATHOLOGICAL FEATURES OF PLACENTAL ABRUPTION IN MATERNAL DIABETES

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Objective
Placental abruption is one of the most dangerous conditions in pregnancy, life threatening for the mother and the child as well. Hypertensive disorders and diabetes associated with pregnancy are considered major risk factors for placental abruption.

Our study goal is to assess the link between the histopathological features and the perinatal outcome in cases of diabetes- associated pregnancies complicated with placental abruption.

Methods
We completed a retrospective study of all the cases of maternal diabetes who delivered in our tertiary university obstetric department during a period of 24 months (between 1st of January 2017 and 31stof December 2018). Placental abruption was diagnosed in 11 from the 48 cases (22,9%). In only 3 of the cases the diagnosis was established before the delivery and the decision was the emergency cesarean section. Because of the systematic examination of the placentas after deliveries, the obstetrician described the presence of the retroplacental hematoma or blood clot in the other 8 cases, all delivered by elective cesarean section. The macroscopic and microscopic description of the placental changes was made after the histopathological examination. The condition of the babies was assessed by the Apgar Score. We systematically recorded from the hospital charts the significant clinical data and the pathological findings.

Results
Patients with placental abruption and diabetes had a history of cesarean section in 4 cases. No one of the babies died in utero in our study group. Fetal heart rate abnormalities appeared in 5 of the cases. All the babies had a good Apgar Score and a favorable outcome. Placental abnormalities were registered with a wide range of variation. The weight of the placenta was higher than those in nondiabetic pregnant women. The placentas were severe abnormal, enlarged, thick, plethoric in cases with pre pregnancy diabetes (in 3 cases). Unusually thick decidua, dysmature villous structure, villous hypervascularity or even chorangiosis were present in almost all cases with poor glucose control. The most frequent placental pathologic nonspecific features were meconium staining, acute atherosis, fibrinoid necrosis, villous oedema or fibrosis.

Conclusion
Diabetes is highly associated with placental abruption. Surprising was the good outcome of all the babies delivered in case of diabetes complicated with placental abruption in our group. That could mean that the wellbeing of the fetus was not affected by the pathological changes described in these placentas. Histopathological examination of the placenta following pregnancies affected by complications may be an important tool in the patient care. Taking in consideration this information, the management of the subsequent pregnancies could also be improved.

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E1371 - EFFECTS OF WEIGHT ON BIOAVAILABILITY OF MISOPROSTOL DURING INDUCTION OF LABOR IN PREGNANT WOMEN WITH OBESITY

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Objetive

The aim of the study was to evaluate the influence of weight on the area under the curve (AUC) of misoprostol (misoprostol acid) and consequently in rates of labor induction failure of pregnant women with obesity.

Methods

We investigated 40 pregnant women distributed as Group 1: 10 non-obese, Group 2: 10 with obesity grade 1, Group 3: 10 with obesity grade 2 and Group 4: 10 with obesity grade 3. After admission of the pregnant women, reading and signing the Informed Consent Term, the length of cervix was evaluated, the Bishop index was determined and blood samples were collected for evaluation of the laboratory tests and zero time of pharmacokinetics. Following administration of the 25µg misoprostol vaginal tablet, serial blood samples were collected at times of 15 to 360 minutes. Plasma concentrations of misoprostol acid were analyzed in plasma using UPLC-MS/MS. Pharmacokinetic parameters were calculated based on the total plasma concentration versus time curves using the Winnolin program. The Kruskal-Wallis test was used and as post-test was used the Dunn test for statistical analysis.

Results

All pregnant women performed prenatal satisfactorily and none had undergone previous caesarean section. There was a significant difference in labor induction failure between groups. The rate of induction failure in Group 4 was 70%, while in the other groups it was only 10%. The method for the analysis of misoprostol acid in plasma followed the prevailing legislation, with lower limit of quantification (LIQ) of 2.0 pg/mL. The median of AUC0-∞ for Group 1 iwas 83.89 pg/mL, for Group 2 was 73.93 pg/mL, for Group 3 was 68.84 pg/mL and for Group 4 was 56.77 pg/mL. There was weight influence on the AUC (p-value=0.0089) (Figure 1). There was also a relation between the low misoprostol exposure (AUC) and the higher rate of induction failure (p-value=0.0052) (Figure 2).

Conclusion

Weight can influence the bioavailability (AUC) of misoprostol, the higher the weight, the lower the bioavailability and the higher rate of induction failure.

E1445 - MATERNAL SERUM SCREENING BIOMARKER LEVELS IN PREGNANCIES AFFECTED BY GESTATIONAL DIABETES MELITUS

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Objective
To examine the maternal first trimester screening serum biomarkers β-hCG and PaPP-A as a possible predictor of Gestational Diabetes mellitus
Population: We investigate 210 pregnant women who came for the prenatal control. 30 of them excluded due to an increased risk for chromosomal abnormality, insufficient data or no follow-up. The study included 180 pregnant women, with singleton pregnancies. 106 women who subsequently developed GDM and 74 non-diabetic controls

Methods
Maternal serum free β-hCG and PaPP-A were measured at 11,0 to 14,0 weeks of gestation, expressed as multiples of the gestation-specific normal median (MoM). To estimate if pregnant women developed Gestational diabetes mellitus, a standard oGTT was performed between 20,0 to 28,0 gestational weeks.

Results
Among 180 women included in the study and tested by oGTT 106 were classed as GDM by WHO criteria and 74 were confirmed as unaffected. There were no differences in age, BMI, obstetric and family history, CRL or NT measurements. There was a reduction of 11% and 13% in both, maternal median PaPP-A and median free-βHCG in GDM groups compared with non-diabetic (control) group, but with no significant statistical difference.

Conclusion
This study did not find a significant predictive value of isolated biomarkers of the first trimester of pregnancy, β-hCG and PaPP-a, for early predictions of gestational diabetes mellitus, but it has shown a decrease in value both biomarkers by more than 10 percent in the group of patients who developed GDM. Therefore these independent biomarkers could be a useful and important part of some combined screening for the prediction of the risk of developing gestational diabetes mellitus in this respect should be further investigated.

Obstetrics - Maternal fetal Doppler: Fetal growth disorders

E1191 - INTRAUTERINE GROWTH RESTRICTION INCIDENCE RISK FACTORS AND MORBIDITY

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Introduction
Intrauterine growth restriction (IUGR) is defined by birth weight less then 10th percentile for gestational age, sex, and parity. Factors that may influence growth restriction are: maternal, fetal, uteroplacental and environmental. By the time of occurrence during pregnancy there are different types of IUGR: symmetrical and asymmetrical. If birth weight is under 3rd percentile that is severe form of IUGR, and if within 3rd-10th percentile that is moderate IUGR. Newborns with IUGR suffer from different complications like: perinatal asphyxia, aspiration of amniotic fluid, metabolic disorders, hypothermia, polycythemia, developmental problems and higher incidence of fetal and neonatal mortality.

Objective
Aim of this paper is to investigate incidence of IUGR, frequency of symmetrical, asymmetrical, severe and moderate form, as well as risk factors and co-morbidity.

Methods
This is retrospective study, conducted during period of 1st of January 2015 to 30th of June 2016 at the Clinic for Gynaecology and Obstetrician and Neonatology department of Pediatric Clinic, Clinical Center University of Sarajevo. Overall number of term infants with IUGR was 166, divided into two subgroups: 118 who were discharged after delivery (analysed by risk factors for IUGR), and 48 newborns who were hospitalized at the Neonatology department after delivery (additionally analyzed by morbidity).

Results
Overall incidence of IUGR is 2.9 % (166/5682). Asymmetrical IUGR was significantly more frequent 102/166 (61.4%) (p=0.005). Prenatal factors do not differ in the groups of symmetrical and asymmetrical IUGR. Hypertension, preeclampsia and multiple pregnancies are significantly more frequent in populations of severe and symmetrical IUGR (p=0.034, p=0.25). That newborns also had significantly longer hospital stay (p=0.008; p=0.016). Newborns with severe IUGR were more frequently symmetrically growth restricted, and moderately IUGR asymmetrically growth restricted. Perinatal asphyxia and hyperbilirubinemia were dominant co-morbidity in asymmetrical IUGR, and hypoglycaemia and congenital anomalies in symmetrical IUGR.

Conclusion

Incidence of IUGR in our study was 2.9 %. Asymmetrical and moderate IUGR is more frequent. Most frequent risk factors for IUGR are hypertension, preeclampsia and smoking. Perinatal asphyxia and hyperbilirubinemia are dominant co-morbidity in asymmetric IUGR, while hypoglycaemia and congenital anomalies in symmetrical IUGR.

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E1239 - PREDICTIVE VALUE OF EXTREME LOW PAPP A FREE βHCG AND EXTREME HIGH MEAN UTERINE ARTERY PULSATILITY INDEX IN THE FIRST TRIMESTER FOR FETAL GROWTH RESTRICTION

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Objective
In the recent studies it has been shown that the placenta is a field of prenatal screening and diagnosis. Adverse pregnancy outcomes such as preeclampsia (PE), placental abruption (PA), fetal growth restriction (IUGR) and stillbirth could be recognized by prenatal screening. The objective of this study was to predict intrauterine growth restriction (IUGR) using first-trimester extreme-low pregnancy-associated-plasma-protein-A (PAPP-A), extreme-low free-beta-human-chorionic-gonadotropin (free-βhCG)-levels, and extreme-high Pulsatility-index (PI) of uterine arteries, as single and combined predictors for IUGR development.

Methods
This is a prospective first-trimester study analyzing singleton pregnancies at 11–13 + 6 weeks' gestation who underwent routine first-trimester screening at the Department of high risk pregnancy of the Clinic for Gynecology and Obstetrics Narodni front, University of Belgrade, Serbia. First-trimester screening for PAPP-A, free-βhCG, and PI was performed in nulliparous, normotensive women with extremely-low PAPP-A (PAPP-A ≤ 0.52 MoM) and/or extremely-low free-βhCG (free-βhCG ≤ 0.56 MoM) and/or extremely-high PI (PI ≥ 2.52).

Results
Of 85 pregnant women included in the final analysis, 14 (16.5 %) developed IUGR. PAPP-A ≤ 0.52 MoM and PI ≥ 2.52, as a single categorical variables, found to be with high predictable values IUGR development (OR = 3.064, 95% CI = 0.634 - 14.810, p = 0.046 and OR = 2.129, 95% CI = 0.449 - 10.713, p =0.021, respectively). Furthermore, the ROC-curve identified PAPP-A and PI as continuous variables to be significant predictors of IUGR (AUC = 0.671, 95% CI =0.521 – 0.820, p = 0.045and AUC = 0.744, 95% CI = 0.587 – 0.902, p = 0.004, respectively).

Conclusion
The present study suggests that the first trimester extreme low PAPP-A and increased Doppler-PI levels are single predictors of IUGR. Described model could be used in a routine daily clinical practice in resource limited settings where other parameters are not available for the prediction of IUGR development.

E1241 - PERINATAL OUTCOME OF PREGNANCIES WITH ABNORMAL INVASIVE PLACENTA

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Objective
Spontaneous labour in pregnancies with abnormal invasive placenta is relates with obstetrical bleeding and adverse outcome both for the mother and the fetus. Nevertheless, it is debatable if placenta previa and increta/percreta are reasons for fetal compromise. We present our experience on fetal growth patterns in pregnancies with abnormal invasive placenta.

Method
Forty five cases of pregnancies with abnormal invasion of placenta were included in our study. We followed up the fetuses every 15 days from 28th week up to delivery.

Results
In thirty four (67%) cases placenta was found to be previa and in seventeen (37%) increta/percreta. Gestational age at delivery ranged from 30th weeks up to 38th weeks. Neonatal weight ranged between 9th -67th percentile. There were no cases with fetal compromise during the study. There was no case of emergency delivery due to fetal distress.

Conclusion
Although abnormal invasive placenta is related to high prevalence of iatrogenic preterm labour and adverse perinatal outcome it seems that this is due to iatrogenic labour and spontaneous labor and bleeding.

Obstetrics - Hypertension in Pregnancy

E1027 - PREGNANCY IN RENAL TRANSPLANT RECIPIENTS OUR CENTER OUTCOMES

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Objective
Renal transplantation (RT) is the only effective treatment for the end-stage renal disease. Although pregnancy after RT is considered to be safe, these patients are difficult to manage for obstetricians. In this study, we aimed to determine maternal and fetal outcomes in pregnancies after RT.

Methods
We conducted a retrospective review of renal transplant recipients who had received prenatal care and delivered pregnancy at Central Customs Hospital Department of Surgery and Transplantation, Department of Obstetrics and Gynecology January 2010 and December 2018.

Results
A total of eight pregnancies were identified during the study period. The mean age of the patients at the time of RT was 27.2 ± 4.3 years (range 17-32 years), and the mean age at conception was 28,3 ± 6.1 years (range 20-33 years). The mean interval between transplantation and conception was 21.1 ± 8.2 months (range 12-36 months). There was no a miscarriage, but stillbirth was observed in one patient. Mean birth week was 36.5 ± 1.1 weeks and mean birthweight was 2752 ± 562 g (range 2650-3250 g). Three of eight deliveries (37.5%) occurred before 37 gestational weeks. Preeclampsia was detected in three patients, two pregnancies were complicated by intrauterine growth retardation and one case with stillbirth. Mean postnatal follow-up period was 3.4 ± 2.6 years (range 1,5-6 years) and all of the babies were healthy. There was no a graft rejection after delivery.

Conclusion
More favorable pregnancy outcomes can be achieved with a multidisciplinary team and satisfactory counseling is mandatory either preconception and through the pregnancy to reduce maternal-fetal risks.

E1053 - THE INCIDENCE OF THYROID DYSFUNCTION DURING PREECLAMPSIA IN THE 3RD TRIMESTER OF PREGNANCY AND THE POSTPARTUM

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Objective

To determine the incidence of thyroid dysfunction during preeclampsia in the 3rd trimester of pregnancy and in the postpartum period
Secondarily it's to identify potential risk factors

Methods

We conducted a longitudinal multicenter cohort study with prospective data. A total of 330 pre-eclamptic women were included between May 2014 and June 2017. A multivariate logistic regression analysis was performed. generalized on confounding factors, estimated adjusted odds ratios (ORs) with 95% confidence intervals (95% CI).

Results

In our study, the incidence of thyroid dysfunction in preeclampsia was 9.7%: (3% Isolated hypothyroxinemia, 0.9% Clinical hypothyroidism, 4.24% Subclinical hypothyroidism, 0.3% Clinical hyperthyroidism and 1.21% Subclinical hyperthyroidism). In univariate analysis, subclinical hypothyroidism was associated with preconceptional obesity. p = 0.01, RR = 3.5 CI 95% [1.3, 9.7], and with iron deficiency anemia p = 0.001, RR = 6.26 95% CI [2.02, 19.45]. Isolated hypothyroxinemia was significantly related to early gestational age, 34.1 ± 3 SA [31.96, 36.24]. In multivariate analysis, superimposed preeclampsia, iron deficiency anemia, and weight gain during pregnancy were associated with an increased risk of dysthyroidism (superimposed preeclampsia: ORa = 4, CI [1,3, 13], iron deficiency anemia iron, ORa = 3.74 IC [1.6e 8.96] and weight gain during pregnancy, ORa = 3 IC [1.34, 6.53] .

Conclusion

Thyroid function disorders in preeclampsia women have been favored by associated comorbidities. Although we have no information on the therapeutic management of thyroid dysfunction during pregnancy and on Preeclampsia. Our results would suggest that there is a need for better management of thyroid function disorders to improve maternal and fetal prognosis.

E1062 - CORRELATION OF HYPERTENSIVE DISORDERS IN PREGNANCY WITH PROCEDURES OF IVF

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Background
Hypertensive disease of pregnancy, also known as maternal hypertensive disorder, is a group of diseases that includes preeclampsia, eclampsia, gestational hypertension, and chronic hypertension. The aim of this study was to see how many women that had primary infertility can remain successfully pregnant thru IVF procedures without showing any symptoms of hypertensive disorders.

Methods
A total of 207 patients underwent in vitro fertilization (IVF) treatment to become pregnant. All of them had primary infertility and they were chosen randomly in the clinical centre of Kosovo so randomized method is used during the selection of the patients.

Results
The pregnant women included in the study had primary infertility with an average duration of 9.9 years (DS ± 5.2 years), ranging from 2 to 25 years. The average duration of the primary infertility duration of the pregnancies included in the research that showed hypertensive disorders was 10.5 years (DS ± 6.5 years), the range 2 to 25 years, while the average duration of the primary infertility of pregnant women who did not show hypertensive disorders was 9.8 years (DS ± 4.6 years), ranging from 2 to 25 years, again showing no significant statistical difference (P> 0.05)

Conclusıons
In this study we demonstrate that women that had primary infertility that were now pregnant with the help of IVF procedures did not show any hypertensive disorders so we can't say that is a correlation between IVF and hypertensive disorders.

Keywords
IVF, primary infertility, hypertensive disorder

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E1063 - CORRELATION OF HYPERTENSIVE DISORDERS IN PREGNANCY WITH PROCEDURES OF IVF TO PREGNANT WOMEN WITH SECONDARY INFERTILITY

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Background
Hypertensive disease of pregnancy, also known as maternal hypertensive disorder, is a group of diseases that includes preeclampsia, eclampsia, gestational hypertension, and chronic hypertension. The aim of this study was to see how many women that had secondary infertility can remain successfully pregnant thru IVF procedures without showing any symptoms of hypertensive disorders.

Methods
A total of 253 patients underwent in vitro fertilization (IVF) treatment to become pregnant. All of them had secondary infertility with no sign of chronic hypertensive disorders.

Results
We found that there was a statistically significant difference between the group that had hypertensive disorders during pregnancy and the group that did not exhibit these disorders in the order of pregnancy. For 9.3% of pregnant women with hypertensive disorders during pregnancy, was the third or more pregnancies compared to 2.0% of pregnant women without hypertensive disorders ($p < 0.05$)

Conclusion
In this study we demonstrate that women that had secondary infertility that were now pregnant with the help of IVF procedures did show symptoms of hypertensive disorders so there is a correlation between secondary infertility and hypertensive disorders.

Keywords
IVF, secondary infertility, hypertensive disorders

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E1068 - HELLP SYNDROME ACCORDING TO A CLINICAL CASE

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Introduction
HELLP syndrome is a multisystemic complication during pregnancy characterized by haemolysis, low platelet count and hypertransaminasemia. The prevalence range from 0.1 to 0.8%. Although it is classically defined as the most severe manifestation of preeclampsia, there is current controversia about this association, due to the fact that hypertension or proteinuria is missing in up to 20% of cases.

Case
Our patient is a 32 year-old woman, with cesarean section in 36 weeks of previous gestation due to preeclampsia and intrauterine fetal growth restriction. Present gestational follow-up proceed without concerns, until she was attended in Emergency Services at 39+4 weeks relating epigastralgia and subjective reduction of diuresis, in the absence of headache, vomits, or visual disturbances. Mild arterial hypertension was objectified. Complementary studies showed slight hypertransaminasemia and significant proteinuria (300 mg/dl). Against this background, severe preeclampsia was highly suspected: intravenous infusion of magnesium sulphate was started and gestational selective induction of labor was indicated using paracervical prostaglandins under strict fetal and maternal monitoring. After four hours, blood test was repeated revealing low platelet levels and worsen hypertransaminasemia. At this moment, Bishop score continued unfavorable, Consequently, cesarean section was urgently performed owed to HELLP syndrome diagnosis and poor prognosis for vaginal delivery. Uterine atony occurred after fetal and placenta delivery, needing pharmacological measures and B-Lynch suture technique. Immediate puerperium admission in Intensive Care Unite (ICU), requiring antihypertensive treatment, blood transfusion and thomboprophylaxis. Meaningful improvement of analytic parameters was identified the third day, and our patient was discharged two days after with oral hypertensive treatment.

Conclusion
HELLP syndrome constitutes the most severe demonstration of arterial hypertensive disorders during pregnancy, even though it may be held without arterial hypertension in up to 20% of cases. Among differential diagnosis, fatty liver syndrome or gestational thrombocytopenia must be taken into account. Patients diagnosed of HELLP syndrome should be treated and closely monitored in ICU.

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E1082 - HELLP SYNDROME CASE REPORT

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Introduction
HELLP Syndrome is characterized by a triad and its abbreviation stands for: hemolysis (H, hemolytic anemia), liver enzymes (EL) and low platelet count (LP). It occurs with the condition in patients with pre-eclampsia (PE). It is estimated that 8% of pregnant women with PE develop the syndrome and it ranges from 0.2% to 0.6% of pregnancies.

Objective
To report a case of a HELLP syndrome, accompanied at the Ary Pinheiro Base Hospital (HBAP) in Porto Velho-RO.

Methods
The present work uses the reference bibliographical search, to search for information and to report this case on HELLP syndrome.

Case
Patient P.R.V, 23 years old, IG 34S6D, from Rolim de Moura, admitted to CO-HB on 06/03/16, with severe fronto-occipital headache, coluria and oliguria. She had a convulsive episode on the way. At admission evolved to crisis-convulsive, lethargy and coluria. The physical examination showed a general, lethargic, dyspneic state with a venturi mask 30%, SAT 92%, tachypneic, hypoxic (+1/+4), icteric (+3/+4), afebrile, PA 170x110mmhg AC: BNF, RCR in 2T without blows. AR: MV + without adventitious sounds. AFU: 32cm DU-, and vaginal touch: thick, posterior, closed cervix. MMII edema (+ 2 / + 4) homans negative. Laboratory tests: hemoglobin: 9.48, platelets: 75000, bilirubin: T 7.4 D 2.0 I 5.4, AST 1558.8 ALT 663.8 ATSP 66.3 TAP 14.4 INR 1.13. It was carried out dose of attack and maintenance of magnesium sulfate, hydralazine, requested vacancy of ICU, SVD with daily flow of 200ml oliguria and coluria. Emergency cesarean section was performed, transferred to ICU and prescribed Nifedipine 40mg + Methyldopa 2g / day. Patient needed blood transfusion after procedure with 3 red cells, 2 platelets and 2 plasma. After 4 days in the ICU, she was transferred to a medical clinic ward, where she developed fever and chills, and vancomycin was administered and presented with bulging in FO. She was submitted to USG of abdominal wall that presented anechoic image with hypoechoic content measuring 88x46mm in the pelvic region, abscess in the pelvic region and bilateral nephritis. She underwent exploratory laparotomy draining supra-aponeurotic hematoma (50x30) mm, moderate amount of blood in the abdominal cavity. In hysterorhaphy and bladder presented organized hematoma of approximately 80x60mm. After the procedure she was transferred to HB maternity where she presented improvement in the clinical picture. Patient was discharged 23 days after admission.

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E1144 - SUCCESSFUL PREGNANCY AFTER THREE STILLBORNS IN A PATIENT WITH HYPOFIBRINOGENEMIA A RARE HEREDITARY THOMBOPHILIA A CASE REPORT

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Introduction

Fibrinogen plays a pivotal role in normal hemostasis by promoting clot formation, platelet aggregation, and fibrinolysis. It has been established that maintenance of hemostatic balance is necessary for successful outcome of pregnancy. Congenital fibrinogen disorders are rare deficiencies and have a prevalence of approximately 1:1,000,000 cases. Hypofibrinogenemia is a subtype of fibrinogen quantitative disorders, in which fibrinogen level is low. These patients are usually asymptomatic, with fibrinogen levels around 1.0 g/L, sufficient to protect against bleeding.

Case

The case is about a 21-year-old pregnant woman who had three previous neonatal death due to extreme prematurity and placental insufficiency and, after the diagnosis of a rare thrombophilia, was finally able to deliver a healthy baby. During her first pregnancy she had preeclampsia and placental abruption at gestational age of 23 weeks. The baby was born by vaginal birth and died soon after delivery. After 11 days, she developed an ischemic stroke with good recovery. In her second pregnancy she was treated with unfractionated heparin. Routine ultrasound realized at 23 weeks of gestation demonstrated early fetal growth restriction, absence of amniotic fluid, and altered doppler waveform (reversed end-diastolic flow in umbilical artery and abnormal ductus venosus flow). The baby was delivered by cesarean section and died after 3 days. Placental histologic examination showed intravenous hemorrhage and uteroplacental hematoma. Investigation of thrombophilia revealed a reduced fibrinogen levels (110 mg/dL) and a prolonged thrombin time (5,49) compatible with the diagnosis of congenital hypofibrinogenemia. One year later, she got pregnant again. Low-dose aspirin prophylaxis (100 mg/day) was prescribed after 17 weeks of gestation. With 25 weeks, the problem repeated. Ultrasound showed early fetal intrauterine growth restriction, oligohydramnios, and altered Doppler waveform (absent end-diastolic flow in umbilical artery and abnormal ductus venosus flow). Two days later, she was submitted to cesarean section due to rapid progression of doppler abnormalities. The newborn survived 5 days. Her fibrinogen level remains stable. Less than one year later, she got pregnant again. It was then initiated unfractionated heparin 10.000UI twice a day and low-dose aspirin. She had no obstetric complications. Considering her bad obstetric history and risk of bleeding, an elective cesarean section was performed at 34 weeks of gestation. The baby weighed 1,850g and received Apgar score of 6/8. He had a good outcome and was discharged home after one week.

Conclusion

Pregnancy with congenital hypofibrinogenemia is a high-risk condition. Complications include bleeding in early gestation, premature delivery, fetal growth restriction, placental abruption, postpartum hemorrhage, and thrombotic events. In pregnancy, the objective is to achieve serum fibrinogen levels greater than 50 mg/dL in the first and second trimesters and above 100 mg/dL in the third trimester. Fibrinogen replacement therapy with fresh frozen plasma (FFP), cryoprecipitate, and fibrinogen concentrate seems to be effective in preventing these complications and reducing the high rate of pregnancy loss. For patients with a history of bleeding and thrombosis, heparin administration can be considered too.

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E1188 - POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME IN SEVERE PREECLAMPSIA

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Introduction
Posterior reversible encephalopathy syndrome (PRES) is a neurological syndrome associated with different situations, including preeclampsia (PE). This condition may involve alteration of consciousness, visual disturbances and seizures. Symmetric white matter abnormalities, typically in the posterior parietooccipital regions, are often present at magnetic resonance (MRI). We introduce a case of PRES in preeclamptic preterm pregnant patient, that emphasizes the importance of rapid intervention.

Case
A 32-year-old nulliparous woman at 31+4 weeks of gestation was transferred from a regional hospital with severe hypertension, headache and mild visual disturbances. Pregnancy previously proceeded uneventfully. PE was suspected at this point, and magnesium sulphate infusion (4 g bolus and then 1 g/h by continuous infusion) and fetal pulmonary maturation (6 mg intramuscular betamethasone) were initiated after her admission to the Obstetric Emergency Unit. Fetal and maternal monitoring showed persistent 200/110 mmhg blood pressure, and intravenous labetalol was started. A progressive vision loss until complete blindness occurred in the meantime, and 10 mg oral nifedipine was dispensed. Laboratory exams showed no significant alterations. Cesarean section was performed, after 6 hours of fetal maturation, under regional anesthesia and without complications. The patient was admitted to the Intensive Care Unit. Twenty-four hours after delivery, MRI showed radiological signs indicative of PRES, with cortico-subcortical hyperintense patched injuries in the brain stem of both occipital lobes. Forty-eight hours after delivery, neurological examination was normal, remaining slight blurry vision, and she was transferred to the obstetric unit. She was discharged one week after delivery in good health with antihypertensive therapy (30 mg oral nifedipine). The newborn weighed 1640 grams and presented hyaline membrane disease with satisfactory response to surfactant.

Conclusion
This is an illustrative case of PRES associated with the acute onset of preeclampsia. It is important to remember that PE can be very unpredictable and manifests in many atypical ways. Differential diagnosis should be excluded as fast as possible, including imaging if neurological manifestations are present. Fast initiation of empirical treatment may be crucial for favorable fetal and maternal outcome.

E1195 - CAN URINARY NGAL LEVELS BE USED TO CONFIRM PREECLAMPSIA DIAGNOSIS

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Objective
Neutrophil gelatinase-associated lipocalin (NGAL) is a 25 kDa protein in the lipocalin family. Preeclampsia is a syndrome consistent of hypertension and proteinuria with inflammation and high anti-angiogenic factor levels. Our purpose in this study is to compare urinary NGAL levels between preeclamptic and healthy pregnancies.

Methods
A case-control study was performed. Urine samples were collected from women with preeclampsia and normotensive controls matched for age and gestational age. Urinary NGAL concentrations were measured by specific enzyme-linked immunosorbent assay (ELISA).

Results
123 patients and 58 healthy pregnant women were included. Patients with preeclampsia had significantly higher urinary NGAL concentrations than controls (mean: 387 ng/ml vs. 188 ng/ml, respectively; $P<0.001$). Using a cut-off value 252 ng/ml for urinary NGAL to confirm diagnosis of preeclampsia, sensitivity, and specificity were 92% and 91%, respectively. The urinary NGAL values of the patients with severe preeclampsia were higher than those in the mild preeclampsia group, (mean: 398 ng/ml vs. 338 ng/ml, respectively; $P=0.05$).

Conclusion
Urinary NGAL levels were significantly elevated in women with preeclampsia versus normotensive controls. We also found that urinary NGAL were associated with the severity of preeclampsia.

E1211 - FOUR CASES OF SEVERE PREECLAMPSIA DEVELOPED BEFORE 22 WEEKS OF GESTATION

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Early-onset preeclampsia is a serious condition of pregnancy with the potential for adverse fetal and maternal outcomes and it is often difficult to manage. Here we report the clinical course of 4 cases of early-onset severe preeclampsia developed before 22 weeks of gestation. The mean maternal age was 36.8 years old (from 34 to 40), and all cases were primigravida and in-vitro fertilization pregnancy. A few days after onset, the blood pressure became severe and two patients had severe proteinuria over 10g daily. In addition, severe fetal growth restriction (less than -2.0 S.D.) was observed in all cases. The maternal conditions presented with various organ disorders such as renal dysfunction, respiratory failure due to pleural and peritoneal effusion, and HELLP syndrome. All patients were delivered by cesarean section with indications for maternal organ disorder at between 22 weeks and 26 weeks of gestation. Patient with HELLP syndrome had difficulty in continuing pregnancy, but with regard to severe dyspnea caused by proteinuria or pleural effusion, it was possible to continue the pregnancy for two weeks or more, with careful observation to the maternal and fetal condition. In all cases, blood pressure was normalized and proteinuria was negative after 1 month of delivery.

All infants were SFD infants less than -3.0 S.D., and 2 cases born before 24 weeks gestation were neonatal deaths (birth weight 264g and 317g). In two other cases which the gestational period was extended 14 days or more, the infants were born exceeded 24 weeks of gestation and intact survival (birth weight 345g and 484g).

Preeclampsia arising before 22 weeks of gestation is difficult to manage because it rapidly develops and becomes severe. It is important to careful observation of the maternal complications and the fetal condition to extend the gestational period as much as possible for the improvement of the newborn's outcomes. In order to further improve the maternal and fetal outcomes, in addition to existing therapies, development of new preventive methods and therapies is required.

E1216 - PRAVASTATIN IN THE FOLLOW UP AND TREATMENT OF PREECLAMPSIA A CASE REPORT

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Objective
Evaluation of the efficacy of pravastatin in a patient who developed preeclampsia at 32 weeks of gestation

Case
A patient, whose first pregnancy was terminated by cesarean section at 28 weeks of pregnancy due to severe preeclampsia and who was followed at intensive care unit for 5 days, was admitted to our clinic with the diagnosis of 7 weeks pregnancy just one year after the first pregnancy. The patient was re-evaluated at the 11th weeks of pregnancy by doppler and prophylactic aspirin was started. Regular blood pressure measurements were started at the 20th weeks of pregnancy. The mean pulsatile index of the uterine arteries was 2.8. Results of all doppler evaluations are demonstrated on table 1. Follow up of blood pressure was normal until 28 weeks of gestation. After the 28th weeks, blood pressure increased moderately and it reached to 140/90 mm hg at 29 W 6D of pregnancy. 24 hour urine was collected and a protein level of 420 mg was detected. Upon this, the patient was followed up weekly in the outpatient clinic due to the diagnosis of mild preeclampsia. The patient was hospitalized due to the blood pressure reaching 160/100. Blood examination revealed no pathology. Proteinuria reached to 2278 mg. Then 10 mg of pravastatin tablet per day was started. After the administration of pravastatin, blood pressure reached to 140/80 once and afterwards it did not exceed 120/70 and she was followed at outpatient clinic. At 35w3d pregnancy, she was hospitalized due to a blood pressure reaching 160/90 mmhg. There was no abnormality in laboratory results. Due to the persistence of high blood pressures, MGSO4 infusion was started. A female fetus, measuring 2285 grams and 47 cm, was delivered by cesarean section. Her APGAR scores were 9 and 10. Examination of the neonate was normal and was not admitted to the neonatal unit. The mother and newborn were discharged on the third day of delivery without any complication.

E1270 - ACUTE PULMONARY EDEMA ASSOCIATED TO SEVERE PREECLAMPSIA IN A 28 WEEK PREGNANCY

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During the last 20 weeks of pregnancy and postpartum, the new onset of hypertension accompanied by proteinuria or significant end-organ dysfunction leads to preeclampsia. This disorder happens in 2,7-8,2% of women. It is caused by placental and maternal vascular abnormal development, which leads to endothelial damage, being able to cause multisystem organ failure. In this context, pulmonary edema can occur due to the elevation of blood hydrostatic pressure, which is a severity marker of the disease.

Case
31 year old patient, without medical history of interest
As obstetric-gynecologic history, primary sterility since 2012, partial septate uterus. Pregnancy obtained by in vitro fecundation with embryo transfer in march of 2018. Lack of control of pregnancy between weeks 9 and 24

At 28+4 weeks of pregnancy, the patient was hospitalized because of severe preeclampsia (blood pressure >160/110) without clinical symptoms, for intravenous antihypertensive treatment with labetalol. The analyses where between normal reference ranges: Hemoglobin 11,7g/dl, normal platelet account, adequate liver and kidney function.

At the day of arrival, fetal lung maturity was begun with the administration of one dose of betamethasone, which was repeated 24 hours before. A perfusion of magnesium sulphate was also initiated. The echography performed the first day showed altered Doppler in uterine vessels, with no fetal blood redistribution.

During the second day, the values of blood pressure got better (150/90) but the analytics worsened, showing a decrease in platelet account and hemoglobin of 9,1g/dl. The patient started to report dyspnea and a chest X-ray was performed, which showed an infiltration in the lower right segment of the lung. That finding, followed by an oxygen saturation of 93% and a BNP 492pg/ml evidenced a pulmonary edema.

With the pulmonary and neurologic maturation finished and the worsening of the patient, a cesarean section was performed to ensure the well-being of the patient and the fetus, with a suitable result.
The recovery of the mother was satisfactory, with analytic improvement and a decrease on the patient's blood pressure levels, and the newborn evolved properly.

One month after delivery a study of thrombophilia was performed to the patient, with positive findings for the lupus anticoagulant.

Acute pulmonary edema is a multifactorial etiology complication that can curse as a severe complication in preeclampsia. It causes symptoms such as chest pain, decreased oxygen saturation and dyspnea. It is important to make an early diagnose, because as the physiopathology is based on the elevation of blood pressure, it can be predictive of other organ failure. Therefore, it will always be recommended to study any sing related to the respiratory system in this context.

E1313 - SEVERE PREECLAMPSIA AN ADDITIONAL RISK OF THROMBOEMBOLIC EVENTS

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Objective
Venous thromboembolism (VTE) remains one of the leading causes of maternal mortality and morbidity in developed countries, especially in our country. Pre-eclampsia that complicate up to 7% of pregnancies, have been shown to be at increased risk of venous thromboembolism. To determine the prevalence of thromboembolic events in severe preeclampsia in patients admitted to our service.

Methods
We performed a venous doppler ultrasound in all patients with severe pre-eclampsia who experienced symptoms in favor of deep vein thrombosis (DVT) and / or postoperative pulmonary embolism (after Caesarean section) according to their seat, between April 2014 and March 2016.

Results
The prevalence of thromboembolic events was 0.9% in patients admitted for severe preeclampsia. Doppler ultrasound has been observed in cases of deep vein thrombosis after cesarean section in pre-eclamptic patients: 3 cases in the right upper limb, 1 cases in the upper left limb, 2 cases in the lower limb left. the 2 cases of segmental pulmonary embolism and one case of massive pulmonary embolism were diagnosed with spiral CT.

Conclusion
The cases of TVP that we observed in our series could be explained by the severity of preeclampsia in some cases or be related to other obstetric causes.

E1341 - HOW DIFFICULT COULD BE THE DIAGNOSIS OF ACUTE FATTY LIVER OF PREGNANCY DURING DELIVERY

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Acute fatty liver of pregnancy (AFLP) is a rare obstetric emergency characterized by maternal liver dysfunction. It affects 1 in 7000 to 20,000 pregnancies and it usually occurs in the third trimester of pregnancy. Its pathogenesis is not clear but it seems that some defects in fatty acid metabolism are involved. The initial symptoms are nonspecific (nausea, vomiting, and abdominal pain among others) but, if the disease progresses, symptoms of liver failure may appear. We present a 36-year-old woman, on her fourth pregnancy (one vaginal delivery and two miscarriages), attended at the emergency room for contractions at 39+1 weeks of pregnancy. Low risk pregnancy so far. She refers fatigue and increased edema in the last two weeks but normal blood pressure. During the course of delivery, mild systolic hypertension was observed (140-150 mmHg). An urgent blood test was requested showing elevation of transaminases (AST 535 U/L, ALT 480 U/L), total bilirubin (3 mg/dL) and creatinine (1.4 mg/dL), as well as a low platelet count (124,000/mL), prolonged prothrombin time (16.7 seconds), prolonged INR (1.44) and low fibrinogen rate (354 mg/dL), but no anemia. In view of these results, maternal neuroprotection with magnesium sulfate was performed. Finally, a male fetus was born by normal vaginal delivery. During her stay at the hospital daily blood test controls were carried out, and hemolytic anemia (without schistocytes) was observed. Reticulocytes, LDH and bilirubin were increased and haptoglobin was low. In addition, progressive lengthening of coagulation times, low platelet count (95.000/mL), hypoglycemia and decreased cholesterol (129 mg/dL) were evidenced. Leukocyte level, PCR and PCT were increased without symptoms of infection. Due to all these parameters, a precise diagnose of AFLP was made, and therapy with vitamin K initiated. Subsequently, this parameters and blood pressure were progressively normalized, with successful clinical evolution. AFLP can entail to serious fetal and maternal adverse outcome, so an early diagnosis and treatment are crutial. Diagnosis is based on compatible clinic and laboratory criteria, but the differential diagnosis between AFLP, HELLP syndrome and severe preeclampsia may be difficult. Sometimes two of them can appear simultaneously. The definitive treatment consists in the termination of pregnancy, as well as maternal stabilization and recovery of liver function.

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E1412 - PREDICTIVE ROLE OD DEMOGRAPHIC AND CLINICAL RISK FACTORS FOR DEVELOPING PRE ECLAMPSIA AND ITS SEVERITY UNI VARIANT LOGISTIC REGRESSION ANALYSIS

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Objective
To determine whether previously identified risk factors are associated with development of severe form of pre-eclampsia in a heterogeneous cohort of women.

Methods
Systematic review of data collected form a doctoral case control study among pregnant women coming for consult at our clinic from 2011 till 2014. It consists of investigating the significance of formerly known risk factors in predicting the development of severe form of pre-eclampsia in patients from our country.

Results
Among the evaluated risk factors our study showed that risk for pre-eclampsia was greater in nullipara women compared with parous. Having a baby at older age is also associated with higher pre-eclampsia risk. The most significant risk factors in predicting not only the development od pre-eclampsia but also its severity is elevated systolic (>160 mm/Hg) and diastolic (>100 mm/Hg) blood pressure. Factors with non-significant greater probability for developing pre-eclampsia according to our logistic regression analysis are patients with previous pre-eclampsia, smokers, pregnant women with higher BMI and also patients with Diabetes Mellitus (type I, type II or gestational diabetes).

Conclusion
The history of elevated systolic and diastolic blood pressure during pregnancy or ever before getting pregnant, pregnancy at older age and null parity can predict the development of pre-eclampsia and its severity with an increased odds-ratio. Using such variables in regression can help to diagnose pre-eclampsia beforehand and allow timely intervention.

E1459 - CONTROVERSY IN THE BEHAVIOR OF PATIENTS WITH EISENMENGER'S SYNDROME (ES) AND PREGNANCY

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Eisenmenger's syndrome is defined as along-standing left-to-right reversal cardiac shunt caused by a congenital heart disease complicated with severs pulmonary arterial hypertension (HTPA). This syndrome in the pregnant women can causes serious complications during the pregnancy, childbirth and post-natal period with increasing level of maternal mortality from 20% to 65%, and may be attributed to fainting spells, blood clots forming and traveling to distant sites in the veins, hypovolemia, coughing up blood or preeclampsia. We report about clinical case of pregnant "A" with Eisenmenger's syndrome.

Case

The patient had been monitored by family doctor since 11-12 weeks of gestation and consequently she was directed to the Republican cardiology center. There woman`s level of HTP was 60 mmHg but she categorically refused to interrupt the pregnancy, after that she was monitored by a multidisciplinary team (cardiologist, heart surgeon and obstetrician) and she got the following treatment with vasodilator and antithrombotic: Seldinophil from 12.5 mg to 25 mg x 3 times; Verospiron 75 mg x2 times; Sol. Clexani 0.2 UA u/s.

Pregnancy had been complicated at 19-20-th week by intrauterine infection (TORCH and Streptococcus beta-hemoliticus) which was cured by cefalosporin and clarithromycin with the main treatment. However at the 23-24 weeks was revealed pregnancy-induced hypertension associated with three-week fetal restriction according to USG date and it led to hospitalization for monitoring and oxygen-therapy. Despite the therapy at the 30th week the patient's general state deteriorated due to acute heart failure (increased fatigue, dyspnea, cough) and the advancing of HTP to 105 mmHg, FEof LHV - 45%, on the background of cavity dilation of left heart ventricular to 182 mm3.

The patient was connected to the ventilation SPAP mask with FiO2 61%. According to this treatment, the women`s general state got better: SpO2 increased from 60% to 94%, HR and the pulse – 80 bpm, BP - 115/80 mmHg. However the state of the fetus was aggravated by the circulatory insufficiency of gr. I b with the onset of fetal hypoxia.

Based on the foregoing the pregnancy was completed by emergency cesarean surgery, which was performed under general anesthesia with muscle relaxes and mechanical ventilation. The male fetus was extracted with weight 650 g according to the scale Apgar 2-4 points. Later 6 hours after the surgery, the artificial ventilation was stopped and the patient was removed under the natural breathing. The postpartum period was held on acute cardiac insufficiency therapy in conditions of pulmonary hypertension (diuretic, seldinophil, nitrate, oxygen-therapy in the SPAP mask, morphine analgesia), antiarrhythmic (Verapamil 20 mg x 2 times), antithrombotic and uterotonic.

The patient on the 7th day after cesarean surgery was transferred to the specialized cardiology hospital, and then the patient was discharged on the 11th day at home under the supervision of the family doctor.

Conclusion

Pregnancy aggravates Eisenmenger syndrome whereas ES itself complicates pregnancy and fetus state. So, it is very serious multisystemic pathology has disastrous maternal and fetal consequences. In this case the pregnancy has to be contraindicated.

Obstetrics - Maternal nutrition

E1020 - A CASE STUDY OF ANEMIA IN PREGNANCY WHO UNDERGO ANTE NATALCARE IN OBYGN POLYCLINIC AT CENTRAL CILACAP 1 COMMUNITY HEALTHCENTRE IN PERIOD OF JANUARY TO DECEMBER 2015

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Anemia in pregnancy occurs when there is decreasing of erythrocytes, hemoglobin quantity, or packed red cell volume below normal rate, which is Hb <11 g/dl. This may be caused by several risk factor related with demographic data in ante natal care medical record This study aimed to know about presentation of anemia pregnancy in gravida term in obgyn policlinic Central Cilacap 1 Community Health centre in period of January to December 2015. This is a quantitative descriptive study using ante natal care medical records win Central Cilacap 1 Community Health centre during January to December 2015 (12 months data). The result of analyzing medical records is majority of pregnant woman had mild anemia (55, 1%), young adult (79, 8%), in third trimester (50, 6%), multigravida (62, 9%), didn't work (93, 3%), had normal LILA (74, 2%), had normal IMT (51, 7%), and had middle educational status (53, 9%).

Several risk factor of anemia pregnancy mentioned in previous theory is appropriate with the result of this study. However, there are several results of this study didn't suitable with the previous theory that may be caused by limitation of this study such as short period of study (only one year) and incompleteness of medical records data of ante natal care.

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E1026 - THE RELATIONS BETWEEN MATERNAL BLOOD LIPIDS AND MACROSOMIA

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Objective
The aim of this study is to explore the relations between maternal lipids and newborn weight and macrosomia.

Methods
All subjects in this study were naturally conceived and healthy pregnant women with singleton pregnancies who delivered macrosomia (96 cases) and those who delivered normal weight newborns (140 cases, as control) at full term during the period of January 1st 2017 to December 31st 2017.Heights and weights of women were measured and pregravid body mass index (BMI) was calculated. Lipids were analyzed with fasting blood samples at 36-37 weeks of gestation. Weights and heights of newborns were measured at birth.

Results
Height, Pre-pregnancy weight and BMI, weight before delivery, weeks of gestation at labor, triglyceride, atherogenic index of plasma, weights and heights of newborns and rates of cesarean section in the group of women having macrosomia newborns were higher significantly than those in control group($t/\chi 2$ value ranged from-4.924 to 6.562,all $P<0.01$). And height, pre-pregnancy weight, pregravid BMI, weight before delivery, weeks of gestation at labor, triglyceride and atherogenic index of plasma were positively correlated with weights of newborns(r value were 0.183,0.254,0.199,0.280,0.508,0.213 and 0.238,respectively,all $P<0.01$).The results of multiple linear regression analysis showed that newborn weight was positively correlated with AIP (β value was 0.42, $P< 0.05$).

Conclusion
The blood lipid levels are elevated in pregnant women generally. The increased level of triglyceride in pregnancy may be associated with the risk of macrosomia. In addition, AIP may has certain values in the observing the correlations between blood lipid and macrosomia.

E1076 - IDIOPATHIC ACUTE PANCREATITIS IN SECOND TRIMESTER OF PREGNANCY CASE REPORT

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A 29-year-old patient G4P1A2 was at 32nd week of gestation was referred to a tertiary level hospital because of acute pancreatitis. The patient has hypothyroidism. The patient is non smoker and the course of pregnancy was uneventful. She had one uncomplicated caesarean section five years ago because of fetal macrosomia.
The patient at the day of admission had sudden onset of upper abdominal pain referring to back of the patient and vomiting. She was admitted to primary care level hospital. Laboratory investigations revealed increased serum level of lipase to 1245 U/l, increased WBC count to 14700/µl, and C reactive protein to 11,8 mg/l. The vital signs were in normal range. Ultrasound scan showed edematous pancreas with total longest dimension of 29 mm with slit like collection of free fluid near the pancreas. There was no evidence of gallstones or biliary lithiasis. Other laboratory investigations were normal. Obstetric physical examination and fetal ultrasound scan did not show abnormalities. Idiopathic mild form of acute pancreatitis according to Atlanta classification was diagnosed. Conservative management was started with intravenous fluid, analgesics (paracetamol and pethidine), and betamethasone was given for fetal lung maturation. The patient was transported to tertiary care level hospital which has both obstetrics and surgical departments. A multidisciplinary team confirmed the diagnosis and continued the conservative method. Subcutaneous heparin was additionally prescribed. A time of admission the serum level of amylase was 713 U/l. Coagulogram was in normal range. Electrolytes results showed only hyponatremia 135 mmol/l. CRP was increased to 21,9 mg/l. Lipid profile was slightly distorted with total cholesterol and triglycerides increased to 257 mg/dl and 215 mg/dl, respectively. The next day there was more intense upper abdominal pain, nausea and frequent vomiting. Laboratory investigations revealed higher leukocytosis 17100 /µl, CRP 117,2 mg/l while serum amylase was 550 U/l. Surgical and gastrological consultations were performed and conservative treatment was continued. The patient's vital signs were in normal range.

Within two days the symptoms of the patient were completely disappeared. The amylase level, leukocyte count dropped to normal value (93 U/l and 11300/µl, respectively). The CRP was 252 mg/l. The patient started to eat without nausea and vomiting. Follow up for the next week in the hospital did not reveal any abnormalities of the vital signs. The patient was in good general condition without symptoms. Abdominal ultrasound features of free fluid disappeared. Throughout hospitalization obstetrical examination did not show abnormalities, cardiotocography was normal.

Exact cause of acute pancreatic in this case was not established. Conservative treatment is the method of choice for mild form of pancreatitis in pregnancy. Multidisciplinary team work is essential for management of such cases. Serial examinations, laboratory investigations and ultrasound are important for monitoring the patient for possible complications. The optimal management should be considered in tertiary level hospital ensuring multidisciplinary care from obstetrics, anesthesia and intensive care, surgery and gastro-enterology units.

E1110 - PERICONCEPTIONAL MULTIVITAMIN INTAKE IS ASSOCIATED WITH A DECREASED RISK OF CONGENITAL HEART DISEASE – A PROSPECTIVE COHORT STUDY

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Objective
Congenital heart disease (CHD) is the most common type of congenital single organ malformation with a prevalence of 8 per 1000 live births. However, little is known about the etiology of CHD, and thus possible modifiable behavioral risk factors. The objective of the study was to assess the association between multivitamin intake and the risk of CHD.

Methods
The study population comprised of 15,567 women from the Copenhagen Pregnancy Cohort with complete data on multivitamin intake before and during pregnancy who gave birth to live-born singletons from October 2012 to October 2016. Data on multivitamin intake were linked to the Medical Birth Registry to identify the birth outcome. Main outcome measure was CHD defined according to the International Classification of Diseases, 10th revision (codes DQ20-DQ26). Cases of CHD were classified in three subgroups based on the clinical phenotype: 1) septum defects, 2) malformations of great arteries, and 3) other CHD. Multivariate logistic regression analyses were used adjusting for a priori identified potential confounders which included maternal age, pre-pregnancy body mass index, chronic disease, maternal smoking, maternal alcohol consumption, being pregnant after use of assisted reproductive technology and gestational age at birth.

Results
Of the included women, 31% had a daily multivitamin intake in the periconceptional period and 54% in the postconceptional period. The prevalence of CHD in the cohort was 1%. Periconceptional multivitamin intake was associated with a decreased risk of overall CHD (aOR 0.61 (95% CI 0.37-0.99)), but did not affect the risk of the remaining outcomes. Stratification by body mass index did not alter these findings.

Conclusion
Few studies have assessed a possible effect of multivitamin intake and CHD. In line with the previous studies, we found that only periconceptional multivitamin intake was associated with a decreased risk of overall CHD. Also, the prevalence of CHD in the cohort corresponded to that previously reported.

E1172 - THE LEVEL OF ANEMIA DURING PREGNANCY

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Anemia of the pregnant woman, especially in the early pregnancy, may have a potentially damaging effect on the fetus. In our Service she controlled the pregnancy of 764 pregnant women, of whom 300 pregnant women with anemia, diagnosed with an average age of 26.6 ± 4.7 years, were diagnosed with an average gestation age of 23.9 ± 9.1 weeks. They all had clinical signs and laboratory evidence of anemia. The number of erythrocytes (E), hemoglobin (Hb), hematocrit (Htc), and serum iron level (Fe) were analyzed. In the second trimester, the value of E was significantly lower ($p < 0.0001$) than in the first trimester. The mean value E in the third trimester was significantly lower compared to the first ($p < 0.0001$) trimester. In the second trimester, the Hb value was significantly lower ($p = 0.020$) compared to the first trimester, while the mean Hb value in the third trimester was significantly lower than the first trimester ($p < 0.0001$). The mean value of Htc in the third trimester was significantly lower compared to the first trimester ($p = 0.0008$). The mean value of Fe in the second trimester was significantly lower compared to the first trimester ($p = 0.010$), while in the third trimester it was significantly lower compared to the first ($p < 0.0001$) and the second trimester ($p = 0.006$). The gestational age in the primigravidas was poorly correlated with the values E ($r = -0.226$) and Fe ($r = -0.276$). The gestational age in secundigravidas was poorly correlated with the values E ($r = -0.366$), Hb ($r = -0.206$), and Fe ($r = -0.280$). The gestational age at multigravidas was really significant at the border and high correlations for the value E ($r = -0.688$), Hb ($r = -0.695$), and really significant for Htc ($r = -0.576$) and easy for Fe ($r = 0.206$).

Conclusion

With each trimester of pregnancy, anemia becomes more pronounced. In multigravidas with anemia there is a significant association of anemia with gestational age, which should pay special attention to the management of pregnancy, i.e. timely include substitution therapy and advise pregnant women about the quality of the diet.

Obstetrics - Preterm labor

E1028 - PREGNANCY OUTCOMES IN ORGAN TRANSPLANT RECIPIENTS A 10 YEAR OUR EXPERIENCE

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Objective
There are an increasing number of reports of pregnancy following liver and renal transplantation, but many questions remain regarding preconception counseling and management of the pregnancy. The aim of this study was to report pregnancy outcomes in women who had undergone liver and renal transplants and to gain insight into these issues.

Methods
We conducted a retrospective review of liver and renal transplant recipients who had received prenatal care Central Oilworker and Customs Hospitals between January 2010 and December 2018.

Results: 11 consecutive pregnancies in 3 liver and 8 renal transplant recipients were identified during the period. The most common indication for liver transplantation was HBV, for renal transplantation was chronic renal failure. The median age at transplantation was 27 years (range, 17-32). The median age at conception was 28 years (range, 20-33) with a median time between transplantation and conception of 21 months (range, 12-36). A tacrolimus-based immunosuppressive regimen (n = 11, 100%) was the most common at the time of conception. There were 10 live births (90,9%), one stillbirth (9,1%) and no any abortion and miscarriage. Median gestational age at delivery was 37 weeks (range, 34-38), and the median birthweight was 2925 g (range, 2600-3250 g). Pregnancy and maternal complications included preterm deliveries 3 (27,3%), intrauterine growth restriction 3 (27,3%), pre-eclampsia 3 (27,3%), cesarean delivery 11(100%), bacterial infection (15%). We had not any congenital anomalies.

Conclusion
Pregnancy after liver and renal transplantation can achieve relatively favorable outcomes. Obstetricians should be involved in the contraceptive and fertility counseling of female transplant recipients to prevent unintended pregnancies.

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E1067 - COMPLEX GESTATIONAL MANAGEMENT AN OBSTETRIC CHALLENGE

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Introduction
High risk pregnancy not is only associated to at least one circumstance that may pose potential risks for current gestation course, worsening maternal and fetal outcome, but is also related to patients suffering from previous medical diseases that might be negatively affected by gestational situation.

Case
35 year-old pregnant G4P2C1A0
High risk for neural tube defects in first trimester screening. Prenatal diagnosis scan and amniocentesis dismissed. Hypothyroidism treated with levothyroxine. Symptomatic complete placenta previa requiring short term observational admission. Gestational diabetes controlled by insulin since 29 weeks of gestation. Preterm rupture of membranes at 29+4 weeks, hospitalization for intravenous antibiotic therapy and fetal lung maturation. Admission complicated by Giardia lamblia infection treated by specific antibiotic. Serial ultrasound scans during this time didn't entirely exclude placental acretism at the anterior uterine wall. Threatened preterm labor at 30+6 week of gestation stopped by intravenous atosiban as a tocolytic therapy. The patient presented general malaise and shivers at 31+1 weeks, and intravenous antibiotic therapy is restarted as well as intravenous magnesium sulphate for neuroprophylaxis. Blood test parameters and physical examination were indicative of chorioamnionitis, so an emergency cesarean delivery was required. Heavy bleeding during surgery made necessary blood transfusion. Female newborn, 1800 grams. Apgar 7-9, admitted in Intensive Care Unit. Blood culture and placental culture resulted positive for Proteus mirabilis, and intravenous antibiotic therapy was adjusted according to antibiogram. Early postpartum evolution with clinical and analytical improvement. The patient was dismissed at 7th day of puerperium.

Conclusion
This case report is a clear example of high risk pregnancy. Management is not easy in spite of several diagnostic tools currently available. Gestational follow-up and management of eventual complications based on Multidisciplinary Units may enable work team and decision making in complex patients.

E1077 - COURSE OF PREGNANCY AND LABOR IN PREGNANT WITH EHLERS DANLOS SYNDROME CASE REPORT

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A 22-year-old patient G1P0A0 at 30th weeks of gestation was admitted to the tertiary care level hospital because of gradually increased joint pain, difficulty in moving, breathlessness, multiple faints and unwell feeling. Classic form of Ehlers-Danlos Syndrome was diagnosed clinically in the childhood. She had multiple orthopedic operations of the vertebral column (twice), shoulder joints (twice) and knee joints (twice). The family history was negative for this disease entity. The height of the patient was 160 cm and the weight was 61kg at time of admission. The pregnancy was planned by the patient and the course of early gestation was uneventful. Fetal ultrasound examination at 13th week and 20th week of gestation did not show any abnormalities. The patient did not have invasive prenatal procedures. She gained about 4 kg during pregnancy. The patients noticed in the last weeks deterioration in her movement capability and increased joints' pain which was no longer be relieved by paracetamol. Conservative management for the patient was done. A multidisciplinary team of cardiologist, internal medicine physician, anesthesiologist, neurologist, obstetrician, perinatologist and radiologist was involved for monitoring the patient in the third trimester. Obstetrics examination did not show abnormalities. The patient was feeling the fetal movement well, the tococardiography monitoring was reactive. The amniotic fluid index was normal and fetus was growing within normal range. Doppler studies of middle cerebral and umbilical arteries were normal.

Abdominal ultrasound scan, heart echo, Holter ECG investigations did not show abnormalities. Neurological examination did not reveal abnormalities. The trunk of the patient was relatively short. The increase of the abdominal size due to pregnancy causes more pressure on the thorax and elevation of the diaphragm. The patient's mobility was more deteriorated and she was unable to lie flat on her back. Joint pain and dyspnea caused patient's irritation and sleep disturbances. The decision of the multidisciplinary team was to postpone the delivery as much as possible to the moment of most possible fetal maturity. Antenatal steroid was given at 30th week of gestation to stimulate fetal lung maturation. Caesarean section under general anesthesia was done at 34th week of gestation delivering female baby 2310g/48cm with Apgar score of 7-5-8-9. At 1st, 3rd, 5th and 10th minute, respectively. The course of the caesarean section was uneventful. After the delivery the patient's well being was improved and the dyspnea was significantly subsided and the mobility of the patient was improved markedly. Both the mother and baby were discharged to home in good general condition seven weeks after caesarean section. Management of pregnancy and labor considering rare diseases should be adjusted to individual cases. Multidisciplinary management involving multiple clinical specialties is essential for obtaining the best possible results for patients with rare diseases.

E1091 - PRETERM BIRTH – RISK FACTORS AND PREDICTORS IN A TERTIARY HOSPITAL IN ROMANIA

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Objective
The study aimed to observe the prevalence of preterm births and to investigate the obstetrical risk factors in a cohort of pregnant women in a tertiary care hospital.

Methods
A prospective study was designed and included 1834 pregnant women that presented for different symptoms in at the Clinical Hospital of Obstetrics and Gynecology "Dr.I.A.Sbarcea" Brasov, Romania during two years (2017-2018).
Relevant history, obstetric and ultrasonographic examination was performed for all the pregnancies in the 2nd and 3rd trimester.

Results
From the total number of patients included in our study, 12.37% delivered before 37 weeks of gestation, 0,43% presented with abortion (<24 weeks of pregnancy). From the total number of preterm births, we observed that 8.5% were women with short stature, 4.2% had the age under 18 years, 10.1% presented with cervical insufficiency (cervix <25 mm). In 7.2% of cases, we observed a statistically significant association between preterm birth and oligohydramnios and intrauterine growth restriction.

Conclusions
The incidence of preterm births was similar in the present cohort with the general prevalence. Cervical insufficiency, oligohydramnios, and IUGR were identified as significant risk factors for preterm births, influencing the neonatal outcome.

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E1137 - DOMESTIC VIOLENCE IN PREGNANCY RISK FACTORS AND FREQUENCY IN GREECE

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Objective
The objective was to define the context of domestic violence focusing on the prevalence and risk factors in a population of pregnant women in Greece.

Methods
An anonymous and confidential questionnaire was used to conduct a survey set in the outpatients' clinics of two Public General Hospitals in Athens, in Greece, including five hundred and forty-six women.

Results
The response rate of the survey was 100%: four hundred and forty-six questionnaires were given and returned filled in revealing that the prevalence of domestic violence in Greece was 6% (33 of the participants in the survey) for the period of the survey. More specifically, 3.4% of the sample of women stated that they had been abused since the beginning of pregnancy. The higher risk of abuse in pregnancy by the partner (61.1%) was noted for foreign women or Greek women with a foreign partner. This can be explained by the living conditions of immigrant women as well as the customs and traditions from their countries of origin and the fact that they feel isolated and do not know how to seek help. The low educational level is also reported as a main factor. The same applies for work. It was found that women with financial and social independence did not report any abuse whereas housewives and unemployed women or university students face a higher risk (7.1%, 15.4% and 20% respectively). The risk of abuse in pregnancy is increased if other factors, such as big age difference, history of abortions and undesired pregnancy (pregnancy which is not desired by the partner increases the percentages of violence by seven times (36.4% vs. 5.5%) are also present. Regarding the type of abuse, 2.7% of the women stated that the abuse was not directed towards a specific part of the body, but it was mainly pushing or verbal abuse. If a part of the body was injured that was mainly the face (3.1%) followed by the abdomen (1.3%), a fact which shows aggressiveness both towards the woman and the fetus. A very important finding is the fact that most of the women stated that they were afraid and also that most of the abused women were not regularly followed up by a physician or did not have all the required tests.

Conclusion
In the case of domestic abuse, it seems that the period of pregnancy is not a protective factor. Women that are more at risk of experiencing abuse are either immigrant women or women with a foreign partner, unemployed and of low educational level. The absence of a social support network also plays a significant role. The most important period to deal with the domestic violence phenomenon is the prenatal period during which women can be informed about abuse and how to seek help. Furthermore, the health services must be ready to provide support during pregnancy and in the follow-up period.

E1215 - MANAGING TO BEAT AN OBSTACLE

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Parkinson's disease is a long-term neurodegenerative disorder that affects predominately dopamine-producing neurons in the substantia nigra, so that it mainly affects the motor system. Symptoms generally develop slowly over years. Young-onset Parkinson's disease occurs in people younger than 40; it affects about 2-10% of the people with Parkinson's disease. Research suggests that genetics may play more of a role in early or young onset than in people who are diagnosed over the age of 40.

Case
39-year-old woman with advanced Parkinson's disease for over 10 years, presented at 8 weeks of gestation. She had no other remarkable medical antecedents apart from morbid obesity. As obstetric antecedents, she had a previous forceps vaginal delivery in 2013. When she got to know she was pregnant, she sharply stopped taking most of the drugs she used to for her illness, such as Ropirinole, Rasagiline and Apomorfine, but Levodope. It caused a worsening control of it until her Neurologist could arrange the treatment again. All test made at the beginning of gestation were normal. The only finding was a subclinical hypothyroidism so that she started taking Eutirox.

During all the pregnancy she has been controlled by a multidisciplinary team composed of Neurologist and Obstetrics in order to closely follow her and to adjust her treatment depending on her symptoms. It has been an arduous task since the patient decided to stop taking some of the drugs when she considered. In the thirtieth week of pregnancy, she underwent a remarkable clinical worsening due to she had notice a slowing-down of its movements and was not even able to move for several hours frequently.

The obstetrician committee studied her case and recommended to finished the pregnancy by Caesarean section in 38 to 39 week of pregnancy in case of bad control of the symptoms and not good enough cervical conditions. Otherwise, if a good control of her symptomatology was achieved and the delivery started but its own, it was decided to try a vaginal delivery, remarking she had a previous vaginal delivery a few years ago. At 36 weeks of pregnancy, she consulted at the emergency room for membranes premature ruptured. By that time, although her scare mobility, she has got better control of her symptoms than a few weeks before, so a vaginal delivery intend was proposed. Finally, a female fetus of 3060 was born by normal vaginal delivery, Apgar score of 9/10 and acid-base equilibrium of 7'29. In the immediate postpartum, she asked for inhibiting nursing in order to reinitiate her complete treatment.

Conclusion
Parkinson's disease is rare in young people; however it can be very debilitation if present. When it occurs in a pregnant woman it is even more difficult to manage. It is also important to have in mind all those drugs they need to intake to achieve a right control of their symptoms. Most of these drugs belong to category C of FDA. It will be essential that we follow the patient closely thanks toto a multidisciplinary team.

E1217 - FETAL WILMS' TUMOR CASE REPORT

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Objective
We herein report a rare fetal renal tumor case that was diagnosed at 33 week 0 days of pregnancy.

Case
A 22-year-old G1POAOCO patient was referred to our clinic with the diagnosis of biparietal diameter-abdominal circumference disproportion and a fetal weight gain of 1000 mg in 3 weeks. She had no significant medical or family history. Ultrasonographic examination revealed a female fetus whose measurements except the abdominal circumference were consistent with the gestational age. Abdominal circumference was 377 mm and it was consistent with 42 weeks. Amniotic fluid was measured as 96 mm in the deepest pocket. A mass measuring 72x90 mm, that pushes the descending aorta, vena cava inferior and the intestines to left was, determined on the right side of the abdomen (Figures 1 and 2). Coronal examination revealed that the mass was completely arising from the right kidney (Figure 3). Corticosteroids were given to induce pulmonary maturation. At 33w4d, spontaneous contractions started and she underwent cesarean section. Apgar scores were 8 and 6 respectively. On the third day, she underwent surgery and complete tumor excision was performed without any complication. The frozen examination of the mass was reported as Wilms' tumor. Case was referred to pediatric oncology department.

Conclusion
Congenital Wilms tumors are seen very rare. Polyhydramnios is frequently associated with renal tumors due to the compression of major infradiaphragmatic vessels. Rapid growth of the tumor mostly needs rapid intervention.

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E1256 - COMPARISON OF MISOPROSTOL VERSUS DINOPROSTONE FOR INDUCTION OF LABOR AT TERM

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Objective
To compare the efficacy and safety of vaginal misoprostol and removable dinoprostone vaginal delivery system (Propess) for the induction of labor in pregnant women between 37 and 41 weeks of gestation

Methods
In this retrospective observational study, 200 patients with a single pregnancy, 37 – 41 weeks, cephalic presentation, Bishop score < 6, admitted for labor induction, were evaluated from October 2016 to September 2017. Misoprostol Group (100 patients) received 50 micrograms vaginally every 6 hours to a maximum of 4 doses and Dinoprostone Group (100 patients) received dinoprostone 10 mg vaginally for once up to 24 hours. Women were monitored by external CGT through labor induction and examined vaginally every 6 hours to assess the progress of induction progress. The primary outcome was percentage of women who reached the active phase. Secondary outcomes included vaginal delivery, emergency C-Section, maternal complications and neonatal outcomes.

Results
There were no significant differences between the two groups in terms of Maternal age, Gestational age, , BMI, and Parity. There were no significant differences in our primary outcome 74% misoprostol group versus 72% dinoprostone group (p 0.803 Pearson ´ s chi-squared test). No significant difference was observed for women delivering vaginally 65% misoprostol versus 61% dinoprostone (p 0.478 Pearson´s chi-squared test), cesarean deliveries, hyperstimulation syndrome, apgar score and neonatal outcomes

Conclusion
Misoprostol is as efficacious and safe as Dinoprostone for labor induction

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E1290 - DEALING WITH A SHORT CERVIX IN THE SECOND TRIMESTER OF PREGNANCY

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Objective
Our objective was to evaluate the results of the implementation of different management protocols in women with a short cervix in the second trimester of pregnancy.

Methods
The study included all pregnant women from our outpatient maternity department with a cervical length of ≤ 25 mm during a seven-year period. Women with a short cervix were offered two management options. The first included the placement of a vaginal pessary in combination with 200 mg vaginal progesterone every night from diagnosis to 37 weeks. The second was the administration of either 200 mg of micronized progesterone, or 80 mg of progesterone gel every night and close follow-up with serial transvaginal scans to assess the cervical length. When shortening of the cervix less than 15 mm until 26 weeks was detected, cervical cerclage was offered, as progesterone was no longer able to inhibit cervical changes. A modified McDonald technique was implemented under regional anesthesia. Vaginal progesterone administration was continued after the cervical cerclage. Exclusion criteria were multiple gestation, a maternal age less than 18 years, major fetal anomalies, placenta previa, active vaginal bleeding, presence of a cerclage in situ and symptoms of preterm labor. Women with ballooning membranes (beyond the external os) were also excluded from the pessary placement. The primary study outcomes were preterm delivery rate (before 34 and 32 weeks of gestation) and pregnancy prolongation. The secondary variables included mean gestational age at birth and birthweight.

Results
Cervical length ≤25 mm was observed in 245 women. One was excluded as she declined treatment with either cerclage or a pessary despite the fact that she had a very short cervix at the initial evaluation (10 mm). Pessary placement in combination with vaginal progesterone was offered to 144 out of 245 women. As for the remaining 100 women, 25 of them were managed with cervical cerclage because of a cervical length <15 mm at the initial evaluation, while 75 received vaginal progesterone. Of the latter, 37 women had a cervix <15 mm during the follow-up visits and they were also managed with cerclage, thus only 38 women remained to the only progesterone group. The preterm delivery rate before 34 and 32 weeks was 10.4 and 6.3% respectively for the pessary group, 20 and 12% for the cerclage group, 13.5 and 8.1% for the progesterone +cerclage group, and 10.5 and 5.3% for the progesterone only group. The mean latency period was 15, 14.4, 15.3 and 16 weeks for the pessary, the cerclage, the progesterone+cerclage and the progesterone only group, respectively. These results were not significantly different. No difference was also observed among the 4 groups regarding the secondary outcomes. Table 2 presents the pregnancy outcome in the 4 groups.

Conclusion
Applying 2 different management protocols with 4 different interventions in pregnant women with a second trimester short cervix led to similar perinatal outcomes regardless of the intervention that was selected.

E1294 - PLACENTAL ALPHA MICROGLOBULIN 1 TO PREDICT SPONTANEOUS PRETERM BIRTH IN SYMPTOMATIC WOMAN

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Objective
The objetive of this study was to determine the effectiveness of Placental Alpha Microglobulin-1 (PAMG-1) to predict preterm birth at 7 and 14 days from the time of assessment.

Methods
We conduced a prospective observational study, between April 2018 to April 2019, the study population consist of 60 consecutive pregnant women with symptoms of preterm labor between 24+0 and 33+6 weeks of gestation with singleton or twin pregnancies, cervical length between 20-30 mm and intact membranes. PAMG-1 was realized at the time of admission according with the provider instructions and the test to delivery interval was calculated. Patients with PAMG-1 positive test were managed at our High-Risk Maternity Unit according to our preterm birth protocol.

Results
60 patients were analyzed. The overall rate of preterm birth was 8% within seven days and 12% within fourteen days of testing. 18% (11/60) had PAMG-1 positive and 82% (49/60) had PAMG-1 negative. The positive predictive value and negative predictive value for spontaneous preterm delivery within 7 days was 18% (2/9)PPV and 98% (1/45) 14 days was 18% PPV (2/9) and 94% NPV(3/45) respectively.

Conclusion
A negative PAGM-1 test in pregnant women presenting with symptoms of preterm labor and cervical length between 20-30 mm indicated that spontaneous preterm birth within 14 days is very unlikely. Our outcomes are in accordance with the results published 7. PAMG-1 is easy to use and his excellent performance to rule out preterm birth will result in less hospitalization, use of tocolysis, corticosteroids and in general a saving of economic and human resources.

E1297 - THE ASSOCIATION OF ANTENATAL CORTICOSTEROID ADMINISTRATION AND FETAL OUTCOME IN INFANTS WITH LOW BIRTH WEIGHT

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Objective
Preterm labour is associated with high perinatal morbidity and mortality. The goal of this study was to evaluate and compare the obstetric outcome in infants with birth weight lower than 1.500 gr.

Methods
In this retrospective study (January 1997- December 2017) 280 women in third trimester of uncomplicated singleton pregnancy were enrolled. Group 1 is consisting from 120 cases which infants born after two doses of 12 mg betamethazone 24 hours apart. Group 2 includes 100 cases where infants born after only one dose of 12 mg betamethazone due to progress of labour. Finally, in Group 3, 60 infants born without administration of antenatal steroids also due to progress of labour are comprised. All participants were informed about the use of corticosteroids and gave their written consent. Cases diagnosed with premature membrane rupture or premature contractions are excluded. Apgar score at one and five minutes, the birth weight among newborns, the assessment of the severity of neonatal respiratory morbidity depending on the admission in NICU, the duration of hospitalization, and complications in the NICU were evaluated.

Results
The complication incidence was significantly higher in the Group 3. 32,5% were born with acute respiratory disorders, 30% with transient tachypnea, 10% severe RDS (respiratory disease syndrome), 1% were dead and 8% had intraventicular hemorrhage or necrotizing enterocolitis. In subgroups 1 and 2 the mobidity and mortality were significantly lower. In the Group 1 based on full corticosteroids administration and in association to increasing pregnancy age more than 28 weeks very satisfactory perinatal outcomes were noticed.

Conclusion
The complete treatment of antenatal steroids is associated to perinatal outcome improvement in full term infants as well as in preterm infants with low born weight.

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E1309 - ESOPHAGUS ATRESIA FETUS OF A PREGNANT ATTENDED IN A POLYCLINIC OF THE WESTERN AMAZON CASE REPORT

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Introduction

Esophageal atresia is a congenital anomaly, where there is narrowing or complete obstruction of the esophageal lumen. It has a higher incidence in twins, an increase in maternal age and primiparity. It occurs with an incidence of one case among 3,000 live births, more common in whites and males. On prenatal ultrasound, esophageal atresia may be suggested by the presence of polyhydramnios, decreased intra-luminal fluid in the fetal gut, no visualization of the stomach, and a distal proximal pouch of the atretic esophagus may be visible.

Objective

To report a case of esophageal atresia in the fetus of a pregnant woman attending a Policlinic in the Western Amazon and review literature of greater relevance on the subject. This work uses a bibliographical research reference, in order to obtain information on the subject and to report the case of esophageal atresia in the fetus of a pregnant woman attended to in a Polyclinic of the Western Amazon.

Case

M.I.O., 33 years old, a 35 week pregnant woman, is diagnosed with esophageal atresia during routine exams. Result of US with gestational age of 32 weeks and 2 days, cephalic fetus, weight 3131gr, normal amniotic fluid, heterogeneous placenta grade I, with absence of gastric bubble and percentile weight less than 03, with restriction of intrauterine growth . Referred to prenatal high-risk for follow-up. She came in preterm labor with 35s6d, vaginal delivery, live fetus, crying at birth, APGAR 6/8, weight 1350gr, was referred to a neonatal intensive care unit.

Conclusion

It is very important the prenatal follow-up with the imaging tests to detect the fetal anomaly and establishment of the treatment at birth. The early diagnosis of atresia in prenatal ultrasound scans will serve as a valuable aid in the immediate postnatal approach, maintaining low mortality rates and perinatal morbidity

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E1312 - HOW THE INTERPRETATION OF CARDIOTOCOGRAPHIC TRACE CANNOT PREDICT ALWAYS PERINATAL OUTCOME

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Introduction

Fetal health is evaluated, in part, by assessment of fetal heart rate patterns. The primary objective of intrapartum fetal heart rate is to assess the adequacy of fetal oxygenation and presence of fetal metabolic acidemia during labor so that timely intervention can be undertake to reduce the neonatal morbi-mortality. Despite a proper interpretation of the cardiotocographic traces, sometimes we can´t prevent a fatal outcome. The interpretations of cardiotocographic trace in premature fetus it´s more difficult and they have complications of premature fetus so the fatal outcomes can be more frequent.

Case

Pregnant of 32 weeks and 4 days of gestational age
She started with work of labor and short cervix length. After 189 minutes of labor, with a satisfactory cardiotocographic trace, she gave birth a newborn with cardiac arrest. The Apgar score was 1,2 and 5 at first, fifth and tenth minute consecutively. The umbilical cord pH analysis score was 6.54 in arterial blood. The newborn was hospitalized at neonatal intensive area but finally he died at third day of life.

Conclusion

Unless we do a correct cardiotocographic control and interpretation, sometimes the fetus has some pathologies, and more complications on premature fetus, that we can´t diagnose them by sonography examination, and we can have fatal perinatal outcomes without a previous suspicion.

E1346 - PROGRESSION OF THE SECOND FETUS TO NEAR TERM THROUGH PERFORMING THE EMERGENCY CERVICAL CERCLAGE BECAUSE OF ABORTION OF ONE FETUS AT 17TH WEEKS OF GESTATION

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A 22 years old patient (G1P0) referred to us due to threatened abortion. She had been pregnant by IVF because of previous abdominopelvic tuberculosis and surgery. There were lower and upper midline incision scars on the abdominal wall. On ultrasound examination; dichorionic-diamniotic twin pregnancy was detected. There were not found any anomaly for both fetuses. The first fetus was in breech presentation, the amniotic membrane was ruptured. Lower half of fetal body was seen in the cervical canal and vagina. The second fetus was seen in uterine cavity with normal amniotic fluid.

After examination the patient transferred to operation room. Under sterile conditions and mask anesthesia, the first fetus extracted, then the umbilical cord, amniotic membranes and placenta pulled down with ovarian clamps and extracted. The emergency cervical cerclage was performed. The patient was treated against infections about ten days. Then, the patient was followed up until 37th weeks of gestation. Towards the end of pregnancy mild preeclampsia developed and therefore Alphamethyldopa was given. At the 37 weeks of gestation due to uterine contraction cesarean section was performed, 2300 g healthy baby was delivered without any undesirable situation.

We think that, if a pregnancy is overly desirable by a couple, we can help in this way.

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E1358 - THE EFFECTS OF EMERGENCY CERVICAL CERCLAGE AFTER AMNIOREDUCTION ON PROGNOSIS OF PREGNANCY

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Objective
The aim of this study is to investigate the effects of emergency cervical cerclage (ECC) after amnioreduction in patients with complete cervical patency and amniotic sac prolapse to the vagina.

Methods
This study was designed retrospectively for ECC cases out of 68 patients between April 2014 and May 2019. The patients data were obtained from hospital files and perinatologist ultrasonography records. In addition, all patients were phoned to find out about their latest status. Only 27 patients who underwent ECC by a single surgeon and whose all information was obtained were included in the study. All patients underwent fetal and cervical examinations by only an experienced perinatologist. All patients were informed and informed consent was obtained Transabdominal amnioreduction was performed in all patients before cerclage, and ECC was performed immediately under general or local anesthesia in operating room conditions. Mersilene tape suture was used for cerclage and supported with prolene suture. All patients were treated with prophylactic antibiotic and tocolytic treatment. Patients were mobilized from the first postoperative day, and discharged when their treatment were finished.

Results
The mean age of patients who underwent ECC was 27.03 ± 4.83 (18-38), gravida was 2.37 ± 1.64 (1-7), parity was 0.48 ± 2.12 (0-4), abortion was 1.0 ± 1.30 (0-4) and living child was 0.22 ± 0.64 (0-3). It was found that 16 (59.25%) of the patients were spontaneous, 7 (25.92%) were pregnant by IVF, 4 (14.81%) were induced by ovulation induction and 8 (29.62%) were twin pregnancies. The mean amount of amnioreduction was 248.82 ± 128.34 (110-420) ml. The mean gestational age of the patients who underwent ECC was 20.74 ± 2.24 (16-25). The mean gestational age at delivery was found as 29.5 ± 6.76 (16-39) and patient's pregnancy was continued. Mean birth week was found as 30.16 ± 7.53 (16-39) weeks in all single pregnancies and 28.0 ± 4.65 (22-34) weeks in twin pregnancies. Survival of 17 (62.96%) pregnancies and fetuses, 4 of them twins and 1 ongoing pregnancy, were achieved in all cases that underwent ECC. The mean weight of 20 live fetuses born was 2120 ± 565.68 and the total weight of 34 newborns was 1454 ± 998 (200-3250), in single cases 1718 ± 1155 (200-3250) and in twin cases 1156 ± 708 (450-2400). Cerebral palsy developed in one of the twin partners and the other babies were found healthy.

Conclusion
Pregnancy with cervical patency and amniotic sac prolapse to the vagina in the pre-viability period usually results in loss. In our study, ECC after amnioreduction was performed in cases with full cervical opening and amniotic sac prolapse to vagina. Our success rate with ECC was 68.42% in single pregnancies, 50% in twin pregnancies, and 62.96% in all pregnancies. If ECC is performed by experienced surgeons, they can survive a significant proportion of the fetuses that will be lost. Therefore, we recommend that, after giving detailed information to patients about their situation and obtaining their consent the ECC may be perform by experienced surgeons.

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E1376 - GIANT UTERINE MYOMA AND PREGNANCY

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Introduction
Uterine myomatosis is the most frequent benign tumor of the female genital tract, increasing progressively with age and reaching a peak at 40s. Because of this, they may be present when a pregnancy is conceived. Most of them do not experience changes during pregnancy, although 1/3 tends to grow mainly in the first trimester. The diagnosis and follow-up is basically clinical and echographic. The surgical treatment of these is reserved only for very specific cases such as: red degeneration that does not yield to the use of analgesia, torsion of this when pedicled, or obstruction of neighboring organs.

Case
A 36-year-old African-American patient, enrolled in a 14-week pregnancy, was admitted to the San José Hospital, Feto-maternal Unit, due to abdominopelvic pain that did not yield to usual analgesia, associated with urinary retention. Ultrasound and MIR inform intrauterine gestation according to gestational age; uterus with multiple fibroids, the largest being located on the anterior wall and fundus, subserous, pedunculated, measuring 24 cm in its maximum diameter and bilateral hydroureteronephrosis.

An exploratory laparotomy was performed, showing a large pedunculated myoma measuring 40 cm in diameter, at the uterine fundus. We proceed to resect myoma accessing 2/3 of the uterine wall without reaching cavity. Myoma weight 3960 grs. The uterus is sutured in double plane, with vicryl and prolene, hemostasis and abdominal wall closure by planes. Biopsy reports leiomyoma with focal involution signs. Patient evolves with a favorable post-surgical being discharged at the 4th day. Subsequently, it is controlled by the Feto-maternal Unit and a cesarean is performed at 37 weeks, by PPROM, giving a male of 3340 grs in good condition.

Conclusion
Although it is true, uterine myomatosis can be found associated with pregnancy, it is uncommon for it to be complicated (<10%).

Myomectomy is a procedure rarely described in pregnancy, this is because of its high risk of bleeding and the probability of hysterectomy. The most frequent indication for a myomectomy is the pain that does not subside with analgesia, as happened with our patient. The moment of surgery is mentioned in the literature as ideal between 16 and 20 weeks, since it is associated with a lower risk of adverse perinatal outcomes. Finally, the cesarean was performed because there would be a contraindication for vaginal delivery due to risk of uterine rupture.

E1421 - WEGENER GRANULOMATOSIS AND IVF

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Wegener's granulomatosis is a multisystem life threatening vasculitis which poses particular concerns when it involves a pregnant patient. We present a patient with Wegener's granulomatosis whose pregnancy was achieved by IVF treatment. Granulomatosis with polyangiitis (GPA) is an autoimmune disease which has a variable clinical presentation and usually progresses from a localized to a generalized form over the course of weeks to years. Pregnancy in patients with GPA is burdened with the risk of possible complications and increased mortality and the conception should be delayed until remission of the disease. A 35-year-old multigravida with EGPA was referred to our hospital because of 12 years -secondary infertility due to severe male factor. She had negative ANA (antinuclear antibodies), dsDNA (double-stranded DNA), ENA (extractable nuclear antigens—RNP, Sm, Ro, La) antibodies. ANCA (using indirect immunofluorescence test—IFT), and her antiphospholipid antibodies were also negative. We used antagonist protocol and obtained 5 oocytes. On planned frozen cycle, we gave 2 day 5 embryos with high quality. She was treated successfully by steroids during pregnancy. Prednisolone treatment was maintained until labor. Routine visits were performed, and fetal growth was normal, and screenings for congenital anomalies and diabetes revealed no abnormal results. With a multidisciplinary approach, she had a successful caesarean section of a healthy twin babies at 31th weeks of gestation because of early rupture of membranes. Her pregnancy and postoperative course was uneventful and she left the hospital in 3 days. The best time to plan conception is a minimum of six months after entering remission. It is beneficial to stop potentially toxic immunosuppressants (if it is possible) and the woman and child should be closely monitored by obstetricians and rheumatologists. There are almost 40 cases of WG in pregnancy reported in the literature. Owing to this rarity, the management is individualized and the pregnancy outcome is variable.

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E1468 - EFFECTS OF CERVICAL CERCLAGE ON PREGNANCY OUTCOMES ACCORDING TO DEGREE OF CERVICAL PATENCY

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Objective

The aim of this study is to investigate the effects of cerclage on pregnancy prognosis due to complete cervical patency, funneling or history of cervical insufficiency.

Methods

In this study, 58 cases of 60 patients who underwent emergency cervical cerclage (ECC) between April 2014 and May 2019 were reviewed retrospectively. All data of the patients were obtained from hospital files and special records of perinatologist ultrasonography. Emergency cervical cerclage was divided into two groups as funneling (partially dilatation of cervix) 29 and complete cervical patency 29. The demographic and clinical data of the cases and survival were determined. All patients underwent fetal and cervical examinations by GE's Voluson E-8 device by a single perinatologist. Cervical evaluation was confirmed by transvaginal sonography (TVS) and gentle speculum examination. After informed about the possible risks, informed consent was obtained and cervical cerclage was applied under general or local anesthesia at the operating room conditions. Mersilene tape suture was used for cerclage in cases with full cervical patency and supported with prolene suture, mersilene tape suture was used only in other cases. All patients were given prophylactic antibiotic treatment and also tocolytic and analgesic treatment were if necessary. Patients were mobilized from the first postoperative day. After this treatment, patients were discharged from the hospital for a follow-up visit every two weeks. In addition, all patients were contacted by telephone to obtain information about their latest status.

Results

The mean age of 58 patients who underwent cervical cerclage was 29.7±5.87 (18-48), gestational age 20.16±3.90 (10-30), gravida 2.40±1.51 (1-8), parity 0.74±1.19 (0-7), abortion 0.83 ±. 1.19 (0-4) and the number of living children was 0.37 ± 0.84 (0-5). Of the patients, 49 (68.96) were pregnant by spontaneous, 10 (14.9%) by IVF, 8 (12%) by ovulation induction, 14 (24.13%) were twin pregnancies, 1 (1.72%) was triplets pregnancy. The mean gestational week at the time of cervical cerclage was found 20.34±4.10 (10-30) in all cases, 19.48±5.06 (10-30) in cases with funneling and 21.20±2.67 (16-29) in cases with full patency. The mean gestational age at birth was 32.03±6.66 (16-40) in all cases, 33.37±6.30 (19-40) in cases with funneling and 29.74 ± 6.74 (16-39) in cases with full patency. Of all cases, 15 (25.86%) had multiple pregnancies (one triplet) and 43 (74.13%) had single pregnancies. Of all cases who had cervical cerclage and whose pregnancy terminated, funneling 24 (82.75%), 17 (58.62%) full patency, 41 (70.68%) pregnancies and 52 (70.27) babies survived and 2 (3.44%) pregnancies continue. The mean weight of all live fetuses 2285±1023 (650-3900), in funneling cases 2088±1122 (270-3900) and in cases with full opening 1513±999

Conclusion

In our study, 71% of pregnant women with full cervical patency and funneling (partially dilatation) provided the survival of pregnancy with emergency cervical cerclage. Although the chances of success of cerclage is decreased in patients with full cervical patency and multiple pregnancies, we think that cervical cerclage should be performed by experienced surgeons after detailed information and informed consent is given to these patients.

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E1485 - A NOVEL TECHNIQUE FOR PREDICTION OF PRETERM BIRTH FETAL NASAL DOPPLER FOR BREATHING PATTERNS

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Objective

Technical advances during the last decades on ultrasonography and Doppler investigations have greatly facilitated research into fetal physiology but its translation into clinical practice has been limited. Breathing movements of the fetus have been demonstrated in many mammalian species. Besides that it appears to be a part of normal fetal development, absence of fetal breathing has been found to be a good predictor of preterm delivery in symptomatic patients. However, fetal breathing patterns for preterm birth prediction have not been investigated before. We hypothesized that if fetal breathing decreases before birth, and then there should specific fetal breathing patterns predictive for preterm birth such in the case of Kussmaul breathing for diabetic ketoacidosis. Therefore, in this prospective study, we aimed to investigate fetal breathing patterns in symptomatic preterm labor patients.

Methods

This study was a multicenter, prospective cohort study. Singleton pregnant patients aged 18 to 45 years old between 24-37 gestational weeks diagnosed with preterm labor were included in the study. Preterm labor was diagnosed if patient had regular uterine contractions and cervical dilation was ≥2 cm. For eligible patients during routine admission ultrasonography, fetal breathing was assessed with two dimensional and Doppler ultrasonography. Fetal nostril width was measured. Fetal breathing was checked by both visual inspection of fetal diaphragmatic movements and by Color Doppler of fluid movements through fetal nostrils.

Results

During the study period, 241 patients were recruited and 73 patient results were available for the final analysis. During investigation, 3 patterns of fetal breathing was noticed:
1. No fetal breathing was present, Group 1 (N=12, 16.4%)
2. Fetal breathing is present with regular inspiration and expirations and Doppler analysis was performed, Group 2 (N=52, 71.2%)
3. Fetal breathing is present but inspiration and expirations were irregular and no Doppler analysis was possible, Group 3(N=9, 12.3%)

11 (91.7%) of patients with no fetal breathing (Group 1) whereas 26 (42.6%) of those who had fetal breathing (Group 2 and Group 3) delivered in the first 24 hours (p= 0.003). When deliveries in the first 48 hours were compared there was still difference between groups (11 (91.7%) vs. 30 (49.2%), p= 0.009). For group 2 patients, inspiration/expiration ratio was different between those who delivered in the first 24 hours (p=0.042). The area under curve was 0.682 in the ROC curve. The Youden index was 1.23 for inspiration/expiration ratio.

For patients with no fetal breathing or for patients with breathing but inspiration/expiration ratio is less than 1.23 sensitivity and specificity of prediction of delivery in the first 24 hours was 94.6% and 42.4%, respectively.

Conclusion

This study is the first in the literature about investigating fetal breathing patterns with Doppler ultrasonography and according to its results 94.6% of patients who will deliver in the first 24 hours may be detected by using Doppler ultrasonography. Although absence of fetal breathing is the main factor predicting preterm birth, inspiration/expiration ratio is also important and may easily be used to predict preterm birth.

Obstetrics - Perinatal infections

E1080 - MENINGITIS IN PREGNANCY

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Case

Pregnant woman 20 weeks of gestation, goes to the emergency room for frontal, pulsatile and very intense headache. She doesn't have photophobia or sonophofia. She has a temperature of 38ºc upon arrival at hospital. She doesn't show visual, language or mobility alterations. No nausea or vomiting. No intestinal transit alterations. The patient has a history of gastroenteritis in her daughter a week ago. The neurological exploration is normal. Upon suspicion of meningitis, a blood test, blood and urine culture and a lumbar puncture are performed. Empirical antibiotic treatment is started with ceftriaxone, ampicillin and vancomycin. The patient is admitted for treatment and surveillance. The cultures are positive for Enterovirus, being diagnoses with viral meningitis. Antibiotic treatment is suspended and symptomatic headache treatment is performed during admission. Fetal control ultrasounds are performed during hospital admission. The patient remains hospitalized during 8 days with gradual improvement of symptoms. There is no obstetric complications of bleeding, contractions, etc during admission and at all time fetal well-being is confirmed. At hospital discharge, the patient is follow up in a high-risk obstetric clinic. Pregnancy and delivery after discharge are normal.

Discussion

Other than an increased risk of paralytic poliomyelitis reported in the 1950s, enterovirus infections have not generally been associated with severe outcomes in pregnant women. Although rare cases of intrauterine fetal death are reported, experimental data suggest that the placental barrier reduce risk of fetal infection. This finding may explain the paucity of evidence linking developmental abnormalities to maternal enterovirus infection. The risk of complications of pregnancy are greatest when infection occurs near term. Sudden onset of fever and severe abdominal pain mimicking abruption placentae and attributed to mesenteric adenines as well as intrauterine death have been reported with maternal echovirus late in pregnancy. In addition, there is a substantial risk of vertical transmission to the newborn infant when maternal infection occurs in the peripartum period.

Conclusion

Viral meningitis by enterovirus is an infrequent infection with little impact during pregnancy but requires fetal and maternal close monitoring and control.

E1125 - TO THE QUESTION OF BILIARY ATRESIA IN CHILDREN WITH CMV INFECTION

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Objective
To study the clinical and laboratory features of the course and prognosis of biliary atresia in newborns with congenital CMV infection

Methods
On the basis of the Karaganda Regional Children Clinical Hospital, during 8 years (from 2010 to 2018), 14 patients with atresia of biliary duct with congenital CMVI were examined and treated. The identification of atresia of the biliary tract was based on the assessment of pregnancy period, an early history of the child's life, the results of biochemical studies and instrumental methods of research.

Results
Prenatal congenital malformations in fetuses were not identified. During pregnancy, chronic CMV infection in mothers was diagnosed by PCR in 21% of cases.

Dates of manifestation of pathological jaundice in newborns in 28% of cases were noted from birth, in other cases from 1 month and older, with jaundice gradually becoming more intense, acquiring a greenish tint. The stool was discolored from the moment of birth in 15%, from the late neonatal period in 85% of children. It is important to note the persistent nature of this symptom. Urine on the background of the discolored stool was a dark color. At admission in children from 1.5 months of age there was marked hepatosplenomegaly. In the late stages of the disease (by 5–6 months), which were noted in 28% of cases, the abdomen increased, the network of saphenous veins of the abdominal wall expanded, ascites and hemorrhagic phenomena developed, which is explained by the development of biliary cirrhosis due to a violation of bile flow. When examined by the PCR method of blood, urine and saliva, in 35% of cases CMVI DNA was found, positive markers of hepatitis B and C were found in 1 case, in 42.8% of cases mixed infections were detected (CMVI in combination with mycoplasma or toxoplasma, or with ureaplasma). Biochemical analysis revealed a moderate increase in the cytolytic activity of the enzymes: ALT 150.8 ± 22.6 U / l, AST 240.2 ± 36.6 U / l. The level of total bilirubin increased to 153.7 ± 17.6 μmol / l, with the predominance of the direct fraction of bilirubin (84.0 ± 10.1 μmol / l). According to an ultrasound scan, computed tomography, a visual impairment of the intrahepatic bile ducts and gallbladder with ABT was detected in 79% of infants, cystic atresia of the choledoch in 14%, and gall bladder dropsy in 7% of cases. In the first half of the year, 4 (28.5%) children were taken for surgical treatment. The remaining children, in connection with the current CMVI, continued treatment of the underlying disease, death occurred in the first year of life in most children.

Conclusion
Early prenatal diagnosis of fetal infection and biliary atresia allows timely surgical correction, and increase patient survival. In general, the prognosis of bile duct atresia is very serious, since cirrhotic changes in the liver are progressive.

E1151 - PYELONEPHRITIS COMPLICATED WITH ARDS PNEUMONIA AND SEPSIS DURING THIRD TRIMESTER OF PREGNANCY CASE REPORT

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Introduction
Pyelonephritis is the most common non-obstetric antepartum infection which requires hospitalisation because of then high incidence of the maternal and neonatal morbidity and mortality. Pregnant woman with pyelonephritis are increase risk for server infection complication such as sepsis, ARDS, pneumonia , acute heart and renal failure which require I.C.U admission.

Case
We present the case of a 38 years old pregnant woman admitted in our hospital for flue like symptoms (fewer, cough, dyspnea) and urinary symptoms.
Obstetrical ultrasound highlighted a 30 weeks singleton pregnancy with no abnormalities in Doppler fetal-velocimetry. Personal and obstetrical history are not significant. Because of the sever dyspnea, hypotension and tachycardia which appeared 12 hours after admission, she was transferred to I.C.U with the diagnosis of pneumonia , ARDS and sepsis, complicating a pyelonephritis. After a few hours she has still an altered status which is also associated with generalized rash.

Discussion
Paraclinical monitoring put in evidence high level of WBC and CRP, uricemia, hyperglycemia, acidosis with base deficit (ph 7,30 and base deficit -14,3mmol/l) and interstitial pneumonia which was diagnosed on clinical and radiologic aspect.

Due to blood culture and urinary culture the diagnosis is pyelonephritis with Escherichia Coli. Also the patient was tested for flue with RIDTs and culture from the sputum , the results were negative for any other infectious diseases.

During 48 hours of interdisciplinary team (ob-gyn, anesthetist, nephrologist, pneumologist and infectiologist doctor) it was initiated an empiric treatment with large broad iv antibiotics which was later adjusted after antibiogram.

Under antibiotic therapy, oxygen therapy and bronchodilators medication, the general status of the patient is slowly adjusting with improvement of clinical and paraclinical parameters . In the next 72 hours she was discharged for I.CU, after 5 days of iv Cephalosporin (according to the ABG). The patient delivered vaginally after 8 weeks, a male newborn baby, 2900 gr, IA 9/10.

Conclusion
In summary, this case report is about a third trimester pregnancy associates with pyelonephritis which was complicated with pneumonia, ARDS, sepsis and was successfully managed in multidisciplinary team.

E1178 - EXPECTATIVE MANAGEMENT FOR ECTOPIC PREGNANCY

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The ectopic pregnancy accounts for up to 2% of all reported pregnancies. The main detection tools for ectopic pregnancy are serum beta-human chorionic gonadotropin (β-hCG) measurement and vaginal ultrasonography techniques. The treatment options involve surgical management preferred for the life threatening conditions, as well as conservative treatment for the uncomplicated cases. The guidelines for timely diagnosis and appropriate management are constantly updated, but compared to the medical treatment protocols, the indication for expectant management based on the β-hCG level remains inexplicit. In this paper, based on clinical experience with spontaneous resolution of the early ectopic pregnancy, we investigated the correlation between the serum β-hCG measurements and the outcome of the expectative approach. We retrospectively assessed the charts of all the patients diagnosed with ectopic pregnancy, who were hospitalized in the Department of Obstetrics and Gynecology of the University Emergency Hospital Bucharest between 1st January 2014 and 31 December 2018. The curative methods used for the patients enrolled in the study were evaluated in order to determine the impact of the expectative approach. During the five years, in our department were hospitalized 440 patients diagnosed with ectopic pregnancy. Although conventional surgical treatment was still the most widely used treatment, the expectative attitude was initiated for 114 cases. Based on β-hCG dynamic values, were selected the cases that required abandoning the initial approach and were suitable for further medical treatment with methotrexate. This management strategy allowed avoiding overtreatment. Closely clinical and paraclinical monitoring was required. Both the initial level and the dynamics of β-hCG values, beside the seriated Doppler transvaginal ultrasound evaluations, represented important guiding tools for the therapeutic decision. With appropriate and prompt management, maternal mortality and morbidity due to ectopic pregnancy can be reduced. Every patient diagnosed with this condition requires a strictly individualised management. The expectative should not be underestimated, as it is important and efficient for stable patients in specific circumstances. The low rate of failure or complications related to the expectant management suggests the benefit of this alternative, avoiding the risks of medical treatment.

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E1212 - PREGNANCY OUTCOME IN GENITAL TRACT INFECTION ASSOCIATED WITH DIABETES

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Objective

It is well known the high maternal and fetal risk for complications in pregnancy associated with diabetes. Genital tract infection has a more increased incidence in pregnancy associated with diabetes. The goal of our study was to assess the frequency and the type of complications which can appear at the pregnant patients who were diagnosed with diabetes and antepartum genital tract infection.

Methods

This is a retrospective study, about the pregnant women with preexistent or gestational diabetes who delivered in our obstetric department in a period of 24 months (1st of January 2017 – 31st of December 2018). Vaginal secretion was sampled from all the patients and microbiological study was performed. The pregnancy outcome was analyzed in relation with the presence or the absence of genital tract infection.

Results

During the last 2 years, 7194 women delivered in our hospital. From these, 48 cases were monitored during pregnancy because of their high glycemic values. In this group, for 17 patients the diabetologist recommended insulin therapy. Among pregnant women with diabetes admitted in the delivery room, abnormal vaginal flora was identified at 27 patients, which means more than half of them. E. Coli was present in 19 cases (39,58%), Klebsiella pneumoniae, Proteus mirabilis and Gardnerella vaginalis appeared each in 2 cases (4,16%). Group B Streptococcus and Enterobacter appeared each of them in 1 case (2,08%). Most of the cases had vaginal candidiasis, too.
Cases with diabetes and genital tract infections had a high incidence of material and fetal complications comparing with cases without infection. The most frequent complications we can mention are: premature births in 15 cases (31,25%), retroplacental hematoma in 11 cases (22,91%) and the delivery finalized by C-section in 43 cases (89,58%). Neonatal complications included hypoglycemia, hyperbilirubinemia, hypocalcemia and neurological damage especially in the premature new born babies (in 2 cases).

Conclusion

Genital tract infection in patients with diabetes was highly associated with poor perinatal outcome. It is very important to perform the microbiological screening in these pregnancies. Controlling the genital infection and the level of glycemia in these patients could improve the outcome.

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E1222 - CASE REPORT CHALLENGING CMV INFECTION DIAGNOSIS COMPLICATED BY CONGENITAL HEART DISEASE

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Introduction
CMV infection of a neonate is an important health problem worldwide. Although not typically associated with structural heart disease it can complicate the management and prognosis of neonates requiring cardiac surgery. We present two such cases cared for in our NICU.

Case
A 29 day old full term male infant was transferred to our unit with a postnatal diagnosis of Trisomy 21 and atrioventricular septal defect. He was in heart failure upon admission and in need of inhaled oxygen up to 30%, which stabilized with diuretics. The infant was born to an underage mother with no antenatal care. Maternal CMV status was unknown, as was the neonatal CMV status. Routine CMV serology was reported as IgM (+) and IgG (+). The result was confirmed with blood and urine CMV positivity by PCR detection, while CSF was negative for the virus. Brain U/S scan, ophthalmologic examination, liver serology and FBC were within normal limits. The baby passed aABR testing for both ears. To distinguish between congenital and acquired CMV infection we utilized blood taken for the Guthrie card at 3 days of age. DNA extraction from the dried blood spot was performed and tested negative for CMV by PCR, the infant was therefore diagnosed with an acquired CMV infection and did not receive antivirals.
Our second neonate was also a full-term male who was admitted in the first day of life with a prenatal diagnosis of TGA. Maternal CMV status at 12 weeks was IgM (-) and IgG (+), but had not been further tested during the pregnancy. Cardiac echocardiography confirmed transposition of the great arteries, PDA, VSD and a small patent foramen ovale. Due to pulmonary hypertension the neonate had severe cardiovascular instability, received blood products from the first day of life and needed both inotrope support and HFOV with NO. He had cardiac catheterization and Rashkind atrial septostomy at 7 days of life, which stabilized him enough to have a successful arterial switch operation utilising cardiopulmonary bypass. Post-operatively the baby was nursed in the cardiac ICU and returned to our unit at 33 days of life. CMV testing performed on day 1 had shown IgM(+), IgG(+) for CMV, however by the time of results reporting the neonate had already been admitted for cardiac surgery, had been transfused several times and further CMV testing was considered unreliable. Platelet count, liver serology, cranial U/S scan, ophthalmologic exam and aABR were again normal, postsurgery. To ascertain whether the infant had CMV infection we used again blood from the Guthrie card taken at 3 days of age. DNA extraction from the dried blood spot was performed and tested negative for CMV by PCR, the infant was therefore presumed not to have CMV infection and received no antivirals.

Conclusion
As CMV infection is ubiquitous it should be screened for actively during pregnancy and in any neonate when maternal serology is non-existent or incomplete. Novel detection methods can aid in uncertain cases and guide need for antiviral treatment and follow-up plans.

E1257 - E.COLI PYELONEPHRITIS COMPLICATED WITH SEPSIS DURING THIRD TRIMESTER OF PREGNANCY A CASE REPORT

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Introduction
Pyelonephritis is the most common non-obstetric antepartum infection which requires hospitalization because of the high incidence of the maternal and neonatal morbidity and mortality. Pregnant women with pyelonephritis are at increased risk for severe complications such as sepsis, ARDS (Acute Respiratory Distress Syndrome), pneumonia, acute heart and renal failure, which often could require Intensive Care Unit (ICU) admission. We present here the case of a multiparous 38 years old pregnant woman admitted in our hospital for urinary symptoms associated with flu-like symptoms (cough, rhinorrhea and dyspnea).

Case
Obstetrical ultrasound highlighted a 30 weeks singleton pregnancy with no abnormalities in fetal growth and in fetal Doppler velocimetry. Personal and obstetrical history was not significant. Because of the high fever, sever dyspnea, hypotension and tachycardia which appeared 12 hours after admission she was transferred to ICU with the suspicion of sepsis, pneumonia and ARDS. After a few hours a generalized rush appeared and she still had fever and an altered status. Paraclinical monitoring put in evidence high level of leucocytes and CRP, acidosis with base deficit (ph 7,30 and base deficit -14,3 mmol/l), hyperglycemia and uricemia. Interstitial pneumonia was diagnosed based on clinical and radiological aspects. Blood and urinary cultures were obtained. The later results showed they were both positive for E. Coli. The diagnosis was pyelonephritis and sepsis with Escherichia Coli complicated with pneumonia and ARDS. The patient was also tested for AH1N1 and the cultures from the sputum were negative. The multidisciplinary team (ob-gyn, anestesiologist, nephrologist, pneumologist and infectiologist) recommended from the beginning large broad spectrum iv antibiotics. After 72 hours of antibiotherapy, oxygen therapy and bronchodilators, the general status of the patient was improved, with normalization of clinical and paraclinical parameters. She was than discharged from ICU. Orally antibiotherapy according to the antibiograms was continued after for another more 5 days.
The evolution of the pregnancy was a normal one till the 38-th week of pregnancy, when the patient delivered vaginally a male newborn baby, 2900 gr, Apgar 10.

Conclusion
This case report is about a pyelonephritis with E coli in third trimester of pregnancy complicated with pneumonia, ARDS and sepsis, which was successfully managed in multidisciplinary team.

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E1308 - VIVAX MALARIA IN PREGNANT WOMAN WITH GESTATIONAL DIABETES IN A HOSPITAL OF THE AMAZON REGION CASE REPORT

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Introduction

Malaria is one of the most important infectious diseases worldwide. It occurs in more than 90 countries, putting at risk about 40% of the population. Its control requires an integrated approach, including prevention and immediate treatment with antimalarials. Malaria is caused by parasites of the genus Plasmodium that are transmitted to people by the bite of females infected with mosquitoes of the genus Anopheles. Plasmodium vivax is the most common in Brazil. Its symptoms are fever, headache, chills and vomiting. The pregnant woman mainly causes abortion, premature birth, anemia, intrauterine growth restriction and death.

Objective

To report a case of vivax malaria in a pregnant woman with gestational diabetes occurring in a hospital in the Amazon region and to review literature of greater relevance on the subject

Methods

The present work uses a bibliographical research reference, in order to seek information and report the case on Plasmodium Vivax infection during pregnancy in a Hospital in the Amazon region.

Case

AALC, 34years, pregnant, 13s1d, G5PC3A1, attended for attendance at the obstetric center on 05/05/2017, referring treatment for malaria vivax. Physical examination at normal admission, blood pressure 110/70 mmHg, TOTG 75g 96\148\99. Examination: uterus with 12 cm in height, heart beats present: 140. Requested examination of plasmodium and obstetric ultrasonography. Confirmed the diagnosis of infection by plasmodium vivax +++/4+, initiated treatment with chloroquine 150mg scheme 4/3/3 tablets and sent to the Pre-Natal of High Risk. On 09/15/2017 returns with IG 32S1D to perform glycemic profile, makes use of chloroquine 150mg 2 tablets weekly. Examination: uterus with 32cm high, heart rate 147.Unrealized vaginal tap. Was confirmed the diagnosis of gestational diabetes and USG polihidramnia with normal Doppler. The patient was admitted to the obstetric center of HBAP, where cesarean delivery occurred with 40S1D.With live RN, male, weighing 3960 gr,46cm of height. There were no malformations. Diagnosis and early treatment of malaria reduce maternal-fetal complications, avoiding maternal death and neonatal damage. Therefore, it can be considered that all pregnant women should be targeted for malaria prevention and control actions.

Conclusion

Diagnosis and early treatment of malaria reduce maternal-fetal complications, avoiding maternal death and neonatal damage. Therefore, it can be considered that all pregnant women should be targeted for malaria prevention and control actions.

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E1344 - CERVICAL INTRAEPITHELIAL NEOPLASIA AND ITS DEVELOPMENT DURING PREGNANCY IN PATIENTS FROM MACEDONIA

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Objective
The study was conducted to evaluate the development of cervical intraepithelial neoplasia (CIN) during pregnancy compared to non-pregnant-women.

Methods
We have analyzed 50 patients, 25 pregnant and 25 non- pregnant, in the University clinic for gynecology and obstetrics and Private Health Institution "Dr. Emilija Trajkovska". We have evaluated the rates of persistence, progression and regression of CIN conferring to histological findings in the initial visit and after delivery. The results were compared with the non-pregnant group of women followed up for nine months.

Results
The study was consisted of 50 pregnant women with cervical intraepithelial. Low grade and High grade cervical intraepithelial neoplasia were histologically proved in 34% and 66% of all pregnant women, respectively. According to the histological findings after delivery cervical intraepithelial neoplasia showed a considerably higher affinity to spontaneous regression (56% vs. 64% patients $p = 0.010$) On the other hand, the persistence rate was significantly lower than in non-pregnant women (40% vs. 58% patients, $p = 0.048$). The progression rate was very low in pregnant women.

Conclusion
The regression rate of cervical intraepithelial neoplasia is significantly high after delivery. For that reason, the decision for the definite type of treatment should be made according to the findings after delivery. On the other hand, the time and the method of treatment should be made according to the severity of the lesion.

E1373 - HERBAL COMBINATION TREATMENT OF THE RENAL DISORDERS DURING THE PREGNANCY

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Objective
The gestation course is often complicated with the UTIs — from asymptomatic bacteriuria to pyelonephritis. Treatment of the renal disorders during the pregnancy is associated with the significant difficulties. Using the herbal products during the pregnancy is very essential. Preference is given to the ready-to-use combination products that exert anti-inflammatory and antibacterial action, have diuretic, litholytic, spasmolytic effects.

Methods
All patients were randomly divided into two clinical groups:
• Group 1 included 47 women with the acute uncomplicated lower urinary tract infection (cystitis), who received standard treatment for 10 days. The standard scheme included the antibacterial products based on the applicable legislation of Ukraine. Investigator selected the treatment;
• Group 2 included 53 women with the acute uncomplicated lower urinary tract infection (cystitis). The patients from that group received standard treatment based on the applicable legislation of Ukraine. The investigator selected the treatment scheme. The standard treatment in this group also included herbal products (Sper gulariarubra, Peumusboldus, Opuntiafi cus-indica, Sideritisangustifolia, Rosmarinusoffi cialis, Cynodondactylon, Melissa Offi cinalis) for 10 days.

All patients had the complete clinical, laboratory and instrumental examination.

Results
Monitoring of the patients has demonstrated the significant differences in the therapy efficacy. Patients reported the clinical improvement and reduction of complaints on Day 3.0 ± 0.12 and 1.8 ± 0.09 of disease in group 1 and 2, respectively. It should be noted that improvement and relief of the clinical symptoms were more rapid in the patients who received combination treatment. The follow-up urine analysis on Day 10 has shown the change in urine pH: 5.61 ± 0.09 in group 1 and 6.41 ± 0.06 in group 2. These findings are indicative of the urinary alkalinizing. The analysis of the clinical and laboratory findings of the patients with acute uncomplicated lower urinary tract infection (cystitis) before and after the treatment has demonstrated the significant differences in the clinical symptoms of women from group 1 and 2. In group 2, on Day 10 of therapy, proteinuria was persistent in 3.78% and crystalluria in 1.88% of women. The clinical and laboratory findings of group 1 have demonstrated worse results: proteinuria was persistent in 8.51% of women, crystalluria — in 8.51%, dysuria was observed in 34.04%, abdominal pain — in 23.4%, bacteriuria — in 10.63%, leukocyturia — in 8.51%, discoloration of urine — in 2.12%. At the same time, those symptoms were absent in women from group 2 after the combination therapy. No patients from group 2 were presented with the repeated complaints within 6 weeks after treatment completion. Seven patients from group 1 (3%) reported the disease recurrence and were subject to the repeated treatment.

Conclusion

The conducted study has demonstrated that herbal combination products used in the pregnant women with the acute uncomplicated lower urinary tract infection (cystitis) with the concomitant crystalluria is an effective, safe and clinically relevant due to the marked uroseptic, spasmolytic, diuretic, litholytic, anti-inflammatory effects. It offers more rapid clinical response in the treatment of cystitis and crystalluria and ensures the preventions of pyelonephritis and edemas in the pregnant women.

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E1414 - HEALTH CARE ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE PATTERNS IN A TERTIARY NEONATAL INTENSIVE CARE UNIT OVER FIVE YEARS IN TURKEY

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Introduction

Healthcare-associated infections (HCAI) are one of the risks which increase neonatal mortality, morbidity, and health care cost in neonatal intensive care units (NICU). As the characteristics of HCAI's vary considerably in different regions and over time, continual HCAI surveillance is important to determine HCAI's rates and healthcare associated pathogens for infection control.

Methods

We aimed to analyze the characteristics of HCAI in a tertiary referring centre in Turkey. All newborns admitted to the NICU between January 2014 and December 2018 were included in this study. HCAI related information has been collected retrospectively according to the "National Hospital Infection Surveillance Network" and the standards of Centers for Disease of Control and Prevention.

Results

This descriptive study was conducted by active search of infection records among newborns in the NICU of Marmara University Hospital. The neonatal intensive care unit with 14 beds has an occupancy rate of 100% and offers care to critically ill newborns, extremely low birth weight premature infants, neonates requiring pre- or postoperative management, and those who have congenital anomalies that require close observation or intervention. Nurse/baby ratio has been 1/3 in the study period. Total patient hospitalization day was 24,161 throughout the study. Of the 1395 patients hospitalized in the NICU, 265 were diagnosed with infection (infection rate 19%; infection density 11/1000 patients days). Of the 316 samples sent, 75 did not produce growth. Out of isolated microorganisms, 47.5% were Gram negative, 24.4% were Gram positive bacteria, 2.5% were yeasts and viruses were isolated in 1.27% of them. The most frequently isolated Gram negative bacteria were Klebsiella spp. (16.7%) and Acinetobacter spp. (8.6%), Pseudomonas spp. (6.3%), Escherichia coli (4.1%) and Enterobacter spp. (3.2%). About ninety six percent of Acinetobacter baumanii were meropenem resistant; carbapenem resistance of Enterobacter spp were 0%. More than 80% of Pseudomonas aeruginosa were resistant for ceftazidime and amikacin. There were 90.6% carbapenem resistance of Klebsiella pneumoniae and 83.3% amikacin resistance of Escherichia coli. The most commonly isolated Gram positive bacteria were coagulase negative staphylococci (CNS) (13.6%), Staphylococcus aereus (6.7%) and Enterococcus spp. (3.1%). In CNS strains, methicillin resistance was found to be 3.9%; resistance were 47.8% for clindamycin 79.3% for trimethoprim-sulfamethoxazol. All CNS strains were susceptible to vancomycin and linezolid.

Conclusion

This study determined that HCAI still presents a serious problem in NICU. The characteristics of HCAIs vary considerably in different regions, over time and referring to the hospitals. The availability of timely and accurate epidemiological information on healthcare associated pathogens is necessary for infection control and the appropriate selection of empiric antibiotics.

E1461 - VIRAL INFECTIONS IN PREGNANCY AND THEIR TREATMENT

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Nowadays we are faced with an increased number of viral infections during pregnancy. Although infections primarily leave the effects on the health of mothers, many infections can be perinatally transmitted and can cause health complications of the fetus and infant. The treatment of these infections is based on two principles, the first is the reduction of the symptoms of maternal infection and the second is the prevention of transmission of viral infection from the mother to the child.

In this, we paid special attention to the treatment of herpes simplex virus, cytomegalovirus and hepatitis B infections during pregnancy.

Obstetrics - Postpartum hemorrhage

E1065 - IMMUNE THROMBOCYTOPENIC PURPURA ASSOCIATED WITH PERIPARTUM CARDIOMYOPATHY FIRST CASE REPORT

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Introduction
Postpartum cardiomyopathy -PPCM – is a systolic heart failure that occurs in the period between the last months of pregnancy or within five months after delivery, the association with idiopathic thrombocytopenic purpura-ITP- has not been reported. Both conditions are potentially lethal and pose a challenge for the clinician to manage this complex scenario. Previous authorization of the research committee and in writing of the patient, the first case of this rare association is presented.

Case
27-year-old female patient, G1P0, of 35 + 5/7 weeks of pregnancy, with a medical history of primary immune thrombocytopenia (IPT) since the age of 3, consulted with clinical signs compatible with preterm delivery, associated with respiratory difficulty and a saturation of 88%. She is admitted with severe thrombocytopenia (56000/µL), compensated respiratory alkalosis, moderate hypoxemia and with irregular negative antibody screening. During the first six hours, the patient's condition deteriorates rapidly, requiring orotracheal intubation. At that moment, paraclinical tests evidence negative troponins and an elevated BNP. The patient is admitted in the Intensive Care Unit with ventilatory support, platelets of 6,600 / µL, tracheal hematic secretion, hematuria, acute kidney injury KDIGO 2 with a creatinine of 1.13 mg/dL (previous 0.47 mg/dL), hyperlactatemia, and metabolic acidemia. Ultrafiltration and transfusion of 2 platelet concentrates (PC) are initiated. An echocardiogram is taken, which reports 37% LVEF with a biventricular compromise and leads to the diagnosis of peripartum cardiomyopathy (PPCM).

On the second day of hospitalization, the patient was taken to an emergency cesarean, with subsequent uterine atony and the loss of approximately 2000 cc of blood, requiring noradrenaline drip, B-Lynch suture, and transfusion of 1 CP of platelets and 1 pRBC. She continues in the ICU with vasopressors and bromocriptine is initiated. The patient presents adequate clinical evolution, on the second postoperative day extubation is achieved and on the third day, vasopressors are suspended. She is assessed by the cardiology department due to the possibility of viral or Chagas' origin myocarditis, both of which are ruled out. A control TTE is taken in the fifth postoperative day, which evidences a moderately dilated left ventricle, with severe eccentric hypertrophy with a 35% LVEF. The patient is discharged after ten days. After five months, follow-up is performed, a Stage C heart failure is evidenced with 36% LVEF, and the patient is admitted to the heart failure clinic of the institution. Currently, the physiopathological mechanism of the PPCM is not fully understood, however, different hypotheses have been proposed about its etiology which include viral myocarditis, nutritional deficiencies, hemodynamic stresses, vascular dysfunction and angiogenic factors

associated with pregnancy. The main differential diagnoses are benign dyspnea during pregnancy, severe preeclampsia, eclampsia or cardiac dysfunction due to valvular disease. Regarding treatment, it is recommended to stabilize the heart failure, loop diuretics for peripheral or pulmonary edema (3) and inhibition of prolactin because of its possible role in the physiopathogenesis of the condition (4).

In relationship with the ITP, platelet count increased in the postpartum and now she is being followed up by the hematology unit, without additional therapy.

E1078 - PRENATAL DIAGNOSIS OF PLACENTAL ABNORMALITY (PLACENTA INCRETA) CASE REPORT

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A 28-year-old patient G4P3A0 at 37th week of gestation was admitted to hospital because of onset of regular uterine contractions. She had normal uneventful vaginal delivery ten years ago and then two caesarean sections. First caesarean section was performed three years ago because of twin pregnancy. The second caesarean section was done one year later because of thin caesarean section scar in ultrasound scan and risk of uterine rupture. The patient denied chronic diseases. She is heavy smoker (more than 20 cigarettes daily). Complete placenta previa and suspicion of placenta increta was shown by ultrasound in second trimester of present pregnancy. The patient refused to be hospitalized, she was fully informed about the medical situation and possible complications.

At admission, the patient was in good general condition. The vital signs were in normal ranges. Cardiotocography showed regular uterine contractions, the tone of the uterus was normal. Fetal heart rate was reactive. Speculum examination confirmed absence of bleeding and closed cervix. Ultrasound examination showed single fetus in the longitudinal cephalic lie. The amniotic fluid index was normal. The placenta was completely covering the internal cervical orifice. The lower segment of the uterus was so thin. There were abundance blood vessels between the placenta and urinary bladder, with subjective loss of a boundary between the placenta and the urinary bladder.

The hemoglobin level was 12,3 g/dl and RBC count was 4,2 x106 /µl. The patient was informed about the medical situation and about possible complications associated with caesarean section including severe blood loss, necessity of blood transfusion, uterine atony, blood coagulation disorders, placental abnormalities, increased risk of hysterectomy and increased risk of urinary bladder injury. Blood was crossed matched and prepared for the patient. The laboratory and intensive care unit were informed about the patient. An experienced multidisciplinary team of obstetricians and midwives performed the caesarean section. Laparotomy revealed very thin paper-like lower uterine segment with multiple enlarged blood vessels on the surface. The urinary bladder had multiple adhesions with the lower uterine segment. The adhesions were released and then a transverse uterine incision was done above the edge of the placenta and a male newborn was delivered 2680g/51cm. The placenta was centrally covering the internal orifice of the cervix. Spontaneous separation of the placenta occurred partially at its upper margin. Carbetocinum was given to the patient. Because of overt placental growth abnormality a decision of hysterectomy was taken. Hysterectomy was performed as fast as possible to minimize blood loss. Adnexa were without macroscopic lesions and they were left intact. Special care was shown to prevent injury of the urinary bladder and ureters. However, two urinary bladder injuries (2 cm and 4 cm) were noticed in the posterior wall at the sites of relieved adhesions. Bladder injuries were sutured and integrity of the walls were checked with methylene blue dye. Total blood loss was estimated as 1000 ml. The patient received two units of packed red cells. Postoperative course was uneventful. Histopathological examination confirmed placenta increta.

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E1100 - MAY THURNER SYNDROME COMPLICATING PREGNANCY

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Objective

May-Thurner syndrome (MTS) is a relatively common anatomical variation caused by extrinsic venous compression by the arterial system against lumbar vertebral bony in the iliocaval venous territory. The most common variant is due to compression of the left iliac vein between the overlying right common iliac artery and the fifth lumbar vertebrae. It is usually asymptomatic but may predispose to deep vein thrombosis (DVT), an important cause of pregnancy-related morbidity and mortality. In symptomatic patients, management may include pharmacological treatment (anticoagulants or coumarins), thrombectomy and, to avoid recurrence of DVT, stent placement.

Case

A 27-year-old woman, G2C1, was referred to our prenatal care due to previous DVT caused by MTS. Three years ago, she had a sudden pain in the region of buttocks that radiated to her left leg. During physical examination it was observed asymmetry between legs, swelling and increased left thigh circumference associated with local erythema. Abdominal CT scan demonstrated stenosis of the proximal segment of the left common iliac vein, between the right common iliac artery and the fifth lumbar vertebrae. Doppler ultrasound showed left common and external iliac veins without flow or compressibility. At that time, she was using combined oral contraceptives (drospirenone and ethinylestradiol). She had no personal or family history of deep venous thrombosis, acute myocardial infarction, stroke or smoking. She had no problem during her first pregnancy or postpartum. She was hospitalized for 20 days and treated with enoxaparin (1mg/kg twice a day), and evolved with total improvement of symptoms. Oral contraceptives were suspended. She was discharged home using compression stockings, rivaroxaban, and coumarin/ troxerrutin for six months and remained asymptomatic since then. She chose intrauterine device as contraceptive method. Approximately two years later, she got pregnant. For thromboprophylaxis, it was recommended the use of compressive stockings, unfractionated heparin 10,000UI twice a day, and low dose aspirin (100mg/day). She had an uncomplicated pregnancy, with no adverse effects from the treatment. With 39 weeks of gestation, she was admitted to labor and delivery ward in active phase of labor. After several hours, a cesarean section was done due to first stage labor arrest. She gave birth to a healthy female baby, with 2,790g, Apgar score of 9 and 9. In the postpartum period, the patient remained in use of compression stockings and unfractionated heparin, and had a good outcome, without complications.

Conclusion

May-Thurner syndrome should always be remembered in young women with DVT, especially when it occurs in left leg. Due to hypercoagulable state and venous stasis, pregnancy represents an important risk factor for developing deep vein thrombosis and pulmonary embolism. Despite this fact, the reported case demonstrates that use of unfractionated heparin was effective to prevent a new episode of DVT during pregnancy and puerperium.

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E1111 - MATERNAL VS FETAL INDICATIONS FOR OPERATIVE LABOR WITH SECIO CESAREAN IN OUR CLINIC

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Objectives
The main objective of this study was to determine the reasons (indications) for cesarea secion. Furthermore, the secondary aim was to evaluate the fetal reasons for operative labor with secio cesarea.

Methods
The research is a retrospective study. The data were gathered from our work in the Clinical University Center of Kosova in Prishtina, for the first three months of 2019. All the cases that were stationed in our Secio Cesarea (S.C) post partum unit were thoroughly looked at, and the cause for operative labor with SC was noted. The data were than analyzed with descriptive statistics in Microsoft Office Package.

Results
There were a total of 305 cases that were admitted in our unit from 1st of January 2019 to 31st of March 2019. Out of these, in 123 (40.32%) cases the reason for operative labor with CS was primarily a fetal diagnosis. In most cases (n=26) the reason was a first pregnancy with pelvic presentation. Close to this, with a total of 21 cases, the reason was because of the mode of fecundation. in vitro fertilization (IVF) and embrio transfer (ET). A more detailed distribution of the indications for labor is presented in table 1.
Table 1. Number of cases per fetal diagnosis that was indicated for Secio Cesarea.
Diag-nosis Pelvic presen-tation Macroso-mia foeti Multiple fetuses Placenta previa IVF Patholog-ical CTG IUGR Situs transve-rsus Placenta abruption
Total 26 20 19 5 9 17 9 1 5

On the other hand, there were a total of 182 cases that ended the pregnancy with SC because of maternal or other reasons. Most often (n=76) a previous SC birth was the reason behind the current one. In this group, because of the etiology, were also included Preeclampsia (n=10) and pregnancy induced hypertension (n=11).

It is important to note that in all of the cases included in the research, there were 3 cases of hysterectomy after birth.

Conclusion
From the data we have, we can conclude that in our Clinic the maternal and fetal reasons for Secio Cesarea are almost equally distributed. As for the fetal reasons, the presentation and size and growth of the baby lead as main reasons. The group of pathological CTG is an important one and need to be further studied as this includes a wide variety of sign. We are aware of the small sample size and therefore we intend to extend this research the whole year and going in depth for each case of pathological CTG.

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E1142 - TIME DURATION AND DIFFICULTY TO ASSEMBLE A SYSTEM TO CONTROL POSTPARTUM HAEMORRHAGE WITH CONDOM AND FOLEY BLADDER CATHETER

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Objective
One of the problems with the use of condom and probe balloon uterine tamponade may be the time spent and the difficulty in assembling. The objective of this study was to evaluate the time duration and level of difficulty presented by health professionals in the assembly of an intra-uterine baloon with a Foley catheter and condom.

Methods
The present experimental study invited to participate medical students, physicians, obstetric nurses, midwifes and nurse technician.
During a course of obstetric emergencies and in a obstetric center of a universitary hospital, several professionals were instructed on methods to control postpartum haemorrhage. They were instructed on indications, contraindications, method of assembly, insertion, control and removal of the intrauterine balloon.
The participants were then asked to assemble intra-uterine baloon with a foley catheter number 22, placed in a condom without lubricant and tied with surgical thread. (figure 1). A self-administered questionnaire was used to collect data from the participants as well as to evaluate the difficulty of assembly. The time in seconds that was used to assemble the system was measured by the researchers. All mounted systems were tested (filled with 500 ml of water) in in a puerperal uterus simulator to prove their functionality.

Results
A total of 49 (59.04%) physicians or medical students, 25 (30.12%) nurses / obstetrician nurses and 9 (10.84%) nursing technicians participated in the study. Thereby were 83 simulations. All participants were able to set up the system. There were significant leakages in 2 assemblies (2.4%). The mean assembly time was 99.6 seconds, with a standard deviation of 57.8 seconds. There was no difference in assembly time according to the years of experience, and students had the same assembly time as professionals with more than 20 years of experience. Most participants considered assembly of the system very easy or easy (table 1)

Conclusion
With the available material and quick instructions all the professionals who participated in this study were able were able to make an intrauterine tamponade system. System mounting is fast (averaging 99 seconds) and does not vary with the professional experience. Most of the participants considered assembly of the system easy or very easy.

In conclusion, it would appear that the intrauterine system made with bladder catheter and condom is an alternative for control of postpartum hemorrhage cheap and effortless.

E1252 - THE RELATIONSHIP BETWEEN USE OF NIFEDIPINE AND POSTPARTUM BLOOD LOSS IN PATIENTS WITH PRETERM LABOR

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Objective
To determine whether exposure to nifedipine before delivery is associated with an increased risk of postpartum blood loss in patients with preterm labor

Methods
This was a retrospective study from 2012 to 2019 and a total of 486 patients who admitted due to preterm labor were included. Patients who were given nifedipine for tocolysis before delivery were considered as the study group (n: 240), and the patients who gave birth without getting tocolysis constituted the control group (n=246). In addition to dose of nifedipine, used during the last 24 hours, 72 hours and 1 week before delivery, the total dose of nifedipine given and the duration from the last dose to the delivery were recorded separately. Hemoglobin and hematocrit values measured before and 6 hours after delivery were recorded and postpartum bleeding amount was calculated.

Results: No significant difference was observed in terms of mean difference between pre-postpartum hemoglobin and hematocrit levels between control group and nifedipine group (p=0.510), (p=0.411). However, in subgroup analyzes for time until delivery and withdrawal of nifedipine, a positive correlation was observed between difference in hemoglobin and hematocrit levels for pre- and postpartum levels and delivery within 24 hours after withdrawal of nifedipine (r=0.176 p=0.006), (r=0.139 p=0.030).

Conclusion: The use of nifedipine in patients with preterm labor and related tocolysis can increase the risk for postpartum blood loss only for cases that deliver within 24 hours after withdrawal.

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E1271 - MANAGEMENT OF POSTPARTUM HEMORRHAGE DUE TO PLACENTARY CAUSE

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Postpartum hemorrhage is classically defined as a blood loss of >500cc after vaginal delivery, > 1000cc after cesarean section or an hemorrhage that causes hemodynamic instability. Its causes can be classified in four groups known as the four 'T': lack of uterine tone, trauma, coagulopathy (trombine) and tissue retention. It is a major cause of maternal morbidity and causes up to 4% of maternal death in developed countries, what makes it necessary to diagnose early and to give a quick treatment.

Case

A 34 year old patient, 37+1 weeks pregnant with a previous cesarean section and with no medical history of interest. Adequate control of pregnancy, without superimposed pathology. The patient was admitted for labor induction with vaginal E2 prostaglandins due to an early rupture of membranes. As medication, she received antibiotic coverage for group B streptococcus and oxytocin. The evolution of dilatation was satisfactory and during the second stage of labour a Mälstrom vacuum was performed because of a lack of descent of the presentation. The placenta was delivered by Crede manoeuvre, resulting difficult and with a subjective moderate bleeding, reason why 1g of intravenous tranexamic acid and 1000g of rectal E1 prostaglandins were administered. At the examination, the placenta was bilobated and appeared complete.

After that, revision of the birth canal was performed, showing a II grade vaginal tear, which was sutured. During the suture, the patient started feeling dizzy and showed cutaneous paleness with a blood pressure of 62/35. The uterus was contracted, so she was given gelafundin, oxygen and efedrin reaching a pressure of 80/45 and hemodynamic stability. After 50 minutes, the patient experienced a new worsen and showed uterine atony. At that point, a blood count and a cross-matching test were requested and the patient was moved to the operating room. Under antibiotic coverage with 2g of cefazolin and sedation with midazolam plenty of clots were taken out and a placental cotyledon was removed from the right uterine horn, with subsequent administration of 20 units of oxytocin and uterine massage. The blood count showed an haemoglobin of 7,6 g/dL so during the 4 days of hospitalization the patient was transfused 3 concentrates of red cells with an haemoglobin of 11 g/dL at discharge. 10 days after delivery, the patient attended the emergency service due to a major bleeding. The uterus was contracted and the echography showed an hyperechogenic area at the anterior wall of the uterus, compatible with a subinvolution of the placental-site. A new blood count was performed, showing a 13 g/dL haemoglobin. As the bleeding was continuous, a Foley catheter filled with 10cc was placed into the uterus in order to make haemostasis. After 2 days, the catheter was removed without incidences and the patient had a satisfactory evolution. Postpartum hemorrhage may lead to a quick haemodinamic worsen of a patient and is a potential cause of morbidity and dead. For that reason, identifying its cause and giving a rapid treatment is crucial in order to avoid major complications.

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E1349 - THE EFFICACY OF PARENTERAL IRON ISOMALTOSIDE 500 (MONOFER) THERAPY IN WOMEN WITH POSTPARTUM IRON DEFICIENCY ANEMIA

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Objective
Our goal was evaluation of Monofer efficacy on correcting severe postpartum anemia (based on measured haemathological parameters and clinical symptoms such as pallor, dyspnoea, fatigue, presyncope), and its effect on hemoglobin (Hb) levels checked up after 6 weeks. Accordingly, if intravenous iron therapy can replace blood transfusions for relieving clinical symptoms of severe anemia due to iron deficiency in postpartum period.

Methods
Single-center, open-label trial, uncontrolled study participants were 32 women who had given birth, regardless of vaginal delivery or Cesarean section, and were monitored in the period between November 2018 to May 2019. The total of 32 women had hemoglobin concentrations in early postpartum period (first to fourth day after the labor) between 67 and 84 mg/l, with more or less expressed clinical symptoms, thus have been candidates for intravenous iron therapy with iron isomaltoside 500 to correct postpartum iron deficiency anemia (IDA) . The primary outcome was estimation of the increase of Hb concentrations 6 weeks after the Monofer injection. Women were advised to continue with per oral iron substitution if needed a month after the injection of Monofer.

Results
We found clinically significant improvement of fatigue and other symptoms, as well as in hematological parameters after the treatment with Monofer. Mean preinfusion Hb was found to be 75,25 g/l and mean postinfusion Hb was 115 g/L.

Conclusion
Iron isomaltoside 500 (Monofer) has demonstrated clinically significant efficacy in women with postpartum iron deficiency anemia therefore could be the first choice therapy for correcting IDA when in doubt about whether to give blood transfusion or not. Consequently, there is less need for blood transfusion, with minimal risk of anaphylactic reaction, faster recovery and shorter hospitalization due to Monofer substitution therapy therefore providing more cost-effective practice.

E1372 - GOOD END RESULTS IN SPITE OF MEDICAL MISTAKES

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Placenta previa refers to the presence of placental tissue that extends over the internal cervical ostium. The management of pregnancies complicated by placenta previa is best addressed in terms of the patient´s clinical setting, concerning asymptomatic or actively bleeding women. The province wide incidence of complications due to placenta previa may be high. Regarding maternal morbidity we consider antepartum bleeding, postpartum hemorrhage, maternal anemia, comorbid adherent placentation and hysterectomy. Concerning neonatal complications we find preterm birth, low birth weight less than 2500 g, Apgar-score after five minutes less tan 7, and fetal mortality.

We present two cases of non diagnosed placenta previa which fortunately finished at good outcome. The first one was a patient ongoing her first pregnancy with no complications described at the moment. An external cephalic version was scheduled as breech presentation remained by week 37 of gestation. Vaginal bleeding was objectified while the maneuvers were performanced, when occlusive placenta previa was diagnosed by echography (not described before). Inmediately an urgent cesarean section was indicated and a female neonate of 2465 grams was born with Apgar-score of 8-9-10 (1'-5'-10')and pH of 7'28-7'41 (arterial and venous respectively)

The second case involved a multiparous woman. She was on her sixth pregnancy and had the following obstetric history: three normal vaginal deliveries, one miscarriage which required obstetric curettage and one cesarean section due to spontaneous rupture membrane and breech presentation. She arrived at the emergency room at week 36 because of severe vaginal bleeding, uterine contractions and feeling dizzy. During exploration, it was made a vaginal exploration appreciating a cervix dilatation of 5 cm and touching the placenta but not the baby presentation. Two days before she had consulted by uterine contractions and very scarce bleeding without diagnosed placenta previa. An urgent cesarean section was performance due to the diagnose of previa placenta and a hypovolemic shock. A male neonate of 2960 was born with Apgar-score of 4-6-8(1'-5'-10') and arterial/venous pH of 7'15-7'18. This patient requires the transfusion of five red blood cells concentrates because of being unstable hemodynamically with and hemoglobine of 5.8 g/dl.

These two are examples which could have finished in very poor outcomes due to an initial wrong medical diagnose.

Placenta previa increases the risk of morbidity and mortality both maternal and fetal. The diagnostic suspicion based on risk factors and echocardiography signs are essential to anticipate possible complications that may arise.

E1379 - IS RADICAL SURGERY NECESSARY FOR PLACENTAL IMPLANTATION ABNORMALITIES (PIAS) (YALINKAYA'S TECHNIQUE)

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Objective
The aim of this study was to describe a new comprehensive and complete conservative surgical technique (developed by Yalinkaya) in all form of PIAs for preserving the patient's future fertility. Therefore, we wanted to discuss our experience to contribute to the literature.

Methods
We prospectively designed this study which includes 152 patients between June 2013 and October 2018. The data were collected from hospital and special recorded patient's files. Most of the patients were referred by different centers and all of them were examined by a perinatologist with transvaginal ultrasound to confirm PIAs. The patients' demographics and medical characteristics were recorded. Antenatal and perinatal PIAs risks, delivery time and place were discussed with them and their relatives. The patients All of were operated by an experienced surgeon (Yalinkaya) with his surgical technique. Used surgical technique and technical details, blood transfusion, maternal complications and mean duration of hospitalization were assessed.

Results
The patients placenta previa were had with PIAs at least one or more previous cesarean section (CS). The mean maternal age, gestational age, infant weight and repeated cesarean section were found in 33.21+4.70 (22-44) years, 35.46±4.99 (11-39) weeks, 2624±836 (30-4175) gram and 3.42±1.03 (2-6) times, respectively. The operations were performed in 60 (39.47%) patients before the planned periods due to their emergency. Spontaneous intra-abdominal hemorrhage was observed in 5 (3.28%) pregnancy and bladder bleeding was observed in 1 (0.65%) of them. The operation was performed to 143 (94.07%) patients under spinal anesthesia and performed to 9 (5.92%) patients under general anesthesia due to medical indications. All of the patients were operated as a normal cesarean section by using Pfannenstiel (Kerr) incision for abdominal wall and lower uterine segment transverse incision for uterine wall. The surgical complications were occurred in 4 (2.63%) cases during entering to abdominal cavity and minimal bladder wall injury was occurred, and repaired with primary suture by the surgeon with no urologist. Vesico-uterine fistula was developed in one patient 4 to 5 months later as a late complication, and repaired via laparotomy by the same surgeon. The average preoperative and postoperative hemoglobin (Hb) and hematocrit (Htc) levels were calculated. A total 81 units RBC were transfused to 34 patients who required blood transfusions. Hysterectomy and vessels ligations were not performed to all cases. The patients did not need intensive care unit (ICU), except three of them with other pregnancy complications. The mean duration of hospitalization was 1.92 ± 1.34 days, and maternal mortality did not occur in any cases.

Conclusion
There are limited data available for optimal management of PIAs in the literature until now. If Yalinkaya technique can be used by experienced surgeons for PIAs, it is the most effective among all of other methods so far, and strongly preserves the patient's life and future fertility, and also leads to reduce the hospital costs and maternal morbidity and mortality. Therefore, we think that this is the most effective technique for PIAs patients.

E1406 - POSTPARTUM HAEMORRHAGE CAUSED BY PLACENTA ACCRETA INCRETA

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The incidence of placenta accreta, increta has increased. It is now one of the common causes of postpartum haemorrhage and consequent maternal morbidity.
This paper describes case of a woman, 48 years old, twin pregnancy from donated oocyte. She was hospitalized in the 31st gestational week because of cholestasis and gestational diabetes. The Cesarean section was done because of obstetrical history. Postoperative period was normal, but on the 6th day after C-section she experienced massive uterine haemorrhage. Ultrasound examination showed enlarged uterus with dilated cavum uteri with hyperechogenity, which measured 6x8cm. The patient was proceeded to the operating room to do curettage: 2x0,25 mg of misoprostol was given intracervical but uterus didn`t contract. She got extreme bradycardia and extreme hypotensive crisis 15-20 minutes, after getting second ampulla of misoprostol. After that they tried Bakri Balloon Tamponade. As the bleeding didn`t stop, hysterectomy was done. Cause of haemorrhage had been placenta accreta and increta with massive occlusion with trophoblast. On the 15th postoperative day the patient went home.

Conclusion
Placenta accreta and increta is responsible for postpartum haemorrhage and often is associated with hysterectomy and maternal morbidity.

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E1455 - POSTPARTUM FEMALE SEXUAL PROBLEMS AND RELATED CONDITIONS IN HUNGARY A CROSS SECTIONAL STUDY

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Objective
However female sexual dysfunctions are common among women in the postpartum period, the profile of these disturbances has not been well investigated in Hungary yet. The aim of the study was to evaluate the postpartum female sexual functions in Hungary. This research sought to investigate the possible predictor factors which can influence postpartum female sexual functions.

Methods
This was a cross-sectional study including patients from two maternity clinics in Budapest. 113 women were recruited into our study 3 months after their childbirth. 53 had vaginal birth, 60 had caesarian section. Data was collected from medical reports and by using self-developed questions and validated questionnaires in order to measure five important predictors which may be responsible for postpartum sexual dysfunctions such as (1) mode of delivery, (2) parity, (3) urinary incontinence and (4) body image. Sexual functions were evaluated by the Hungarian version of Female Sexual Function Index (FSFI). The Hungarian version of Body Image Questionnaire-Short Form14 (BSQ-SF14) was applied for assessing body image.

Results
82,3% of the participants began to have sexual intercourse within three months postpartum. 53,98% of the participants reported sexual dysfunctions (cut-off FSFI score 26,55). According to our results mode of delivery, parity, hemorrhoids, time of intercourse resumption were not associated with female sexual dysfunctions. We found correlation at a tendential level between urinary incontinence and sexual dysfunctions (p=0,003, R=0,26). We found negativ correlation at a tendential level between the total score of BSQ-SF14 and FSFI (p=0,03, R=-0,269). Only 32,74% of women reported discussing sexual life with health care professionals, however 67,25% of them would have had the need to be asked about their postpartum health issues.

Conclusion
The prevalence of female sexual dysfunctions was relatively high after childbirth. We found that incontinence and body image were associated with sexual dysfunctions, other risk factors remained unknown. Despite regular contact with health care professionals, women rarely get any information about postpartum sexual health issues. The high prevalence of dysfunctions indicate the need for further investigation to address other risk factors and proper counselling of women after childbirth.

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E1470 - THE OUTCOMES OF MANAGEMENT OF VAGINAL DELIVERY AFTER CESAREAN SECTION

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Objective

Currently, the issue of increasing rate of cesarean section (CS) is a serious concern either among professionals and society. Country statistics show a stable growing trend. On average, 1 from 5 pregnant women in the world have CS. According to the data of the Institute of Mother and Child (the only third level maternity hospital in the Republic of Moldova) in 2015 the rate of CS was 33.6%, in 2016 -30.5%, in 2017-30.7%, in 2018 – 31,8%. The main indication for repeated CS is the scar on the uterus after the previous or myomectomy. It is well known that each subsequent surgery aggravates the prognosis and increases the number of complications. For these reasons, a solution in reducing the above-mentioned complications is to reduce the cesarean rate by vaginal delivery in the possible cases.

Methods

A retrospective study of 2316 patients who had a history of scar on the uterus after a CS was performed in the obstetrics departments of the IMC between 2015 and 2017. Over 3-years period, with the general decreasing of births at the IMC (2015- 6493 cases, 2017-6122 cases) and across the country, there has been a steady increasing number of women with uterine scarring after previous CS, namely 808 (13.2%) in 2017 vs 756 (11.3%) in 2015. It is important to note that the IMC is the only third level institution in RM where are admitted the maximum number of women with this pathology, including those with 3 or more interventions. This leads to a regular grow of the number of repeated CS, from 31.22% (2014) to 37.8% (2017).

Results

The implementation of the national protocol for vaginal delivery after previous CS in January 2015 allowed to decrease the rate of CS from 33.6% in 2014 to 30.7% in 2017. The number of vaginal births after previous abdominal birth grew from 7.7% (2014) to 12.1% (2017) of women with scarring on the uterus. From 406 patients selected for vaginal birth, 76.3% had natural delivery, 23,7% of cases were finished through repeated CS. Only 38.96% had at least one vaginal birth that proves the patient's good selection. In 21.25% of vaginal delivery cases, the labor was completed by vacuum-extractor assistance because of acute fetal hypoxia, prolonged second stage of the labor. Stimulation of labor was required in 12.5% of births. There were no pathological haemorrhage during the third period of labor. Regarding to the perinatal results only in two cases children were born with 4/5 points Apgar score due to acute hypoxia, the rest having 7/8 points

Conclusion

The rational management of women with scarring on the uterus allow to reduce the risk of obstetrical and perinatal complications. In the case of mature pregnancy and biological matured cervix in patients with scarring on the uterus, it is possible to induce labor through early amniotomy. The degree of maturity of the cervix and the spontaneous onset of labor is a preliminary factor indicating the competence of the scar on the uterus.

Obstetrics - Preterm Premature Rupture of Membranes

E1147 - E.COLI GENITAL INFECTIONS IN WOMEN WITH PRETERM PREMATURE RUPTURE OF MEMBRANE AND PREGNANCY OUTCOMES RETROSPECTIVE STUDY

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Premature rupture of membranes (pprom) refers to a patient who is beyond 37 weeks`gestation and has presented with rupture of membranes (rom) prior to the onset of labor and is associated with high fetal and maternal risk. Vaginal bacterial colonization is one of the most important etiologies in pprom.

Objective
This study was designed to highlight genital infections in preterm delivery with prom and pregnancy outcome.

Methods
Our retrospective and randomized trial(study)consist of 277 pregnant woman with preterm delivery(24-27 weeks of gestation) who were assisted at birth in the last 2 years(1 january 2017- 31 december 2018), in an academic hospital of Oradea University- department of medical science. 166 of the cases were with prom. The results were obtained based on routine vaginal secretion cultures.

Results
In our department, in last 2 years the incidence of premature delivery was 3,8% (277 cases) out of a total of 7194 births. Also, 41,87% of pregnant woman with premature labor were with pprom. Is put in evidence that almost half of the cases (43,10%) were found to have genital infections. Most isolated pathogens from uro-genital cultures was escherichia coli (72%), followed by gardnerella (6%), coagulase-negative staphylococci (4%), proteus vulgaris (4%) and other microorganisms with lower frequency (proteus mirabilis, staphylococcus aureus, enterobacter, trichomonas vaginalis). 15,3%of genital infections were also associated with candida albicans. The study does not reveal a higher risk of chorioamnionits (only 8%) or congenital pneumonia.

Conclusion
Based on results of this study, vaginal cultures are essential in early diagnosis and management of genital infections (most frequent with e.coli) associated with preterm delivery in order to decrease fetal and maternal complication.

E1156 - CORRELATION BETWEEN CERVICAL CERCLAGE DURING PREGNANCY WITH IVF PROCEDURES

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Correlation between Cervical cerclage during pregnancy with IVF procedures
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Background
Cervical cerclage, also known as a cervical stitch, is a treatment for cervical incompetence or insufficiency, when the cervix starts to shorten and open too early during a pregnancy causing either a late miscarriage or preterm birth. The aim of this study was to see how many women that had secondary infertility needed Cervical cerclage during their pregnancy helped with IVF procedures.

Methods
A total of 207 patients underwent in vitro fertilization (IVF) treatment to become pregnant. All of them had secondary infertility and they had more than one miscarriages during their lives all of them result of early cervical opening during the first trimester of the pregnancy.

Results
In total 18 pregnancies needed Cervical cerclage during pregnancy; of them 8 or 14.8% of the pregnancy group who had had hypertensive disorders during pregnancy and 10 or 6.5% of the group of pregnant women who did not exhibit these disorders (P> 0.05),

Conclusıons
We concluded that at IVF procedures and cervical cerclage is not correlated and women can successfully finish their pregnancy without cervical cerclage.

E1255 - PREVIABLE PRETERM MEMBRANE RUPTURE MATERNAL AND FETAL OUTCOME

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Objective
The aim of this study is to evaluate maternal, neonatal, fetal outcomes of pregnant patients diagnosed with preterm premature membranous rupture before 24 weeks with follow-up until birth and related factors affecting outcome.

Methods
This retrospective study was planned in screening patients applied to our clinic with confirmed preterm membrane rupture before the 24+0 gestational weeks, diagnosed between April 2012 and August 2017. Inclusion criteria were patients with singleton gestations between 14-24 gestational weeks and confirmed diagnosis of PPROM. Gestations complicated with a fetal anomaly, fetal death during application, families opting for termination of pregnancy and cases with multiple gestations were not included in the study. We recorded demographic characteristics, medical history, gestational age at diagnoses of PPROM, risk factors, parameters during follow-up and management, related data of delivery, maternal and neonatal complications in the postnatal period of the patients in our study.

Results
The study included 192 patients, of whom in 21 (10,94%) patients intrauterine fetal death occurred. 67 (34,8%) of newborns were lost during follow-up in intensive care unit after delivery. Finally, 104 (54,16%) of these infants were discharged alive. We compared in two groups alive (n=104) and dead (n=67) patients medical data. Statistically significant variables in multivariate regression analysis affecting neonatal survival are amnion fluid volume, the presence of oligohydramnios and / or anhydramnios, duration of PPROM, average of first minute Apgar, average of neonatal birth weight. ROC analysis showed us that gestational week at birth was determinant for fetal death prediction.

Conclusion
57.14% of patients resulted with neonatal survival with diagnoses of PPROM before 24+0 gestational weeks. The most important determinants in these cases for survival were duration of PPROM, gestational age at birth and amount of amniotic fluid.

E1428 - GESTATIONAL TROFOBLASTIC DISEASE MOLA PARTIAL TYPE AND BORN LIVE

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Case

26-year-old patient, G 2 A 1. First control, 14-week pregnancy. First ultrasound says placenta with signs of partial molar type hydropathic degeneration. Laboratory Tests normal, BHCG 87219 mIU / ml
Amniocentesis in week 18, karyotype in amniotic fluid: 46 XX.
Monthly prenatal check-ups are performed without complications, but at 29 weeks it presents PREPROM, 140/90 blood pressure, 24-hour urine protein: 332 mg / 24h. Ultrasound: live single fetus, anhydramnios, weight 1200g. Diagnosis: Pregnancy of 29 weeks + PREPROM + Preeclampsia + Gestational trophoblastic disease Partial mola type.

Plan: cesarean.
Is obtained newborn female living weight 1105 g, large posterior placenta with partial mole characteristics? Pathology: weight 1600g, cord 19cm, spongy appearance and areas with vesicles. Double population of irregular chorionic villi: fibrotic and hydropathic. RX chest: normal. Puerperio: BHCG, 24 h (3815 mIU/ml), 1 week (2520 mIU/ml), 1 month (0.68mIU/ml) and the year (<0.05 mIU/ml).

Definition: It is defined as a rare complication of pregnancy characterized by abnormal proliferation of trophoblastic tissue. It consists of an abnormal pregnancy characterized by hydropic degeneration of the chorionic villi and trophoblastic proliferation with abnormal or absent embryonic development.

Etiology: Polyspermia etiology: is the most frequent, the oocyte is fertilized by 2 sperm (twins) Oocyte fertilized by a diploid sperm, due to a defect in the first meiotic division. Very infrequent Clinical Presentation: Asymptomatic cases 41%. Hemorrhage is present in 72% of patients. Uterine height greater than expected by gestational age (3.7%). Preeclampsia (2.5%). Low association with hyperthyroidism, hyperemesis gravidarum and luteal teak ovarian cysts (2%). This entity has a benign behavior in most cases and the risk of malignant transformation is around 4%.

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E1466 - THE EFFECTS OF CONTINUOUS AMNIOINFUSION ON FETAL SURVIVAL IN PRETERM PREMATURE RUPTURE OF MEMBRANE

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Objective
Deficiency or absence of amniotic fluid due to preterm premature rupture of membrane (PPROM) may cause various complications such as limitation of movement of the fetus, growth retardation, failure of lung development and cord compression from intrauterine asphyxia to fetal death. Therefore, by increasing the amniotic fluid with continuous amnioinfusion, it is tried to prolong the pregnancy. The aim of this study was to present the effects of continuous amnioinfusion on continuation of pregnancy in order to treat oligohydramnios caused by preterm premature rupture of membrane.

Methods
This study was planned retrospectively between January 2014 and December 2018 in our clinic. Demographic and clinical data of all patients were obtained from hospital records, and the latest information of patients was also obtained by phone. Continuous amnioinfusion was performed to 13 of 15 PPROM patients and two patients were excluded due to spontaneous increase in amniotic fluid. In addition, the last data of an 800 g baby who underwent continuous amnioinfusion and was born alive after 8 days was not reached. All patients who underwent continuous amnioinfusion were examined by a perinatologist and treated with antibiotics because of preterm premature rupture of membrane. Continuous amnioinfusion was performed to only PPROM cases by using an epidural catheter. On the other hand, the cases that had vaginal bleeding, uterine contractions, symptomatic infections, and oligohydramnios with intact membrane were excluded. All patients were informed about possible risks of the procedure, and informed consent was obtained from the patients.

Results
Continuous amnioinfusion was planned for 15 cases of PPROM, but performed in 13 cases. The mean age of the patients was 31.15±4.37 (24-42), gravida 2.76±1.48 (1-5) and parity 1.38±1.44 (1-4). At the inception of continuous amnioinfusion, the mean gestational week was 22.07±1.93 (19-25) and the amniotic fluid index 30.00±11.54 (15-50) mm. However, the mean gestational age at delivery was 26.38±3.73 (20-34) weeks. Gestational age was prolonged on average 4.31 weeks by performing continuous amnioinfusion. The average of prolonging time from the procedure to the delivery was found 30.53±24.42 (2-84) days. 5 (38.46%) of patients were delivered vaginally and 8 (61.53%) were delivered by cesarean section. Among 13 patients who underwent continuous amnioinfusion, 9 (69.23%) of the fetuses were born alive. 6 (45.15%) of them are surviving their life, but 1 (7.69%) of them is unknown. However, the remaining 6 (46.15%) cases resulted in death, of these, 4 (30.76%) intrauterine mortality due to unknown reasons and 2 (15.38%) died after delivery in the early perinatal period. All live-born infants were treated in the neonatal intensive care unit.

Conclusion
In this study, 46.15% of PPROM patients were survived with continuous amnioinfusion and the mean gestational period was prolonged in 4.23 weeks. There are not enough studies so we need many more comprehensive studies. We suggest that, continuous amnioinfusion has positive effect on prognosis of PPROM cases. Therefore, it can be preferred in appropriate patients.

Obstetrics - Fetal neurosonography and CNS anomalies

E1146 - FETAL INTRACRANIAL TERATOMA

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Fetal intracranial tumors are rare representing 0.5 - 1.9% of all fetal tumors. Among them, the most common histologic type is teratoma, composed by tissues from three germ layers, usually located at supratentorial level. The diagnosis may be suspected by ultrasound (US) of the second and third trimester. Teratoma appears as a complex heterogeneous mass, with solid and cystic components, and areas of calcification. Growth is rapid causing enlarged head circumference and distortion of brain anatomy. It may be accompanied by hydrocephalus and polyhydramnios. Definitive diagnosis can only be made after surgery. Since there is no intrauterine treatment available, the prognosis is usually lethal. Treatment of postnatal immature teratomas is controversial. They have a poor prognosis, with a low survival rate and a high percentage of psychomotor development delay and intracranial hypertension among survivors. The risk of recurrence in future pregnancies is low, since there is no association with family history or specific chromosomal abnormalities.

A 31-year-old pregnant woman, G2C1, Caucasian, was referred to our prenatal care due to fetal central nervous system anomalies evidenced by US scan performed at 34+2 weeks of gestation. The US demonstrated an expansive lesion located in the left cerebral hemisphere, at choroid plexus topography, measuring 6.7 x 3.6 cm, with low color Doppler vascularization, associated to macrocrania (biparietal diameter of 122.2 mm), ventriculomegaly, and polyhydramnios (amniotic fluid index of 29 cm). Subsequently, a magnetic resonance imaging was performed, which showed a brain tumor involving the left hemisphere suggestive of teratoma. At 35+6 weeks of gestation, she sought obstetric emergency complaining of sparse contractions and decreased fetal movement. At obstetrical examination, fetal heartbeat was undetectable. Fetal death was confirmed by US evaluation. Due to cephalopelvic disproportion, a caesarean section was performed. Fetus and placenta were submitted to histopathological analysis. Placental examination revealed scattered villous infarcts. Umbilical cord and fetal membrane had no relevant histological alterations. Visceral autolysis was demonstrated in a macerated, macrocephalic fetus, with a gestational age estimated between 35 and 36 weeks. Unfortunately, liquefaction of brain structures did not allow the identification of tumor or neoplastic process.

E1322 - ALOBAR HOLOPROSENCEPHALY CASE REPORT

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Holoprosencephaly is a serious central nervous system malformation that occurs as a result of failure to completely separate the cerebral hemispheres into two lobes. The disease is divided into three groups as alobar, semilobar and lobar type. Here, a case of alobar holoprosencephaly with ventriculoperitoneal shunt is presented because of its rarity. Case: Twenty-nine-year-old mother was born as 2090 grams after 30 weeks of gestation by cesarean section as the second child of her third pregnancy. After the tests, she was diagnosed as alobar holoprosencephaly. Echocardiography showed no anomaly except VSD and secundum ASD. Chromosomal test was normal. In brain ultrasonography; brain midline structures (3rd ventricle, corpus callosum, basal ganglia and interhemispheric fissure and falks) were not observed. Dilated mono ventricle was observed. Although the cortex was observed in the frontal region, no falx, parietal, temporal and occipital lobes were observed. Mesencephalon and pons were observed. The thalamus have a fusible appearance. The findings were consistent with alobar holoprosencephaly. Brain MRI The midline structures of the brain (3rd ventricle, corpus callosum, basal ganglia, and interhemispheric fissure and falx) were not observed. Dilated mono ventricle was observed. Although the cortex was observed in the frontal region, no falx, parietal, temporal and occipital lobes were observed. Mesencephalon and pons were observed. The thalamus has a fusible appearance. The findings were consistent with alobar holoprosencephaly. During follow-up, ventriculoperitoneal shunt was inserted with increased head circumference.

As a result, it was observed that the quality of life of the baby and his family improved with the insertion of a shunt in a baby with severe brain anomaly. We think that it is important to consider the quality of life in infants with severe anomalies except prognostic outcome.

E1323 - OSTEOGENESIS IMPERFECTA TYPE III IN A NEWBORN CASE REPORT

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Introduction

Osteogenesis Imperfecta presents with recurrent bone fractures, bone deformities, hearing loss and blue sclera. The clinical picture and course of the disease vary widely among the different types of the disease. Here, it is reported that there are different molecular features in patients with similar clinical findings, as well as cases with similar phenotypic features in the same family, despite the genetic similarity in the family. Osteogenesis Imperfecta In most cases of Type 3, the transition is autosomal dominant and new mutations may occur. Type 3 Osteogenesis Imperfecta cases may present with multiple fractures and related deformities, or they may arise normally. In our case, there were relatively macrocephaly, triangular facial appearance, blue sclera and multiple fractures on the extremities, and these findings were consistent with Osteogenesis Imperfecta type 3.

Case

The fourth child of a 38-year-old mother from her fourth pregnancy was born by cesarean section at 39 weeks of age and weighing 2320 grams. There was no history of metabolic bone disease in the family. The diagnosis was confirmed by direct radiographs. When the patient was stable after early neonatal sepsis treatment, vitamin D and pamidronate from 1 mg / kg were planned for three days and every four months. Hypocalcemia developed and treated after pamidronate treatment. He was discharged after making recommendations to the family.

Conclusion

Severe forms such as Osteogenesis Imperfecta Type 3 can be recognized by intrauterine ultrasonography showing fractures. Our case is exceptional because the mother does not have a history of advanced age, fourth pregnancy and before, no family history, and antenatal diagnosis in the late period. However, genetic counseling may be given for subsequent pregnancies. Molecular analysis can be performed from chorionic villus during antenatal period and prenatal diagnosis can be made by chorionic villus biopsy in the first trimester of pregnancy in families with a history.

E1324 - INTERHEMISPHERIC CYST ASSOCIATED WITH AGENESIS OF CORPUS CALLOSUM CASE REPORT

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Introduction
Congenital interhemispheric arachnoid cysts occur as a result of deviations in cerebrospinal fluid (CSF) flow during the early embryonic life of the primitive arachnoid membrane. The gap between the outer layer of the mesenchyme that will form the dura and arachnoid and the inner layer of the pia begins to fill with CSF from the 15th week. Herein we present a newborn with severe hydrocephalus diagnosed in antenatal period.

Case
The 36-year-old mother was born with a 36-week cesarean section as the second child of the second pregnancy. The parents were cousins. She was followed up due to prematurity and severe hydrocephalus. Physical examination was unremarkable. Eye, TORCH serology and chromosomal analysis were normal. Brain MRI showed an isointense cystic formation with 16x10x12 mm CSF filling the anterior cranial fossa from the level of the interhemispheric fissure and extending from the left cerebellar hemisphere adjacent to the posterior fossa. No dilatation was detected in the 4th ventricle. Enlargement of the right lateral ventricle is seen. It is thought to be associated with left lateral ventricular cyst and could not be selected separately. No dilatation was detected in the lateral ventricular frontal horns. Corpus callosum is not observed.

The component of the cyst extending into the posterior fossa forms compression from the extraaxial distance to the left cerebellar hemisphere and the 4th ventricle. Ventriculoperitoneal shunt was inserted during follow-up. After the shunt infection, the shunt was removed. In the sixth month, the shunt was re-inserted. No problems were detected in the control.

Conclusion
The most appropriate treatment for interhemispheric arachnoid cysts is direct cyst fenestration or shunting of the cyst. The success rate of shunt surgery in interhemispheric arachnoid cysts is reported to be very high.

E1325 - ANTENATAL BILATERAL SYMMETRICAL HEMORRHAGE IN THE BILATERAL TEMPORAL LOBE A CASE OF ALLLOIMMUNE AUTOIMMUNE NEONATAL THROMBOCYTOPENIA

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Radiological imaging in the neonatal period provides very useful clues for differential diagnosis and diagnosis. Here, the findings of antenatal bilateral symmetric hemorrhage and right subdural hemorrhage in the bilateral temporal lobe on MRI were evaluated as consistent with alloimmune-autoimmune neonatal thrombocytopenia. The case was presented because of its rarity.

Case

A 2800-year-old mother was taken to the intensive care unit at 4100 grams after spontaneous vaginal delivery due to spontaneous vaginal delivery at 37 weeks of gestation with G4P2Dc1. He was treated for hypothermia with severe acidosis. He was treated with severe pulmonary hypertension. There was Rh incompatibility between mother and baby. In the BK automatic count Hb 6.2 Hct 17.1 BK 161,000 / mm3. Platelet 45,000 / mm3. He had severe hemolysis findings, left shift, and diffuse normoblasts. PT, PTT prolonged, CK and troponin I were found high. The patient was treated with hypothermia and three blood exchanges were performed. IVIG treatment was performed before the first blood exchange. In the first month of hospitalization, she was treated with Klebsiella pneumonia and sepsis treatment for three weeks. When the patient is stable, brain MRI was performed. According to MRI report, "Hemorrhage and related porencephalic cystic parenchymal changes and signal differences due to gliosis are seen in the bilateral temporal lobe. Two mm thick subdural hemorrhage is seen in the left frontotemporal region. There was no evidence of hemorrhage in other areas of the cerebral parenchyma. Although imaging typically suggests alloi-immuno-isoimmune thrombocytopenia, we could not prove it to be laboratory-specific because of the patient's complex clinic.

Early neonatal period should be taken into consideration in the differential diagnosis because many causes have similar findings. Radiological imaging provides important clues in these cases.

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E1347 - AMNIOTIC FLUID CONCENTRATIONS OF SOLUBLE ENDOGLIN AND ENDOTHELIAL CELL SPECIFIC MOLECULE 1 IN PREGNANCIES COMPLICATED WITH NEURAL TUBE DEFECTS

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Objective
To determine the concentrations of soluble endoglin (sCD105) and endothelial cell-specific molecule-1 (ESM-1) in the amniotic fluid (AF) of pregnant women, and to investigate the relationship between these concentrations with neural tube defects (NTDs).

Methods
AF concentrations of sCD105 and ESM-1 were measured in the study group, which included 60 pregnant women complicated with NTDs; and 64 pregnant women with unaffected healthy fetuses (control group). The AF concentrations of sCD105 and ESM-1 in both groups were measured using enzyme-linked immunosorbent assay and compared.

Results
The demographic data and biochemical parameters in amniotic fluid of the groups were compared (Table 1). There were no significant differences in terms of the mean AF concentrations of sCD105 and ESM-1 between the groups (p=0.141, p=0.084, respectively). No statistically significant relations were detected between sCD105 and ESM-1 (p=0.907). There was a significant difference between the AF sCD105 concentrations in those with gestational age <24 weeks (n=101) and ≥24 weeks (n=23) ($\bar{X}$_(<24)=76.35±126.62 vs $\bar{X}$_(≥24)=39.87±58.32, p=0.041). AF ESM-1 concentrations were found to be statistically significant in the gestational age <22 weeks (n=90) and ≥22 weeks (n=34) groups ($\bar{X}$_(<22)=135.91±19.26 vs $\bar{X}$_(≥22)=148.56±46.85, p=0.035). A positive and low-level relation at a statistically significant level was determined between the gestational age and AF ESM-1 concentration in the study group (r=0.257; p=0.048). When the AF ESM-1 concentrations of the patients only in the study group who were at gestational age <24 weeks (n=42) and ≥24 weeks (n=18) were compared, a statistically significant difference was detected ($\bar{X}$_(<24)=137.46±19.80 vs. $\bar{X}$_(≥24)=160.19±60.94, p=0.033). When only the patients in the study group were divided into two groups as cranial (n=31) and spinal (n=29) NTDs, the sCD105 concentrations showed no statistically significant differences ($\bar{X}$_cranial=70.97±128.30 vs. $\bar{X}$spinal=35.13±51.22, p=0.166). When only the patients in the study group were divided into two groups as cranial and spinal NTDs, the ESM-1 concentrations showed no statistically significant differences ($\bar{X}$_cranial=137.59±21.11 vs. $\bar{X}$spinal=151.42±49.81, p=0.162).

Conclusion
AF concentrations of sCD105 and ESM-1 were not associated with the development of NTDs. Unlike studies that reported that ESM-1 concentrations decreased in maternal plasma with the increase in gestational age, we determined an increase that was proportionate to gestational age in AF.

E1396 - CONGENITAL HYDROCEPHALUS ON ARTERIOVENOUS MALFORMATION A CASE REPORT

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Congenital hydrocephalus is the result of the imbalance between the production and the resorption of the cerebrospinal fluid, which causes the increase of the intracranial pressure with the expansion of the ventricular system.

We report on a case of a 27-year-old patient, diagnosed in the 35th weeks of gestation with fetal hydrocephalus. Fetal MRI reveals associated hemorrhage in the right lateral ventricle. Term birth by cesarean section of a female fetus with Apgar 9. Postnatal ultrasound confirms the diagnostic and computer tomography reveals a tumor formation in the cortex of the right lateral ventricle without being able to exclude a subacute/chronic hematoma.

On the 6th day of life, surgery is performed. The ventricular hematoma was evacuated, and an arteriovenous malformation was identified as a capable bleeding source. The left lateral ventricular dilatation requires insertion of a left ventricular external drainage. The favorable evolution made it possible to discharge the patient on day 44 of life.

The uncertain prognosis, with the probability of normal psychomotor development after the surgical resolution of 60-80%, depends on the severity, precocity of the installation and the progressive character.

In our case, at the age of 1 year and 6 months, motor development corresponds to a 3-month-old baby and the clinical examination reveals microcephaly, hemiparesis and left hemianopsy, associated with focal epileptic symptoms.

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E1403 - SUBSTANCE ABUSE DURING PREGNANCY AND ITS EFFECT ON CARDIOVASCULAR ADAPTATION AND NEURODEVELOPMENT IN NEONATE

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Introduction

Comprehensive and high quality perinatal health care requires the care and follow-up of pregnant substance abusers. Proper treatment requires knowledge of true epidemiological characteristics, socioeconomic conditions and psychological factors that have led to addiction. Whether pregnancy is planned or not, the monitoring and treatment of this kind of risk pregnancies should be directed toward successful fetal outcome. Although positive short-term neonatal outcomes are known, the emergence of neonatal abstinence syndrome (NAS) is described in up to the 90% of cases in literature.

Most recently, the variation of intensity of NAS symptoms and the need for pharmacological therapy are explained by the epigenetic changes and the degree of methylation of MOR gene (μ-opioid receptor). In addition to the short-term symptoms of NAS, it is necessary to consider long term effects of neonatal exposure as well as outcomes of negative effect of opioids on tissue development.

Objective

The case-control study aimed to establish the correlation between substance abuse during pregnancy and short term perinatal outcome as well as the specific cranial ultrasonographic and echocardiographic findings in neonates.

Methods

Data for opioid – dependent pregnant women was collected from the archives of the Department of Obstetrics and Gynecology of University Hospital Centre Sestre Milosrdnice between 2016. and 2019. Among the 14 substance users, 10 of them were taking buprenorphine and 4 were using methadone. Given data was compared with the control group of 14 gravidae who did not use any of addictive substances. Patients of control group were sampled in a way that the first following patient with same gestational age was included in study. Categorical data is displayed in absolute and relative frequencies. Data analysis was performed using Mann - Whitney and Chi - squared test. Statistical analysis has been performed using the Statistical Package for Social Sciences (SPSS V20).

Results

Substance exposure was not significantly associated with mode of delivery or Apgar score. Use of addictive drugs was associated with lower birth weight ($p < 0.01$). However, there were no statistically significant differences in Ponderal index. All except one patient experienced NAS. The reported symptoms were irritability, tremors, high pitched crying, gastrointestinal symptoms and sweating. The mean age at onset of symptoms was 44.6 hours. The use of methadone was associated more cranial ultrasound abnormalities then buprenoprhine but with less reported cardiac defects. Most commonly reported cardiac anomalies were patent ductus arteriosus (PDA) and patent foramen ovale (PFO).

Analyzing cranial sonograms, increased periventricular echogenicity and intracranial hemorrhage grade 1 or 2 were prevalent among neonates prenatally exposed to opioids.

Conclusion

Although this study was conducted on a small number of subjects, it highlights the need for a more precise and accurate monitoring of drug-addicted pregnant women.

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E1454 - THE NOMOGRAM OF THE CAVUM SEPTUM PELLUCIDUM AT 15 28 WEEKS OF GESTATION

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Objective
To obtain nomogram of the cavum septum pellucidum (CSP) width at 15-28 weeks of gestation with known prognosis of normal pregnancies

Methods
The CSP width and other routine biometric measurements of 6042 structurally normal fetuses at 15-28 weeks of gestation were measured by transabdominal ultrasonography. The distribution of the CSP width is established according to gestational weeks and percentiles between 15-28 weeks are calculated. Statistical analysis was performed using Statistical Package for the Social Sciences Version 22 (SPSS Inc., Chicago, IL, USA).

Results
The mean gestational age was 21 ± 1.7 weeks and mean biparietal diameter (BPD) was 50.2 ± 5.8 mm. The CSP width ranged from 1.6 to 7.7 mm between 15 and 28 weeks of gestation and the mean CSP width was 4.1 ± 0.8 mm. The CSP width is linearly increased between 15-28 weeks. Significant correlation was also found between the CSP width and gestational weeks (GW) (CSP = GW X 0,2705 - 1,6121; R = 0.62; p <0.01) and BPD (CSP= BPD X 0,0859 - 0,273; R = 0.651; p <0.01). A significant difference in CSP width were observed between gestational age groups and the percentiles for CSP width were calculated for 15–28 weeks of gestation. The ninety-fifth percentiles for CSP width were 3.7 -7 mm at 15-28 weeks of gestation.

Conclusion
The CSP width showed a linear increase between 15-28 weeks of gestation. Gestational weeks should be taken into consideration during the evaluation of the CSP width.

Obstetrics - Aneuploidy and fetal anomalies - first trimester

E1209 - PRUNE BELLY SYNDROME DIAGNOSIS IN MONOCORIONIC TWINS IN FIRST TRIMESTER

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Introduction

The Prune-Belly syndrome is a congenital disorder defined by abdominal muscle deficiency, severe urinary tract abnormalities and bilateral cryptorchidism in males. The incidence is approximately 3.8 cases per 100,000 live births. The genetic basis is unknown, but a recessive X-linked defect is suggested because of it typically occurs in males, although there are a few cases reported in females. The pathogenesis remains unknown, but it is thought to be due to a mesenchymal genetic defect.

The major renal change is dysplasia that affects a variable portion of renal tissue, and it may not be evident before 16 weeks gestation. The bladder is usually enlarged and nontrabeculated, and has thickened walls with smooth muscle hypoplasia. In the first half of gestation, oligohydramnios due to lack of sufficient urine production promotes mechanical compression of the fetus and inhibits thoracic expansion and the e lungs remain hypoplastic. Partial aplasia or hypoplasia of the abdominal muscles are characteristic of Prune Belly Syndrome.

Case

This was a 33 year old Hispanic woman with no personal history of interest (except for obesity) in her second pregnancy. She had a normal previous pregnancy with at term delivery by cesarean section due to placental abruption.
She came to gestational control in her 13+2 week. This pregnancy was spontaneous and with a normal course so far. The first-trimester blood analysis didn´t show remarkable alterations, without having undergone biochemical screening of chromosomopathies due to patient´s rejection. A monoamniotic monochorionic gestation was found in the ultrasound, with two live fetuses with crown-rump length (CRL) of 59 mm and 49.5 mm (smaller than amenorrhea), and both of them had an anomaly compatible with megabladder. Chorial biopsy was performed without complications, and the karyotype result was normal XX. The findings and possibilities were explained to the patient and she decided to interrupt the pregnancy. The anatomopathological study demonstrated a monoamniotic monochorionic gestation, with both female fetuses with complete defect of the abdominal wall and megabladder.

Conclusion

The renal dysplasia, the urinary tract abnormalities and the presence of pulmonary hypoplasia are the principal clinical manifestations and those that determine the prognosis. They result in recurrent episodes of urinary tract infections, urosepsis, and varying degrees of renal and respiratory insufficiency.

The diagnosis is typically made by antenatal ultrasonographic examination between 20 and 30 weeks. Although nowadays the vaginal sonography allows visualization of the kidneys and the urinary drainage system as early as 11 to 13 weeks gestation. The management depends on the severity of the clinical findings. Patients with Prune-Belly syndrome have had generally a poor prognosis. The overall mortality was between 30 and 50% with the majority of deaths confined to the perinatal period.

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E1210 - GASTROSCHISIS CASE REPORT

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Introduction
Gastroschisis is a full-thickness paraumbilical abdominal wall defect usually associated with evisceration of bowel and sometimes other abdominal organs. Bowel herniation may lead to a variety of intestinal abnormalities. Other common potential sequelae of gastroschisis include growth restriction (30 to 60 %), spontaneous preterm birth (30 to 50%), and fetal demise (3 to 6%). After birth, the newborn requires special care because of the exposed bowel. The prognosis is generally very good. We present prenatal diagnosis and management of fetal gastroschisis and its good evolution.

Case
We present a 19-year-old pregnant woman, G1P0A0, diagnosed with fetal gastroschisis in the first trimester of pregnancy (12 weeks). An elevated maternal serum alpha fetoprotein level (MSAFP) is associated with this finding. Obstetricians and Pediatric Surgeons inform parents of fetal malformation, complications and fetal and postnatal prognosis. Control of pregnancy is performed in the Obstetric High Risk Consultation.

Serial ultrasounds are performed every 2-4 weeks to follow fetal growth and amniotic fluid and also obtain targeted views of the intra- and extra-abdominal bowel to look for significant dilatation, thickening, or edema. In third trimester (33 week), a slight increase is found in diameter of the distal intestinal loop at the ultrasound study and fetal lung maturation is performed. Worsening of prognosis ultrasound markers occurs at 35th week of gestation so it is decided to perform a labor induction with dinoprostone and oxytocin. Finally, a vaginal delivery is performed with a female newborn of 2020 gr, APGAR 9/10. A few hours of birth a reduction and primary closure of laparoschisis and ileo-colostomy are performed by Pediatric Surgeons. The newborn remains in the Neonatology Unit for 2 months with good recovery. At 4 months of age the girl is operating for stoma closure.

Conclusion
Gastroschisis and omphalocele are the most common fetal abdominal wall defects: the prevalence of each is approximately 3 to 4 per 10,000 live births/fetal deaths/ stillbirths/pregnancy terminations. The pathogenesis of gastroschisis is unknown. There is an inverse association between maternal age and incidence of fetal gastroschisis, with the highest prevalence in whites and births to women under age 20 years. Prenatal diagnosis is based on sonographic visualization of a paraumbilical abdominal wall defect with visceral herniation. The combination of ultrasound examination and MSAFP screening detects at least 90 percent of cases. The decision on timing of delivery is based on a combination of factors, including gestational age, ultrasound findings, and fetal testing results. The mean gestational age at spontaneous labor in pregnancies complicated by gastroschisis is in the 36th week of gestation. Coordinating delivery at a tertiary care center provides optimal conditions for the neonate.

E1282 - PRENATAL DIAGNOSIS OF INIENCEPHALY

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Objective
Iniencephaly is a disorder of the cervical spine consisting of congenital cervical synostoses, fixed retroflexion of the head, severe cervical lordosis, and varying degrees of deficits of the dorsal occiput and cervical vertebrae. In iniencephaly, developmental disturbances of the neural tube and spine arise very early in embryogenesis, generally between day 26 and day 30 after conception. Ultrasonography and serum or amniotic α-fetoprotein levels can be used to detect this condition in utero.
The aim of this case is to contribute prenatal diagnosis and management of fetal iniencephaly.

Case
A 38-years-old G3P2 pregnant was referred to our perinatology clinic at 11+6 weeks of gestation for first trimester scan. Her first baby had hydrocephalus and craniosynostosis in her medical story. She didn't use folic acid in her pregnancy. Sonographic examination showed a fixed flexion of the head with an upturned face (stargazer appearance) and lemon sign. Cervical and thoracic vertebrae showed incomplete formation or closure; the occipital bones seem fused with the cervicothoracic vertebrae. We performed chorion villus sampling (CVS). After 5 weeks the pregnant came up with CVS result. CVS revealed normal karyotype (46, XX). The pregnant's never been in control over this period. At 17 weeks of gestation ultrasound examination showed fetus was ex. Termination was made to the pregnant woman.

Conclusion
Iniencephaly is a rare NTD. Advanced maternal age, folic acid deficiency and a history of anomalous birth are the factors that increase the risk. Associated abnormalities of the CNS include anencephaly, encephalocele, hydrocephalus, hydromyelia, microcephaly agenesis of the cerebellar vermis, and presence of cerebellar cyst. The abnormal fetal growth occurring at such an early stage in gestation might be the reason for the multiple associated malformations, owing to subsequent hindering and cramping of structures related to the retroflexed fetal neck. Iniencephaly should be distinguished from extreme hyperextension of the fetal head, which may resolve spontaneously, and Klippel-Feil syndrome. Because of the hyperextension of the head, dystocia may occur.

Iniencephaly is a rare neural tube defect that is often lethal, ending in either a stillbirth or a neonatal death. Several infants with iniencephaly have had close relatives with either anencephaly or myelomeningocele. While usually a lethal malformation, affected children and even adults with normal intelligence have been reported.

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E1283 - OMPHALOCELE IN EDWARDS SYNDROME A CASE REPORT

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Introductıon
Edwards Syndrome is a genetic disorder caused by the presence of an extra 18th chromosome. The incidence varies from 1 in 6,000 to 1 in 8,000 births, and it is the 2nd most common autosomal trisomy after Down´s syndrome. It is a polymalformative syndrome characterized by a short survival, most of the foetuses die before birth and less than 5% of the newborns survive the first year.

Case Descrıptıon
A 39-year-old woman with history of a previous caesarean delivery and without any other medical history of interest. During the first trimester ultrasound in the 13th week of pregnancy, a big omphalocele with intestines, stomach and liver protruding through it is described (Figure 1). The heart is tractioned by the omphalocele, avoiding a correct display of the four cardiac cavities. A cystic hygroma of 5.17mm is also detected (Figure 2). The risk of chromosomopathies calculated with the first-trimester combined test is increased (1/11), so an amniocentesis is indicated for a prenatal diagnosis. After explaining the association between the findings in the ultrasound and the high risk of chromosomopathies to the patient, she refuses to make an amniocentesis as she will not interrupt the pregnancy despite the results for religious motives. In the successive visits the fetal heartbeat is checked. In the second trimester ultrasound we detect intrauterine growth restriction, the omphalocele (Figure 3), absence of the cavum septum pellucidum, and a single ventricle with transposition of the great arteries. In addition, the foetus presents rocker bottom feet and clenched hands. In the 30th week of pregnancy the diagnose of stillbirth is made, so our patient accepts the induction of labour. The birth goes well, confirming the findings in the ultrasound after the fetal autopsy. A molecular genetic study is made, confirming the diagnosis of trisomy 18, also known as Edwards syndrome.

Conclusion
Most cases of Edwards syndrome are suspected during the 1st trimester ultrasound due to tests which calculate the risk of chromosomopathy using the maternal age, markers in maternal serum and abnormal ultrasound findings. The diagnosis is made analysing the fetal chromosomes using material obtained by amniocentesis, corial biopsy or cordocentesis. In this case, the diagnosis is made after the birth as the patient refuses diagnostic techniques during pregnancy.

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E1407 - ADVANCES IN PRENATAL DIAGNOSIS AND DECISION TO TERMINATE PREGNANCY AT UNIVERSITY CLINIC OF GYNECOLOGY AND OBSTETRICS

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Objective

The purpose of prenatal diagnosis is to obtain the appropriate information regarding prognosis, risk of recurrence, and potential therapy, and thus achieve optimum outcome for the fetus and the mother. Making a decision to terminate pregnancy is always on the parents' indication that the fetus with an increased nuchal translucency may have a normal karyotype at the start of diagnosis, a range of malformations that may develop later in pregnancy and after screening for organic malformations of 20-24 gestational week, as well as a long list of explanations for possible consequences in relation to the fetus if pregnancy is not terminated.

Methods

In the article, interruptions of pregnancies were considered during one year, 2017, at the Clinic for Gynecology and Obstetrics, the same systematized after gestation weeks. Before any termination of pregnancy amniocentesis was performed in the clinic and all other diagnostic examinations according to the week that are within the scope of the Clinic. The purpose of the review is to begin the termination of pregnancy, determined using diagnostic facilities before the interruption. Fetal anomalies divided into four major groups: cardiac defects, nervous system defects, chromosomopathies, others (covering abdominal wall defects, urinary system, hydrops, dysplasia, IVGR, multiple anomalies).

Results

According to the data on termination of pregnancy at the University Clinic of Gynecology and Obstetrics, in 2017, the total number of interruptions of pregnancy is greatest in the period from 20.1 to 24 gestational week, or 44% of all interruptions of pregnancy. Aborted pregnancies above 28 weeks of gestation are 11%, most of them due to defects in the nervous system (34%), and equally represented cardiac defects and chromosomopathies. Neural tube defects (anencephaly, spina bifida, cephalocele, holoprosencephalus, acrony ...) are the second most common fetal abnormalities after cardiac anomalies (Williams, Cragan, 2009, Dolk, 2010), or interruption of pregnancy due to the same in our examined group 40% of all interruptions over one year. Discontinuation of pregnancy due to a cardiac defect in the examined group is 10% of all interruptions in a year, due to cardiopathia complex.

Conclusion

The determination of Nuchal translucency and its elevated values are only the beginning which points to additional diagnostics and confirmation of fetal abnormalities. Further biochemical screening in the second trimester, ultrasound echocardiography and screening for structural defects of other organs and organ systems complement the diagnosis of fetal abnormalities in subsequent weeks of pregnancy, unless an abortion occurred in early pregnancy or fetus in utero death. Amniocentesis affects parents' decision-making, their desire for prolonged pregnancy, or a decision to prolong pregnancy with otherwise unhealthy organic anomalies and heart failure, which at some point in the pregnancy would end up in fetal death or soon after birth. Reduction of the percentage of interruption of pregnancy due to anomalies that are the first in the presence of the fetus is due to the progress in the operative resolution of the fetus.

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E1418 - NOONAN SYNDROME ANTENATAL DIAGNOSIS AND CLINICAL IMPLICATIONS

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Objective
Noonan syndrome is a rare genetic disorder with its prevalence estimated between 1 in 1,000 to 2,500 live births, affecting equally male and female infants. It is an autosomal dominant disorder mainly, yet both autosomal recessive inheritance and de novo cases have been reported. The syndrome presents a clinical and genetic heterogeneity, characterized by short stature, mild facial malformations, congenital heart abnormalities, and a variety of cognitive deficits. Mutations in seven genes have so far been associated with Noonan syndrome, especially those related to the PTPN11 gene. These mutations are thought to cause dysregulation in the RAS-MAPK signaling pathway, which also appears to be involved in the pathogenesis of other syndromes such as Leopard syndrome (LS), Noonan-like(with loose anagen hair, NS/LAH) syndrome, Costello's syndrome (CS), Cardio-Facio-Cutaneous syndrome (CFCS), Neurofibromatosis Type I (NF1) and Legius syndrome (LS). We present 3 cases of Noonan's syndrome, that were diagnosed antenatally as a result of detection of suspicious ultrasonographic findings in the fisrt trimester of pregnancy, and discuss the role of detailed screening by a specialist in fetal medicine, as well as the multiple challenges of a comprehensive parental counseling, once the diagnosis has been confirmed by molecular karyotype.

Methods
In the first trimester scan of 12-13 weeks, performed in a fetal-maternal referral unit, sonographic findings such as cystic hygroma in one case and increased nuchal translucency in two cases, lead to Chorionic Villous Sampling (CVS).

Results
In all 3 cases, molecular karyotype revealed the characteristic PTPN11 gene mutation suggestive of Noonan syndrome. An extensive parental counseling by a specialist in fetal-maternal medicine, as well as by a pediatrician with expertise in congenital malformations and genetic disorders followed, regarding the prognosis, the clinical heterogeneity and the broad spectrum of manifestation of signs and symptoms, the treatment options available after birth, the implications on future pregnancies and the need for genetic testing of both parents. All couples decided to terminate pregnancy, referring as their major concern the possibility of a severe cognitive disorder.

Conclusion
Diagnosis of Noonan Syndrome is mainly based on genetic testing, however, antenatally, due to absence of specific ultrasound findings, it should be suspected in any case of first trimester increased nuchal translucency or cystic hygroma, or increased or persistent nuchal fold during the second trimester of pregnancy. The role of ultrasonographic screening is indispensable, especially in the absence of a family history, to guide further testing to confirm diagnosis, counseling, clinical management and future implications.

Obstetrics - Noninvasive prenatal test (Fetal DNA)

E1186 - TWO YEARS OUTCOMES OF NON INVASIVE PRENATAL TEST OF TRISOMY

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Objective
Non invasive prenatal testing for trisomy 21 (NIPT) by cell free DNA analysis exist in European countries. First of all in France, it was available only in research studies, then paid and very expensive. It has been officially published by French High Health Authorities in 2017, and is now supported by French health assurance since January 2019. We studied our practices and results, and pregnancy outcomes before 2019.

Methods
Our public structure accepted to finance non invasive prenatal testing in maternal blood for trisomy 21 from 2017. This is transversal cohort.
NIPT is allowed only without fetal abnormalities by ultrasonography examination after first or second trimester screening trisomy blood test in France. It is based on combinated test of factors including nuchal translucency if possible, hormonal analysis (PAPPA, HCG or AFP) and maternal age. NIPT used to be proposed when early screening test is between 1/50 and 1/1000 with different level of risks. Invasive intervention was still indicated for karyotype by amniocentesis for test >1/50, but NIPT could be done anyway. We did 408 tests, and could get 348 NIPT results.

Results
On 348 NIPT: 5 were done for wrong indication, 5 for antecedent, 56 for patients with late pregnancy declaration without first trimester ultrasound, 53 for multiple pregnancy (39 bichorionic-biamniotic, 12 monochorionic-biamniotic, 1 monochorionic-monoamniotic, 1 triple), 196 for intermediate risk between 1/50-1/1000, 13 for high risk >1/50, 20 lost of view. In only 3 cases NIPT was undetermined and needed to be done twice and was negative and it couldn't be returned in one case in intermediate risk (the patient chose not to perform the amniocentesis and to continue the ultrasound surveillance).

For all patients mean age was 29 years old; parity 1,8; body mass index was 28 ; median term of delivery was 39SA+4 gestation week and birth weigh 2950 grams.
Surprisingly, only 1 trisomy 21 was found in high risk group (>1/50), other ultrasound follow up and neonatal outcomes were normal.

False positive test were 1 for trisomy 21 and trisomy 18, none false negative: sensibility was 100% and specificity 99,7%, predictive positive value respectively 0,8 and 0,66. It was more often in intermediate group (without identified predictive factor).

Multiple pregnancies did not create technical problem.

According to recommendations, NIPT could avoid 185/196 (94,3%) useless amniocentesis which used to be done when screening was >1/250.

Conclusion

In France, this strategy of early combined test and indications of NIPT allows to select patient at different type of risk. It is a at time interesting for financial reasons and to avoid useless 94% amniocentesis. NIPT is safe, with good sensitivity and specificity.

Unfortunately it could be as well a source of stress for patient and difficulties to invest pregnancy for false positive NIPT. Further information could be given for patients before prescription of NIPT.

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E1253 - CASE REPORT VALUE OF CFDNA TESTING IN DETECTING OTHER CHROMOSOMAL ABRNORMALITIES

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Using cfDNA testing in detection of Trisomy 21, 18 and 13 has shown high PPV (high detection rate with low false positive rate). In our private Hospital many women opt for NIPT with the possibility to report incidental findings on other chromosomes as well, and we report 2 cases where using MPSS method has given us clinical benefit.

Case 1
35-year old women, second pregnancy, opted for NIPT at 12 week of pregnancy, with normal first trimester ultrasound screening (CRL 58 mm, NT 1.2 mm). First pregnancy was 10 years ago and she delivered vaginally healthy female child. NIPT result (NIFTY plus test, MPSS method) was high risk in possibility of fetal trisomy 5 with fetal fraction 8.94%. In reviewing publications it has been reported that mosaic trisomy 5 is rare chromosomal anomaly syndrome with a variable phenotype ranging from clinically normal to patient presenting intrauterine growth retardation, congenital heart anomalies, dysmorphic features and other congenital anomalies (eventration of diaphragm, agenesis of corpus callosum, cloverleaf skull, clinodactyly, anteriorly placed anus).
At 15 week of gestation she underwent amniocentesis and control ultrasound that showed SUA (single umbilical artery) and slight growth retardation, but with normal visible fetal morphology. Microarray report confirmed mosaic trisomy chromosome 5, estimated size 20%, and FISH method in cultured cells confirmed 6% mosaic chromosome 5. At 18 week of gestation she was admitted in the hospital with missed abortion for termination of pregnancy.

Case 2
25-year old healthy women, first pregnancy, wanted NIPT at 12 weeks of gestation, with normal first trimester ultrasound screening (CRL 65 mm, NT 1.1 mm). NIPT result (NIFTY plus test, MPSS method) was high risk for duplication of chromosome 9 (9p24.3-P13.1, 38.68 M), with fetal fraction 13.19%.
Duplication 9p may affect facial dysmorphismus and abnormalities of the fingers, toes, nails and heart failure.
At 16 week of gestation ultrasound screening showed ventriculomegaly, cleft lip and palate, no visible stomach and single umbilical artery. At that gestational age amniocentesis was done and duplication (or triplication, also a presence of possible mosaicism cannot be excluded) of chromosome 9p24.3-p13.1 was detected in prenatal array CHG analysis. The result was concordant with NIFTY testing results. Additionally, chromosome analysis of amniotic fluid cells using standard G-banding technique showed karyotype 47,XY,+psu dic(9;9)(q12;q12) (unbalanced structural aberration). At this moment the patient is 21 weeks of ongoing pregnancy, with no other data.

Conclusion
We can conclude that although cfDNA testing has been validated for screening of common trisomies, in case that we perform the extended panel that some laboratories offer, we could find useful clinical information that has been confirmed by invasive testing.

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E1254 - NON INVASIVE PRENATAL TESTING (NIPT) FOR COMMON CHROMOSOMAL ANEUPLOIDIES DATA FROM A SINGLE CENTER IN A ROUTINE SCREENING POPULATION

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Objective
Non- invasive prenatal testing (NIPT) by analysis of cell-free DNA (cfDNA) from maternal blood has shown promise for highly accurate detection of common fetal trisomies. We assessed the performance of NIPT for common chromosomal aneuploidies screening in a routine pregnant population from a single center in Zagreb.

Methods
We present the results of prenatal cfDNA testing in a period from 25.03.2013 until 26.03.2019 in a private Hospital in Zagreb. Of total 1161 pregnant women on which cfDNA testing was performed, 6 were twin pregnancies. All samples were analyzed using massively parallel sequencing, in clinical laboratory of BGI –Shenzhen, China.

Results
Results were available in 1157 cases (99,66%), among them delayed results in 31 (2,67%), 12 needed resampling (redraw rate 1,03 %) and only 4 'no call' result. Among 22 (1,9%) high risk results there were 13 Trisomies 21, 2 Trisomies 18, 1 Trisomy 13, 1 45X0, 1 Cri Du Chat, 1 Trisomy 5, 1 Trisomy 2 and 1 duplication 9 chr. All cases of T21, 1 case of T18 and T13 were confirmed by karyotyping (PPV for T21 is 100%). 2 women with high cf-DNA test result for T18 had miscarriage before karyotyping. Trisomy 2 was not confirmed by standard karyotyping but interestingly suspected trisomy 5 confirmed mosaic of trisomy 5 in 6% of cultured cells (it was a missed ab at 17 weeks of pregnancy). A suspected 5p deletion and trisomy 2 was not confirmed by microarray method. There was one case of false negative T21, resulting in sensitivity for T21 of 92,31%.

Conclusion
The performance of screening for Trisomy 21, 18, 13 and sex chromosome aneuploidies by cf-DNA testing using massively parallel sequencing is most effective screening method with high detection rates and extremely high PPV (100 %) for Trisomy 21. Our results show extremely low redraw and 'no call' rate.

E1417 - SHOULD FETAL ARRAY CHG ANALYSIS BE OFFERED TO PARENTS UNDERGOING INVASIVE TEST DUE TO INCREASED RISK OF SEX CHROMOSOMAL ABNORMALITY ON FETAL DNA TESTING

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Objective
To emphasize the importance of array-CGH testing in fetuses with sex chromosomal abnormalities

Case
A 32-year-old woman, G1P0, was examined for first trimester screening in the antenatal follow-up outpatient clinics. The early fetal anatomy scan revealed no abnormalities with an NT: 1,2 mm at 12 weeks' gestation. The parents opted for fetal DNA testing without first trimester biochemical testing. The fetal DNA test revealed increased risk for 47, XXY with a fetal fraction of 8.9%. The patient underwent an amniocentesis without any complications at 15 weeks & 3 days. The Quantitative Fluorescent PCR (QF-PCR) QF-PCR, using a set of STR markers for chromosomes 13, 18, 21, X, and Y revealed normal number of chromosomes. However, the conventional karyotype analysis yielded 90 % mosaicism for 47, XXY (47, --- (91)/46,--- (9)). The genetic laboratory continued array-CGH analysis upon parents' request. Meanwhile, the detailed fetal anatomy scan revealed a Blake's Pouch cyst and bilateral contracture of hands with polydactyly. Array-CHG analysis revealed uniparental isodisomy X. The patient was given genetic counseling and the fetal abnormality was thought to be due to a X-linked single gene disorder. The parents opted for termination of pregnancy. A skin biopsy of the fetus was sent to genetic laboratory for whole-exome sequencing. The results revealed pathogenic mutation on TCTN2 gene.

Conclusion
Increased risk for sex chromosomal abnormalities detected on fetal DNA testing usually represent a dilemma both for clinicians and parents-to-be. Despite, Klinefelter syndrome usually does not necessitate termination of pregnancy, it may be reasonable to offer fetal array-CHG analysis among with conventional karyotyping if the patients consider to undergo invasive test due to increased risk of any sex chromosomal abnormality on fetal DNA testing.

Obstetrics - Aneuploidy and fetal anomalies - second trimester

E1123 - CLINICAL VALUE OF BACTERIAL ARTIFICIAL CHROMOSOMES (BACS)ONBEADS (BOBS) FOR PRENATAL DIAGNOSIS OF ANEUPLOIDIES AND MICRODELETIONS

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Objective
To assess the clinical value of bacterial artificial chromosomes (BACs)onbeads (BoBs) for prenatal diagnosis of aneuploidies and microdeletions.

Methods
The amniotic fluid and cultured cell samples were collected from 193 pregnant women undergoing BoBs and karyotyping simultaneously due to advanced age, abnormal ultrasound and high-risk pregnancy of serological screening. Chromosomal karyotype analysis was employed as the gold standard to evaluate the efficiency of BoBs for prenatal diagnosis of aneuploidies and microdeletions.

Results
Of the 193 pregnant women-derived amniotic fluid and cultured cell samples, the success rate of karyotyping and BoBs was both 100%. Chromosomal karyotype analysis detected 25 fetal chromosomal abnormalities, with a 13.0% proportion, and BoBs revealed 27 fetal chromosomal abnormalities, with a 14.0% proportion. The results of BoBs were totally consistent with chromosomal karyotype analysis, and BoBs did not detect false positives or false negatives. In addition, BoBs revealed 22q11.2 microdeletion syndromes (DiGeorge Syndrome) in two samples from the pregnant women with high-risk pregnancy.

Conclusion
BoBs is a rapid, sensitive and reliable prenatal diagnosis tool for the detection of aneuploidies and microdeletions. As an alternative of karyotyping, it may be used for the detection of common aneuploidies, and the diagnosis of microdeletions as an effective complementary of karyotyping.

E1143 - PLACENTAL CHORIOANGIOMA AS CAUSE OF SEVERE FETAL ANEMIA AND INTRAUTERINE BLOOD TRANSFUSION A CASE REPORT

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Chorioangiomas are the most common non-trophoblastic tumors of the placenta and consist of anomalous vascular proliferation of the placental tissue. The estimated incidence is 1%, however clinically evident chorioangiomas are less common, being reported between 1:3,000 and 1:9,000 births. The etiopathogenesis is unknown and routine screening is not recommended. However, the presence of chorioangiomas should be considered among differential diagnosis of fetal growth restriction or delayed fetal growth in the absence of placental insufficiency. Fetal complications include non-immune hydrops, polyhydramnios, fetal growth restriction, cardiomegaly, congestive heart failure, severe anemia, thrombocytopenia, consumption coagulopathy, preterm labor, and fetal demise. Chorioangiomas are mainly perfused by fetal circulation and tumor size determines the amount of blood divergent from fetal circulation and represents the main determinant of the presence and severity of complications and perinatal outcome.

Case

A 30 year-old pregnant woman, G1, was referred to our hospital due to non-immune fetal hydrops and abnormal MCA-PSV suggestive of severe fetal anemia of unknown etiology at gestational age of 26+1 weeks. A new ultrasound (US) scan also showed placentomegaly and a hypoechogenic placental node of approximately 6x2x2 cm with exuberant vascularization that could correspond to placental chorioangioma. She was managed with serial intravascular transfusion. The first transfusion was realized on November 30th, 2018 when it was transfused 23 mL of blood O negative, which increased fetal hemoglobin from 4.1g/dL to 9.4g/dL. On December 3rd, 2018, US scan demonstrated worsening of fetal anemia. Fetal hemoglobin was 4.1g/dL. She received another intrauterine transfusion of 30mL of blood O negative. Fetal hemoglobin after the procedure was 8.0g/dL. After 4 days, doppler gets worse displaying severe fetal anemia. The patient was admitted to hospital for corticosteroid therapy for pulmonary maturation and to plan the interruption of gestation. Cesarean section was performed on December 10th, 2018. She gave birth to a healthy female baby, weighing 995g, Apgar score of 6 and 8, and Ballard of 27 weeks. The baby was transferred to the neonatal ICU, where she remained for 3 months. The placenta was sent to histopathological analysis that evidenced the presence of vascularized tumor of 6x2.5x2 cm compatible with chorioangioma, as well as areas of bleeding and placental infarction, with signs of villous hypovascularisation.

E1219 - A CASE OF RHIZOMELIC CHONDRODYSPLASIA PUNCTATA TYPE I IN A MALE FETUS

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Chondrodysplasia punctata (CDP) is a rare autosomal recessive genetic disorder that is characterized by severely symmetric short limbs, abnormal ossification of the proximal extremities, congenital cataracts, ichthyosiform skin changes, microcephaly, and mental retardation. The incidence of this skeletal dysplasia is estimated at 0.9 per 100,000 live births and infant mortality is high within the first year of life. Antenatal sonographic diagnosis of the disease is usually based on the demonstration of the rhizomelic bone shortening and epiphyseal stippling. Although 75% of neonates with CDP have cataracts, prenatal sonographic diagnosis of fetal congenital cataracts has rarely reported. Herein, we aimed to report the antenatal ultrasonographic features of CPD case including congenital cataract and rhizomelic symmetric long bone shortening in the second trimester of pregnancy. A 28-year-old pregnant woman gravida 5 para 4, referred to our Prenatal Diagnosis and Treatment Unit due to dysmorphic face appearance in routine sonographic assessment during the 25th week of pregnancy. There was no abnormal characteristic in her medical history. Also, there was no pathologic finding in her physical examination and laboratory values. Obstetric ultrasonography revealed a fetus with bilateral pelvicaliectasis, bilateral short femur, and humerus, frontal bossing, microphthalmia, and cataract (Image-1). The patient and her partner were informed about the fetal status, and the option of invasive prenatal diagnosis (cordocentesis) was offered. The parents refused the invasive prenatal diagnostic procedure, and subsequent follow-up evaluations were performed at two weeks interval. Elective cesarean section was planned at 37 weeks of gestation due to intrauterine growth retardation after one course of betamethasone administration. APGAR score 7/8, 2350 g, 46 cm male infant was delivered by cesarean section. Physical examination revealed rhizomelic micromelia, bilateral cataracts, broad nasal bridge and long philtrum that suggest CDP syndrome (Image-2). The karyotype of the fetus was 46, XY. No unusual single nucleotide polymorphisms were detected. Whole exome analysis showed that the fetus was homozygous for the PEX7 mutation (c370_396 delGGTGAACAGCTTGTGGTGTCTGGCTCA pG124 S132del), which is compatible with rhizomelic CPD type I. In the second month of life, the baby died due to pulmonary infection and respiratory failure in intensive care unit. In conclusion, the detection of symmetric rhizomelic shortening and bilateral cataracts in antenatal ultrasonography in a fetus without a positive family history, the diagnosis of rhizomelic CPD should be considered in the differential diagnosis.

E1223 - PRENATAL DIAGNOSIS OF DISTAL TRISOMY 17Q SYNDROME A CASE REPORT

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The precise detection of the chromosomal abnormality is a crucial factor when evaluating the genotype-phenotype correlation in clinical cytogenetics. De novo and complex imbalanced chromosomal rearrangements often difficult to detect by using traditional cytogenetic techniques. Microarray comparative genomic hybridization (CGH) has recently been used to identify sub-microscopic chromosomal aberrations in fetal medicine especially in pregnant women complicated with fetal anomalies. Trisomy of the distal portion of long (q) arm of chromosome 17 is a rare condition and until now both de novo and inherited a few cases have been reported in the literature. The syndrome is characterized by microcephaly, mental retardation, intrauterine growth retardation, short and webbed neck, rhizomelia, polydactyly, short stature, and distinct facial features. In this report, we presented a fetus with antenatally diagnosed distal trisomy 17q syndrome by the sonographic features detected in mid-trimester fetal anomaly scan and microarray CGH analysis. A 37 years old woman, gravida 2 para 1, attended the Prenatal Diagnosis and Treatment department for the purpose of routine second-trimester fetal ultrasonography scan at 22 weeks of pregnancy. The first-trimester screening test was within normal limits. Her obstetric and medical histories were unremarkable. She had no consanguinity with her spouse. Fetal ultrasonography scan revealed bilateral ventriculomegaly, vermian agenesis, bilateral polydactyly, flattened nose, bilateral short femur and humerus (Image-1). After the detailed counseling of the parents about the fetal malformation, fetal magnetic resonance imagining (MRG) and invasive prenatal diagnosis were planned. Fetal MRG showed corpus callosum hypoplasia and confirmed the diagnosis of vermian agenesis and bilateral ventriculomegaly. Microarray CGH analysis revealed distal trisomy 17q (17q21.32q25.3) syndrome. The option of termination of pregnancy was offered, which the parents refused, and subsequent follow-up scans were performed at two weekly intervals. Elective cesarean section was planned at 39 weeks of gestation due to the history of previous cesarean section. A male infant was delivered, Apgar scores were 6 at one minute and 8 at five minutes, birthweight was 2750 g, the length was 48 cm. On physical examination, he had polydactyly in both hands and feet that suggested distal trisomy 17q syndrome (Image-2). In the 17th day of life, the baby died due to respiratory failure in intensive care unit. The case is presented because of its rare occurrence and to provide a beneficial contribution to genetic counseling of parents in fetuses with similar antenatal ultrasonographic features.

E1226 - A CASE OF ANTENATALLY DIAGNOSED AMBIGUOUS GENITALIA IN A FETUS IN MID TRIMESTER FETAL ANOMALY SCAN

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Sexual differentiation is a complex process that leads to the formation of male or female internal and external genitalia. The interaction of sex chromosome, gene products that regulate the migration of germ cells and gonadal hormone production determine the fetal gender. Although fetal sex can be detected accurately from 12 weeks of gestation, typically the prenatal determination of fetal gender is performed by ultrasonographic examination of the external genitalia in the second trimester. While most of the sex development disorders are commonly isolated, the determination of associated congenital anomalies and evaluation of maternal and family history may contribute to define the origin of the disease. Laboratory studies including chromosome analysis, array comparative genomic hybridization analysis, and amniotic fluid hormone measurements are indicated when a suspect of sex development disorder occurs. The diagnosis of ambiguous genitalia in a fetus presents a challenge for both the clinician and the family. A multidisciplinary approach including perinatology, pediatric endocrinology, genetics, and psychology is essential for the management of the condition. We aimed to describe a case of antenatally diagnosed ambiguous genitalia in a fetus in mid-trimester fetal anomaly scan. A 34 years old woman, gravida 2 para 1, attended the Prenatal Diagnosis and Treatment Unit for a routine second-trimester fetal anomaly scan at 22 weeks of pregnancy. The first-trimester screening test was within normal limits. Her obstetric and medical histories were unremarkable. She had no consanguinity with her spouse. Fetal ultrasonography scan revealed abnormal phallic structure (short shape) and bifid scrotum in the examination of fetal external genitalia. (Image-1) No associated anatomic anomalies were detected. After the detailed counseling of the parents about the sex development disorder and expected neonatal prognosis with a pediatric endocrinologist; the invasive prenatal diagnosis was offered for further evaluation. They refused the invasive test, and subsequent pregnancy follow-up was performed routinely. APGAR score 9/10, 3450 g, 49 cm infant with ambiguous genitalia was delivered by vaginal delivery in 40 weeks of gestation. Physical examination of neonate revealed ambiguous genitalia, and there was no any other pathologic finding (Image-2). The laboratory tests including biochemical (glucose, electrolytes) and hormone measurements (FSH, LH, DHEAS, free and total testosterone, ACTH, cortisol) are all detected in the normal range. The karyotype of the fetus was showed no deletion in SRY region and 46, XY/47, XXY mosaicism was found (20% of cells were detected XXY and 80% of cells determined XY). Neonate was discharged at postnatal 10th day and at the time of writing, the baby showed normal growth and no additional intervention was planned by the Paediatric Endocrine Clinic for the present. In conclusion, ambiguous genitalia can be diagnosed antenatally by the ultrasonographic evaluation of fetal external genitalia for the characteristic ultrasonographic findings. The determination of associated abnormalities, offering invasive prenatal diagnosis and counseling with a multidisciplinary team is essential for the management of this sex development disorder.

E1229 - NASOPALPEBRAL LIPOMA COLOBOMA SYNDROME REPORT OF A CASE

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Nasopalpebral lipoma-coloboma syndrome (OMIM 167730) is an extremely rare autosomal dominant condition characterized by bilateral nasopalpebral lipomas, bilateral upper and lower eyelid colobomata, a broad forehead, telecanthus, and maxillary hypoplasia. The etiology is unknown, but it has been hypothesized that a migration defect of the neural crest cells leads to abnormal development of the facial anatomy. We aimed to present a prenatally diagnosed newborn with nasopalpebral lipoma-coloboma syndrome due to facial dysmorphic appearance and hypertelorism. A 33-year-old pregnant woman, gravida 1 para 0, was referred to a specialized perinatologist for second-trimester detailed ultrasonographic examination because of hypertelorism. Her medical and obstetric history was unremarkable, but fetus's father had a facial reconstructive operation history due to hypertelorism at childhood. Parents were non-consanguineous. Fetal ultrasonography scan revealed ordinary findings except for facial dysmorphic appearance due to the narrowed nasopalpebral region and marked telecanthus. These findings were evaluated with family history, and genetic counseling was requested. At term, a 3320 g, 50 cm female baby was delivered by cesarean section. On physical examination, she had a bilateral symmetrical accumulation of subcutaneous tissue in the nasopalpebral region, extending to the forehead and causing marked telecanthus. Symmetrical colobomata located at the junction of the inner and middle thirds of upper lids, epiphora, and absence of medial eyelashes were disclosed. There were no other systemic anomalies. Genetic counseling recommended to the family, and with these clinical features, the diagnosis of was nasopalpebral lipoma-coloboma syndrome confirmed. Genetic studies are ongoing on the identification of the disorder. The case is presented because it is rarity. A multidisciplinary approach is required because of ophthalmological manifestations, and cosmetic surgery may be necessary.

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E1234 - APLASIA CUTIS CONGENITA CASE REPORT

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Aplasia cutis congenita (ACC) is a rare disease characterized by incomplete skin formation. Clinical presentation at birth is variable, depending upon the time of occurrence, tissue layers involved, and degree of healing in utero. It can affect any part of the body but in 85% of cases it is located on the scalp. Although in most cases ACC is a benign isolated defect, it may be associated with a number of genetic syndromes and congenital anomalies. The exact pathophysiology of ACC is unclear. Proposed mechanisms include intrauterine trauma, vascular compromise, infection, and medications such as methimazole, misoprostol, and valproic acid.

Case
A 37-year-old black pregnant woman, G4P2A1, was referred to our prenatal care due to gestational diabetes. She was managed with healthy diet and physical activity and had an adequate glycemic control throughout pregnancy. She was admitted to our hospital at gestational age of 29+3 weeks with preterm prelabor rupture of membranes. Ultrasound scan showed adequate fetal growth and oligohydramnios. There was no evidence of intrauterine infection. She was managed expectantly until 34 weeks of gestation when her labor was induced with misoprostol and oxytocin. She gave birth to a baby boy, Apgar score 9/9, weighing 2025g. At birth, a cutaneous malformation was observed crossing the insertion of the umbilical cord, measuring 6 to 8 cm, yellowish and with softened consistency. No other congenital anomaly was observed. There were no changes in placenta or umbilical cord and no reports of cutaneous changes in relatives. A pediatric dermatologist confirmed the diagnosis of ACC. The lesion was treated with silver sulfadiazine cream and nonadherent dressings. After eight days the newborn was discharged home. His mother was oriented to continue wound care. Two weeks later, his lesion was almost totally healed.

Suspicious of AAC by antenatal ultrasound examinations is difficult. Diagnostic is made by physical findings and biopsy of the lesion after birth. Clinical course and severity of ACC varies depending upon the size of the defect and the tissues involved. Small lesions have a good prognosis and usually heal spontaneously over weeks to months. Large lesion may require surgical repair. Associated anomalies may affect the prognosis. Because it is a rare disease, there is a difficulty in standardization of management. Treatment with silver sulfadiazine seems to be effective in healing superficial wound and ensuring an evolution without sequelae.

E1279 - THE DETECTION OF TWO COPIES OF SURVIVAL MOTOR NEURON GENE 1 IN ARTHROGRYPOSIS MULTIPLEX CONGENITA–SPINAL MUSCULAR ATROPHY ASSOCIATION A CASE REPORT

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Arthrogryposis multiplex congenita (AMC) is a rare sequence of congenital joint fixation disorder with a reported incidence of 1/3000 live births. Neurogenic, or muscular disorders, connective tissue abnormalities, intrauterine compression due to severe oligohydramnios, vascular compromise, or teratogenic factors could be the primary cause of the ultrasonographic findings. While neuronal degeneration occurs in the anterior horn of the central nervous system, it has been proposed that the neurogenic origin of AMC could be associated with acute spinal muscular atrophy (SMA)(SMA type I). The diagnosis of AMC-SMA association is one of the rarest forms of spinal muscular atrophy that have been described as an atypical form of infantile SMA. We aimed to present a case of AMC-SMA association because of its rare occurrence and postnatally detection on the genetic basis. A 31-year-old gravida 5 parity 3 pregnant woman with a history of one first-trimester fetal loss was referred to our Prenatal Diagnosis and Treatment Unit due to severe polyhydramnios and micrognathia during the 34th week of gestation. The parents had documented second-degree consanguinity but both did not have any significant family history. Also, there were no pathologic findings in physical examination and laboratory values of pregnant. Obstetric ultrasonography revealed that the biometric measurements of the fetus were lower than 5 percentile according to the gestational age and the placenta was observed in the posterior wall of the uterus with normal appearance. The amniotic fluid index was determined 61.1 cm, suggesting severe polyhydramnios and the fetus was in the breech position. Decreased fetal movements, fixed extension deformities in both lower and upper extremities, mineralization defect in long bones, small chest, subcutaneous edema, and dysmorphic features including hypotelorism, micrognathia were noted in the fetal anatomical assessment. (Image-1) The diagnosis of AMC was considered and the patient and her partner were informed about the fetal status. Emergency cesarean section was planned due to fetal distress (reversed diastolic flow in the umbilical artery), and APGAR scores 3/4, 2073 g, 47 cm male infant was delivered. In physical examination, he had micrognathia, severe edema, marked hypotonia, right humerus fracture, and multiple contractures in both extremities. (Image-2). The infant was intubated due to poor respiratory effort. Genetic tests including STR fragment analysis and Multiplex Ligation-dependent Probe Amplification test determined two copies of survival motor neuron gene-1 (SMN-1) gene. The infant continued to require ventilatory support and had no spontaneous respiratory movements during the follow-up period, and the baby died due to respiratory failure in intensive care unit in the 28th day of life. In conclusion, the SMN gene should be carefully investigated in fetus diagnosed with AMC for the evidence of spinal cord involvement. While AMC of neurogenic origin remains a genetically heterogeneous condition SMN gene analysis will make the diagnosis easier in the AMC-SMA association, thus contributing to elucidate the classification of AMC. Not only SMN gene deletion analysis also SMN gene dosage analysis in negative cases for the detection of SMN copies could be of help in the genetic counseling of this association.

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E1280 - A CASE OF ALKURAYA KUCINSKAS SYNDROME DIAGNOSED IN PRENATAL PERIOD

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Objective
Alkuraya-Kucinskassendroma (AKS) is an autosomal recessive, serious neurodevelopmental disorder caused by a homozygous or compound heterozygote mutation in the KIAA1109 gene in the 4q27 chromosome. It is characterized by arthrogryposis and brain abnormalities associated with minimal development of brain parenchyma. It is also characterized by developmental delay. In this article, we wanted to present a case with Alkuraya Kucinskas syndrome.

Case
27 years old G2P0A1, LMP 23 weeks 2 days pregnant, she was referred because of hydrocephalus and clenched hand from external center to our perinatology clinic. Apart from her second degree relative marriage, there was no feature in her story. In the ultrasonographic examination, fetus was compatible with 18 weeks and 5 days. Intrauterine growth retardation, hydrocephalus, corpus callosum agenesis, micrognathia, clubfoot in the right lower extremity, bilateral clenched hand were observed. Amniocentesis was performed, the result was reported as arr (1-22, X) x2. The family was offered a termination option. The family did not accept termination. While 36 weeks and 5 days of gestation according to SAT, premature rupture of membranes and fetal condition due to unreliable fetal condition, emergency cesarean delivery was performed. APGAR score 1.-5. minute, 0. The baby was ex. Fetal autopsy was recommended to the family and the family accepted. In autopsy of the fetus, 2475 g, 47 cm in height, sex in the external examination of the female fetus micrognathia, retrognathia, bilateral clenched hand, bilateral clubfoot were observed. No abnormality was observed in the abdominal organs. In the central nervous system examination, 225 g of the brain, giral pattern flattened, ventriculomegaly were observed, midbrain, thalamus and hippocampus (temporal lobe) could not be selected. Lissencephaly, hydrocephalus, corpus callosum agenesis were evaluated. This case, which had hydrocephalus and arthrogryposis findings, was evaluated as ACS.

Discussion
Alkuraya Kucinskas syndrome is a fatal disease with hydrocephalus and arthrogryposis. The incidence is unknown. In the clinical course, cerebellar hypoplasia with cerebral atrophy, lissencephaly, mild or severe ventriculomegaly and brain stem dysgenesis may be seen. Other diseases associated with arthrogryposis should be reviewed in the differential diagnosis. Most of the affected individuals die in the antenatal period or immediately after birth. The surviving patients were followed by mental retardation and seizures. In the KIAA1109 gene there are 14 mutations identified as homozygous or compound heterozygous. Gueneau et al. found that the destruction of the KIAA1109 gene in the zebrafish by CRISPR technology resulted in increased frequency of hydrocephalus or other head defects and increased body curvature compared to control groups.

Conclusion
Alkuraya Kucinskas syndrome is a neurodevelopmental disease that can be diagnosed easily in the first trimester. Families should be informed about the prognosis of pregnancy and the termination option should be explained. AKS should be considered in fetuses with brain parenchymal defect and skeletal anomaly and genetic examination should be recommended.

E1301 - ANTENATAL DIAGNOSIS OF A RARE CASE OF EVENTRATION OF THE DIAPHRAGM HIGH INDEX OF SUSPICION

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Congenital diaphragmatic eventration is rare congenital anomaly. A case of diaphragmatic hernia was evaluated carefully with high suspicion of diaphragmatic eventration. 26 years, primigravida with normal first trimester scan. Anatomy scan showed; multicystic mass on the left side of the chest, heart and stomach were in normal position, diagnosed as congenital pulmonary adenoid malformation (CPAM). Follow up scan at 25 weeks, showed the same chest cystic mass with absent stomach. The diagnosis was changed to congenital diaphragmatic hernia. Fetal MRI at 26 weeks; showed a multicystic lesion seen in the lower thorax (5 x 2.2 cm), no definitive communication with abdominal cavity. The findings are nonspecific, may indicate diaphragmatic hernia or CPAM.
As the scans and MRI were not conclusive, a comprehensive scan at 36 weeks was performed, the left kidney was in a higher position under the left hemidiaphragm, and heart and stomach were in normal position. The case was diagnosed as diaphragmatic eventration. Pregnancy progressed uneventfully and patient delivered at 39 weeks. The neonate was intubated and admitted to NICU. Chest and abdomen X-RAY shows herniated bowel loops across the diaphragm to the thorax. At day two, chest CT with intravenous contrast showed no lung mass, no pleural effusion and the left hemidiaphragm was elevated. Diagnosed as left diaphragmatic eventration with elevation of small bowel loops and left kidney underneath the elevated left hemidiaphragm.
The neonate was extubated after 3 days, pediatric surgery advised no need to interfere. The neonate was discharged in day 17 on stable condition with follow up appointment with neonatology and pediatric surgery.
Eventration of the diaphragm is abnormal elevation of one leaf of an intact diaphragm as a result of paralysis or atrophy of varying degrees of muscle fibers. Eventration of the diaphragm is a rare anomaly, occurring in 0.002% of live births. The prenatal differentiation between congenital diaphragmatic eventration and congenital diaphragmatic hernia by sonography is very difficult because the 2 disease have similar sonographic appearances. Antenatal diagnosis of diaphragmatic eventration is vital as the neonate relies upon the diaphragm for the normal respiration.
The antenatal diagnosis of eventration of the diaphragm is unusual and need high index of suspension as the features can be easily interpreted as diaphragmatic hernia. Diaphragmatic eventration was suspected based on several features:

1- The appearance of the chest lesion was inconsistent in different scans
2- The absence of cardiac displacement as in cases of diaphragmatic hernia
3- The presence of normal right lung head ratio
4- The presence of normal stomach and absent stomach in different scans.
5- Normal amniotic fluids which is unusual in case of diaphragmatic hernia
6- The intact diaphragm

E1302 - PRENATAL DIAGNOSIS OF ADRENAL NEUROBLASTOMA DIFFERENTIAL DIAGNOSIS AND MANAGEMENT

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Neuroblastoma is the most common extracranial solid tumor of infancy with an incidence rate of 58 per million infants younger than one year old. Neuroblastomas originate from the neural crest during fetal development and may arise from the sympathetic ganglia or the adrenal medulla. We present the case of a cystic neuroblastoma of the left adrenal gland that was detected prenatally during a routine antenatal visit.
A 27-year-old pregnant woman visited the outpatient clinic of Alexandra maternity hospital during the third trimester of her pregnancy. The woman was Gravida 2 Para 0 Abortus 1. The gestational age of the pregnancy was 38 weeks and 2 days. The woman's past medical history was uneventful. During her pregnancy she was subjected to prenatal testing including first trimester scan, anomaly scan, 3rd trimester – doppler scan without any abnormal findings. During our initial ultrasound examination, we detected one fetus in occiput anterior position. All growth parameters (Biparietal Diameter, Head Circumference, Abdominal Circumference, Femur Length, Estimated Fetal Weight) and the Amniotic Fluid Index were within the normal range for the gestational age. During the scan a well circumscribed mass was detected over the left kidney (Figure 1). The mass appeared to have both cystic and solid areas and appeared to originate from the left adrenal gland (Figure 2a). The anatomy of the left kidney was normal. The mass measured 4.49 x 3.95cm (Figure 2b). Doppler evaluation did not reveal increased blood flow in the mass (Figure 3). The unilateral kidney and unilateral adrenal gland appeared normal (Figure 4). Extensive ultrasound examination of the fetus revealed no other anomalies. After careful consideration the diagnosis of cystic adrenal neuroblastoma was made. Taking into consideration the gestational age of the pregnancy, induction of labor was programmed at 39+1 weeks, resulting in the birth of a male neonate with APGAR score 9 in the first minute. Transabdominal ultrasound examination confirmed the diagnosis. The neonate was transported to the pediatric oncology department where it was subjected to abdominal MRI and serum and urine VMA and HVA tests which verified the diagnosis of neuroblastoma. Early detection of neuroblastomas is very important since treatment of low stage disease results in favorable oncologic outcomes (for instance surgery is curative for neonates with small adrenal masses). Detection of antenatal fetal neuroblastoma was described for the first time in1983 by Fenart et al. Since then, the evolution of imaging technics has allowed earlier detection of fetal tumors. Differential diagnosis of fetal abdominal tumors is based on tumor characteristics, location, vasculature and the gestational age at detection. Fetal suprarenal tumors include neuroblastoma of the adrenal gland, extra lobular pulmonary sequestration, adrenal hematoma, adrenal abscess, adrenal nodular hyperplasia, adrenal cyst, bronchogenic cyst and adrenal carcinoma. Evaluation by a maternal – fetal medicine specialist is essential for the proper management of the case.

E1303 - A TREACHER COLLINS CASE INVESTIGATION CHALLENGES IN INTERPRETING GENETIC ANALYSIS RESULTS

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Treacher–Collins Syndrome (TCS) (also known as mandibulofacial dysostosis) is a malformation of the craniofacial development. TCS 1 and TCS 2 are autosomal dominant disorders with a variable degree of penetrance, while TCS 3 is autosomal recessive and about 10% of the TCS patients have an unknown underlying genetic defect. Treacher-Collins Syndrome affects about 1:50.000 live births. The cause of the disease is the presence of mutations in the TCOF1, POLR1D και POLR1C genes. Treacher Collins phenotype includes zygomatic hypoplasia, antimongoloid slant of the eyes, eyelid notches, class 2 malocclusion, external ear abnormalities, hearing loss, cleft lip and choanal atresia. We present a case of a 36-year-old pregnant woman, who visited our outpatient maternity clinic for prenatal screening. She was Gravida 2 Para 1 Abortus 0. She was carrying dichorionic diamniotic twins and the gestational age of the pregnancy was 11 weeks. She reported a stillbirth with a diagnosis of Treacher–Collins Syndrome based on the phenotype of the neonate, without molecular analysis confirmation. After subjecting her to molecular analysis she was found heterozygous for the single nucleotide polymorphism (SNP) c.1232A>G (p.Gin411Arg) of the TCOF1 gene. A small zygomatic hypoplasia of the patient was attributed to this mutation. Following her diagnosis, she was subjected to chorionic villus sampling and molecular analysis which was negative for the c.1232A>G (p.Gin411Arg) SNP of the TCOF1 gene in both fetuses. Despite the negative result, close ultrasound follow-up of the pregnancy was advised as there was a discrepancy regarding the characterization of c.1232A>G (p.Gin411Arg) in different gene databases. After reviewing Clinvar, HGMD, LOVD, Clinvitae, Decipher, gnomAD and Bravo Topmed for said SNP, it was not considered a pathologic polymorphism in 6/7 but it was considered to be a pathologic polymorphism in 1/7. At 21 weeks of gestation the anomaly scan detected cleft palate and zygomatic hypoplasia of fetus A. Further testing of the chorionic villi samples with high resolution chromosomal microarray was ordered and a 462 kb deletion was detected in the 5q32 (chr5:149,283,356_149,745,109) chromosomal region in both fetuses. This region included 9 documented genes, one of which is TCOF1. After thorough genetic counselling the woman decided to terminate the pregnancy.

The presence of mutations with unknown clinical value and the discordance in characterization of mutations as pathologic or not between different databases creates uncertainties regarding genetic counselling. Hence attributing phenotypic characteristics to SNPs with uncertain clinical significance may often be misleading. Furthermore, in case of stillbirths with suspected congenital anomalies or genetic syndromes it is imperative that they are subjected to molecular analysis before any diagnosis are made.

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E1317 - CONGENITAL HIGH AIRWAYS OBSTRUCTION SYNDROME (CHAOS) CASE REPORT OF TWO WOMEN WITHOUT CLASSICAL ULTRASOUND FINDING

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Congenital high airways obstruction syndrome (CHAOS) is a rare fetal anomaly. The underlying cause is congenital complete or incomplete obstruction of fetal upper airway tracts during embryogenesis, resulting in a spectrum of characteristic radiological feature diagnosed prenatally by ultrasound at time of routine anatomy scan. In many cases the diagnosis will be delayed to postnatal period at time of delivery when the newborn fail to open his/ her airway immediately after delivery.
We report our experience of two cases of CHAOS diagnosed only in the postpartum examination when there were no characteristic findings on detailed ultrasound examination.

Case 1
A 24-years old, was referred early at 11 weeks for dating ultrasound scan. Anatomy scan was showing normal appearance of 4 chamber view and normal diaphragm shape. During her antenatal follow up, the fetus was diagnosed to have absent right kidney, dilated bowel loop and he developed fetal growth restriction (FGR). She underwent cesarean section for breech presentation and FGR. The baby delivered alive, has dysmorphic features with abnormal microotia, micrognathesia and high arch palate and bifid tongue, trial of intubation failed as no laryngeal opening on examination. Infant died post CPR for 38 minutes after birth. Neonatal whole exome sequencing revealed, Fraser syndrome (FRAS1 gene) but with variant of unknown significance.

Case 2
A 33-years old was referred early at 15 week and anatomy scan was normal apart from echogenic lungs but normal cardiac axis, mediastinum and diaphragm curvature. Growth scan was done at 34 weeks and showed polyhydramnios with AFI of 38 cm. At time of delivery the baby was not crying and NICU team failed to intubate hem, bronchoscopy examination showed subglottic laryngeal atresia, tracheostomy was done and the baby died after 30 min of CPR. Neonatal blood was obtained for whole exome sequencing and the results showed that the baby was homozygous for, Fraser syndrome (FRAS1 gene) ch.4 c.2917T>G, p. Cys 973 Gly. The result was reported as a variant of unknown significance.

Conclusion
The current diagnostic criteria are not applicable for all the cases and physicians need to have high index of suspicion for the diagnosis when the lungs got to be echogenic in the ultrasound. CHAOS can be part of FRASER syndrome but we are reporting a new variant that has not been identified to be of clinical significance till the mean time.

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E1327 - PRENATAL SONOGRAPHIC DIAGNOSIS OF HARLEQUIN ICHTHYOSIS A CASE REPORT

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Aim

We report as a case of successful prenatal diagnosis of HI during the third trimester sonographic examination in a related couple with history of the disease.

Case

A 30-year-old gravida 3 para 2 woman, at the 32th week of gestation, was referred to our perinatology department for second opinion ultrasound (US). The couple was third degree consanguine and their first baby died on the fourth day of life, with an undiagnosed skin disease. Her routine aneuploidy screenings and pregnancy follow-ups were uneventful but she did not have a second trimester ultrasonographic examination for abnormality screening. On 2-dimensional (2D) and 4-dimensional (4D) US; facial dysmorphism with distorsion of the lips (eclabion), conjunctival protrusion associated with severe chemosis (ectropion), skin fissures, dense floating particles in the amniotic fluid, short digits, flattened nose and ears, severe edema on the dorsal surfaces of hands and feet were detected. These findings were considered as sonographic features of HI. (Figure 1-4). After counselling about the disease exactly, the patient did not accept any invasive procedures becouse of the risks. A male infant with HI (birth weight, 3190 gr) was delivered by cesarean section for breech presentation on active labor at 39 weeks of gestation. Sonographic signs were confirmed postnatally (Figure 5-6). Parenteral nutrition, hydration, antibiotherapy and skin care treatment were given to the infant in neonatal intensive care unit but he died due to sepsis on postpartum seventh day.

Conclusion

HI is a severe disorder of keratinization caused by mutations in the ABCA12 gene with autosomal recessive inheritance and related marriages could be a risk factor. The mutations lead to defective lipid transportation which negatively affects the correct development and function of the skin. The main phenotypic features include dry scaly fish-like skin, consisting of hyperkeratosis with erythematous fissures between thick yellowish armor-like plaques involving the entire body surface, ectropion and eclabium, flattened nose, malformed ears, abnormally fixed limbs and fingers, and toes in rigid flexion (mitten-like hands) due to the inability of the skin to expand. Even with intensive care (including treatment with retinoids-etratinate, acitretin), prognosis is poor and most neonates die shortly after delivery due to infection, heat loss, dehydration, electrolytic disturbances (eg, hypernatremia), or respiratory distress. Fetoscopic or US guided fetal skin biopsies are generally preferred for prenatal diagnosis. In conclusion US markers for HI should be kept in mind, particularly for early and accurate antenatal diagnosis of this devastating condition and detailed counselling should be given to the parents.

E1356 - TRISOMY 18 CASE DIAGNOSED WITH CLENCHED HAND AND NT THICKNESS IN THE FIRST TRIMESTER A CASE REPORT

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Aim

To present a case diagnosed with trisomy 18, whose chorionic villus sampling was performed due to clenched hand and increased NT thickness in the first trimester.

Case

The 41-year-old G3 P2 A1 L1 patient was referred to our perinatology outpatient clinic due to increased thickness of the NT, with a 13 weeks 3 day pregnancy according to her last menstrual period. In the detailed fetal examination of the patient, CRL was consistent with 11 weeks 5 days, NT: 3.4 mm and the fluid accumulated in the back of the neck was observed to envelop the whole body like a membrane. Flexion deformity and clenched hand appearance were observed in both wrists. The patient was informed about prenatal genetic diagnosis and chorionic villus sampling was performed with the consent of the patient. CVS FISH result was found as Trisomy 18. The patient was admitted for medical abortion for 14 weeks and 5 days of gestation, there was no fetal cardiac activity in the examination. Medical abortion was performed.

Conclusion

Trisomy 18 (Edwards' syndrome) is one of the rare genetic anomalies, but the most common chromosomal disorder after trisomy 21. The incidence rate was reported as 3 / 10,000 in newborns. The risk of trisomy 18 increases with maternal age but decreases with advanced gestational age. NT is the sonographic view of the accumulation of subcutaneous fluid, collected under the skin behind the fetal neck in the first-trimester of pregnancy. This term is used regardless of whether fluid accumulation exists only on the neck or throughout the body. The relationship of NT with the frequency of chromosomal disorders and other anomalies is not related to its appearance, but with its thickness. For trisomy 18, fetal loss rate is approximately 80% between 12 and 40 weeks. In patients with increased NT thickness and clenched hand findings in the first trimester, Trisomy 18 should be considered in the differential diagnosis and the family should be informed about the preinvasive diagnostic methods and fetal prognosis.

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E1419 - THE ROLE OF ULTRASOUND SCREENING IN DETECTING SKELETAL DYSPLASIAS IN SECOND TRIMESTER – THE CASE OF ACHONDROPLASIA

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Objective

Achondroplasia is the most common osteochondrodysplasia and the most common non-lethal skeletal dysplasia, with an estimated prevalence between 1 in 10,000 to 30,000 births. It is an autosomal dominant disorder, mainly caused by mutations in the fibroblast growth factor 3 receptor (FGFR3) gene. However, most cases are sporadic and are attributed to de novo mutations. The differential diagnosis, in cases with suspicious sonographic findings, includes hypochondroplasia, lethal dysplasia and homozygous achrondroplasia.
We present 3 cases of achondroplasia that were diagnosed during routine ultrasound screening in the second trimester of pregnancy in the absence of any family history, and discuss the role of ultrasound as a screening tool for detecting this rare genetic disorder, as well as the various aspects of a comprehensive parental counseling, once the diagnosis has been confirmed by amniocentesis.

Methods

Detailed scan of fetal anatomy at 22-23 weeks of gestation, performed by a specialist in a Fetal-Medicine referral unit, raised the suspicion for this skeletal abnormality, due to findings such as shortening of long bones, brachydactyly and macrocephaly. Diagnosis was confirmed by amniocentesis.

Results

In all cases, molecular karyotype revealed the characteristic FGFR3 gene mutation and confirmed the diagnosis of achondroplasia. Subsequently, parents received extensive counseling by a fetal-maternal medicine specialist, as well as by a pediatrician with expertise in congenital abnormalities and genetic disorders, regarding the prognosis, the clinical presentation, the pattern of inheritance and the risk of recurrence in future pregnancies, the treatment options available after birth, and the need for genetic parental testing. Eventually, all 3 couples decided to terminate pregnancy.

Conclusion

Prenatal diagnosis of achondroplasia is often missed until 20 weeks of gestation, especially if there is no family history, because the characteristic sonographic finding of shortening of long bones and macrocephaly, which is the hallmark of dwarfism after birth, is not usually obvious earlier. Further investigation and genetic testing is needed to differentiate between other skeletal dysplasias. In all cases, subsequent thorough counseling is essential, as the management of pregnancy, in terms of termination, poses ethical dilemmas to the parents due to relatively advanced gestation and to the fact that mental status of the affected offspring is usually normal.

Obstetrics - Intrapartum ultrasonography

E1057 - ULTRASONOGRAPHIC FINDINGS AND CLINICAL CHARACTERISTICS OF VASA PREVIA A REPORT OF 8 CASES

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Objective
Vasa previa is defined as a condition in which fetal blood vessel(s) locate on the membranes within 2 cm from the internal cervical os. A growing rate of the incidence has been reported, possibly due to prevalence of assisted reproductive technology. Vasa previa is classified into two categories: Type I) vessels that connect a velamentous umbilical cord to the placenta. Type II) vessels connect the lobes of a bilobed placenta or the placenta and a succenturiate lobe. However, several studies reported the cases which cannot be classified into these two types. In this study, we aimed to investigate the relationship between the disease types and clinical characteristics of vasa previa.

Methods
A retrospective descriptive study of all vasa previa cases that were managed in Shinshu University Hospital between 2010 and 2018 was performed. Data of maternal background, ultrasound findings of the cervix, placenta, and covering vessels, as well as obstetric and neonatal outcomes were reviewed and analyzed. This study was approved by the Ethics Committee of Shinshu University, School of Medicine.

Results
There were 8 cases of vasa previa among 7579 deliveries. All cases were diagnosed antenatally and delivered by cesarean section before the onset of labor. Six cases were nulliparous, and 2 were multiparous. Four had a history of assisted reproductive technology. The maternal age at referral was 35.1 ± 3.7 years (mean ± SD). The gestational age at the time of diagnosis of vasa previa and delivery was 31 ± 5.6 weeks (mean ± SD) and 36 ± 2.0 weeks (mean ± SD), respectively. Six (75%) cases were associated with the low-lying placenta. Five (62.5%) were classified as Type I, but there was no Type II case. The remaining 3 (37.5%) cases could not be classified into two categories because the aberrant fetal vessel located out from the placenta which had normal cord insertion and no multipartite variant (unclassified, or "Type III"). The maternal and neonatal outcomes were acceptable in all cases. In one case, vasa previa was not detected by routine screening ultrasonography and color Doppler because the aberrant vein covered the internal os through posterior-anterior direction, which was not clearly visualized as a vasculature. The color Doppler image also resembled with flowing amniotic fluid, which could be distinguished by observing the steady flow with pulse-doppler imaging.

Conclusions

In our study, a considerable number of cases was not matched to the typical classification. Obstetricians should be aware of such cases that associate with no abnormal cord insertion nor multipartite placenta. Caution should be paid to vasa previa of with aberrant venous vessel because these cases may not have a clear image of vasculature and may have nonpulsatile flow on color Doppler imaging. A pulse-doppler imaging may help the diagnosis in such cases.

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E1059 - STUDY OF THE APPROPRIATE DELIVERY METHOD FOR PREGNANCY WITH CARDIAC DISEASE USING NON INVASIVE CARDIAC MONITORING

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Objective
During labor, there are many physiological changes in circulation which may induce adverse event in pregnant woman with cardiac disease. Previously, invasive and intermittent measurement methods were used to determine the hemodynamic parameters. However, these techniques are not reliable to detect rapid hemodynamic changes during labor. The purpose of this study is to clarify how each delivery method affects cardiac function using non-invasive and continuous measurement method. That will help to indicate the appropriate delivery method for pregnancy with cardiac disease.

Methods
Prospective study was performed at National Cerebral and Cardiovascular Center in Japan from October 1, 2014 to November 30, 2018. Recruited healthy heart pregnant women were classified into 3 groups according to the delivery method; vaginal delivery without epidural anesthesia, vaginal delivery with epidural anesthesia, and caesarean section. The hemodynamic parameters; cardiac index (CI), stroke volume index (SVI) and heart rate (HR) were measured continuously during delivery by non-invasive Electrical Cardiometry monitor AESCULON mini®. Interrupted time-series analysis (ITSA) was conducted to evaluate the trends and changes.

Results
Ten cases of vaginal delivery without epidural anesthesia, ten cases of vaginal delivery with epidural anesthesia, and the other ten cases of caesarean section were analyzed. In vaginal delivery, CI and HR was significantly increased before delivery. And the increase in CI and HR was mild in epidural group compared with non-epidural group. SVI was increased towards the delivery in epidural group. And it was unchanged in non-epidural group. But there was no difference in the level of outcome values between the two groups. In caesarean section, SVI was increased and HR was decreased before delivery. And after delivery, while SVI was continued to be increased and HR was not changed, CI was increased.

Conclusion
Autotransfusion caused by uterine contraction increases venous return. Pain and anxiety according to uterine contraction stimulate the sympathetic nerve and increases HR. By using epidural anesthesia, the increase in HR before vaginal delivery was suppressed. It may reduce the cardiac load caused by tachycardia. In non-epidural vaginal delivery, the increase in venous circulation by autotransfusion is processed by increasing HR. On the other hand, in epidural vaginal delivery, it is not processed only by increasing HR but also by increasing SVI. Even though, as epidural anesthesia increases the vascular capacity, the level of SVI outcome was equivalent. In caesarean section, SVI was increased due to hydration. And HR was decreased due to the spinal anesthesia which suppress the sympathetic nerve. As a result, CI was not changed before delivery. After the delivery, as the hydration was continued, SVI was increased and CI was also increased. Spinal anesthesia reduces the heart load in caesarean section. However, hypotension and excessive infusion load must be taken care of. As there are many circulatory factors to control, it would not be the first choice for many cardiac disease patients. Summarizing for the above reasons, vaginal delivery with epidural anesthesia seems to be the best delivery mode for most cardiac disease patients.

E1126 - THE INFLUENCE OF ACCURACY OF ESTIMATED FETAL ABDOMINAL CIRCUMFERENCE ON EMERGENCY CESAREAN SECTION IN NULLIPAROUS

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Objective
This study was to investigate the risk of emergency cesarean section according to the differences between estimated fetal abdominal circumference and postnatal abdominal circumference.

Methods
A retrospective analysis from nulliparous women with singleton term births who attempted a vaginal delivery was conducted. Pregnancies with preeclampsia, chronic hypertension, diabetes, planned cesarean section, placenta previa or cesarean section due to fetal anomalies or maternal condition were excluded. Postnatal abdominal circumference was analyzed in five groups (28-31, 32, 33, 34, and 35-40cm). Estimated fetal abdominal circumference was defined as measured data within 1 week from delivery. Odds ratio (OR) and confidence interval (CI) for emergency cesarean section according to the difference between estimated and postnatal abdominal circumference in each group were calculated after adjusting for maternal age, gestational age, and pre-pregnancy body mass index (BMI).

Results
Among the 1,129 women we analyzed, 790 (70.0%) had a vaginal delivery and 339 (30.0%) underwent emergency cesarean section. The estimated abdominal circumference was greater in the emergency cesarean section group compared to that in the vaginal delivery group (33.5± 1.89 vs. 33.09 ± 1.65, $P<0.05$). There were no significant difference in postnatal abdominal circumference and the difference between estimated and postnatal abdominal circumference. Estimated abdominal circumference The risk of emergency cesarean section were increased with greater difference between estimated and postnatal abdominal circumference with adjusting for maternal age, gestational age at delivery and pre-pregnancy BMI. when postnatal abdominal circumference was 32cm (OR 1.10, 95% CI 1.01-1.22) and 35cm (OR 1.26, 95% CI 1.01-1.55).

Conclusion
The bigger difference between estimated and postnatal abdominal circumference is etiological to a considerable proportion of emergency cesarean sections in specific range.

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E1194 - DINOPROSTONA VAGINAL SLOW RELEASE SYSTEM (PROPESS) FOR INDUCTION OF LABOUR A RETROSPECTIVE DESCRIPTIVE REVIEW

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Objective

To analyze obstetric and perinatal outcome in single pregnancies undergoing induction of labour with Dinoprostona vaginal slow-release system (PGE2) in a secondary hospital

Methods

We performed a retrospective case series study based on 801 single gestations deliveries attended in our hospital in 2018. Pregnancies having induction of labour with PGE2 were analyzed. Obstetric and perinatal variables were reviewed.

Results

A total of 108 singletons were induced with PGE2 in 2018 (13,5% of the total of deliveries). Mean maternal age was 32,4 years (SD 5,63). The average BMI calculated was 26.59 (SD 5,23). Observing obstetric background, we identify 65,7% of nulliparous pregnant patients and up to 34,3% of patients had at least one previous vaginal delivery. In this group, 40,5% of cases were multiparous (two or more previous vaginal deliveries). Previous cesarean section was also found in up to 17,6% of patients (19 patients). Most frequent medical indications were: nonreassuring fetal status (26,4%), podalic presentation (26,4%), failed induction (20,5%), maternal choice (15,8%) and cephalopelvic disproportion (10,9%). Mean estimated fetal weight at third trimester was 3.214,07 kg (SD 400,92). We objectify a median for gestational age at delivery of 40+2 weeks (36+4 - 41+6). The duration of the induction of labour (from the time PGE2 dispositive was placed intravaginally until birth) resulted in 21,29 hours on average (SD 10,86). New born mean weight at birth was 3.289,81 kg (SD 495,86). The average arterial ph obtained was 7,27 (SD 0,07). Median for Apgar test was 9 (3-9) and 10 (1-10), for first and fifth minute of live, respectively. In up to 25% of cases, meconium liquid was objectified during labour. Regarding medical indications for labour induction, we observed: ruptured amniotic membranes (33,3% of patients), prolonged pregnancy (30,6%), oligoamnios (17,6%), intrauterine growth restriction (6,5%), preeclampsia (4,6%), gestational diabetes (4,6%) and cholestasis (2,8%). In relation to Bishop score before initiating induction of labour with PGE2, up to 45,37% of patients had less than 3 points, and 54,63% obtained 3 or more points. Considering type of delivery after induction with PGE2, vaginal delivery was registered in up to 80,6% of cases (73,5% eutocic birth, 23% vacuum extraction, forceps 3,5%), and cesarean section occurred in up to 19,4% of cases (21 patients). Analyzing motivations for cesarean section, we found failed induction in up to 33,3% of patients (7 cases), failure to progress during labour in 28,6% of cases (6 patients), nonreassuring fetal status in 23,8% and cephalopelvic disproportion in up to 14,3%. Examining neonatal outcomes, we identify 4,6% of newborns requiring admission in Intensive Care Unit (ICU).

Conclusion

In our clinical practice, PGE2 is commonly used as first option in singleton induction of labour when no or few contractions are reveled and Bishop score is less than 5. This mechanism may also be securely used, by performing close maternal and fetal clinical follow-up, in multiparous and previous cesarean section patients.

E1246 -SUCCESSFUL IVF PREGNANCY AFTER ENDOMETRTIOSIS AND THROMBOPHILIA

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Endometriosis with multi complications as the cause of sterility – Case study: Ivana F. born in 1984 from Belgrade, was treated from 2007-2016. Her first visit was in January 2007. UltraSound/2D/3D Color Doppler DG: Tumor ovarii lat dex.obs Endometriosis. Hydrosalpinx ovarii lat.dex Cystae ovarii lat sin. Endometriosis. OP: Coellioscopia. Cystectomia ovarii bill. HP Endometriosis. th ; Zoladex amp. After HS an US Color Doppler: Dg: Multiplices cystae ovarii l. dex et paraovarialis OP 21. 08. 2008. OP: Laparascopia. Cystectomia ovarii bill. Endometriosis Adhaesyolisis. HSG facta est. The HST was introduced after the operation: OC in coursu : years 2010, 2011, 2012 , 2013. In the year 2013 the patient planned pregnancy. As part of the examination for planned pregnancy complete laboratory, endocrinological and hematological tests were performed. Endocrinological testing revealed Sy Haschimoto and Hyperinsulinemia as part of PCOS. Therapy introduced: Euthirox and Metformin. Hematological testing confirmed presence of genetic mutation on F V and on PAI -1 4G/5G and confirmed Trombophillio congenitalis. Sy Leiden and mutation on gene PAI -1 4G/5G . Anticoagulation therapy was given during pregnancy. After observation of fertile days – it was decided that the patient be entered into IVF program. In 2014. patient was entered into IVF program. During hormonal stimulation, Fraxiparin 0, 4 ml sc. /24 h was introduced. On 24th of November Punctio folliculi et aspiratio oocita. 29th of November IVF /ET facta est . Result of beta hcg was negative. After unsuccessful ivf, the patient comes in for regular ultrasound check-up as a preparation for the next IVF. In February 2015. on ultrasound : Cystis ovarii l sin. Endometriosis. Hydrosalpinx ovarii l sin. Th: symptomatic. The Patient refused hormonal therapy. Explanation given was that pregnancy would be the best medicine for endometriosis. She continues to come for regular follicular tracking. In June 2015, she reports missed period with severe abdominal pain. Result beta hcg 150, positive , pregnancy occurred spontaneously. After seven days slight bleeding accompanied by severe pain. On ultrasound the endometrium thickness 12,2 mm, gestational sack was not spotted. Immediately hospitalized at GA Clinic NF because of suspicion of EU. Immediately operated on; Laparascopia facta est . Gravid. ml. I + Obs EU. St. post haemorrhagiam intraabdominale causa ignore. St.post transfusio sangv.N II.Trombophillia Sy Leiden; PAI-1 4G/5G . St. post IVF am VII PCOS Sy Hashimoto. After seven days, on ultrasound check-up normal uterine pregnancy was verified. Regular check-ups followed and monthly hospitalizations. Introduced anticoagulation th : Fragmin 5000 ij. Utrogestan 200 , Progesteron depo 250 amp, folic acid. Euthirox , Ferrum . On 24. 07. 2015 Prenatal test, Double test performed: Low risk. Starting from 28th week of gestation, patient was hospitalized until the end of pregnancy. 22nd January, 2016. g. Partus SC. A healthy baby boy was born (3050g).

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E1266 - DINOPROSTONE VAGINAL SLOW RELEASE SYSTEM (PROPESS) IN PATIENTS WITH PREVIOUS CESAREAN SECTION A RETROSPECTIVE REVIEW

Abian N. [1], Ruiz J. [1], Royo B. [1], Gastón B. [1], Rodrigo M. [1], Martinez M. [1], Azcona B. [1], Sanz O. [1], Fernandez A. [1], Echavarren V. [1]
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Introduction

To analyze obstetric and perinatal outcome in patients with previous cesarean section and current single pregnancy undergoing induction of labour with Dinoprostone vaginal slow-release system (PGE2) in a secondary hospital during 2018.

Methods

We performed a case series study based on 801 single gestations deliveries attended in our hospital in 2018. Pregnancies having induction of labour with PGE2 were analyzed. Obstetric and perinatal variables were reviewed and compared between two groups: patients with previous cesarean section (PCS) and patients with no previous cesarean section (NPCS). We used adequate statistic tests, considering a p-value less than 0.05 as statistically significant.

Results

A total of 108 singletons were induced with PGE2 in 2018 (13,5% of the total of deliveries). We identify previous cesarean section in this sample in up to 17,6% of cases (19 patients). We found 65,7% of nulliparous pregnant patients and up to 34,3% of patients had at least one previous vaginal delivery. In this group, 40,5% of cases were multiparous (two or more previous vaginal deliveries). Mean gestational age at induction of labour had no statistically significant differences between PCS and NPCS groups (p: 0,070), and neither did mean maternal age (p: 0,120) and BMI (p: 0,058). Regarding medical indications for labour induction, we observed no statistically significant differences in both groups PCS and NPCS for any of them (in order of frequency): ruptured amniotic membranes (p: 0,151), prolonged pregnancy (p: 0,164), oligoamnios (p: 0,087), intrauterine growth restriction (p: 0,169) and gestational diabetes (p: 0,220).

Considering type of delivery, normal vaginal delivery is identified as statistically significant more frequent in NPCS group as compared to PCS group (p: 0,038). In relation to instrumental delivery using vacuum and forceps, no statistically significant differences were found (p: 0,100 and 0,098, respectively). We observed no differences in the incidence of cesarean section comparing this two groups, PCS and NPCS (p: 0,012). When analyzing neonatal variables comparing PCS and NPCS groups, we detect no statistically significant differences with reference to frequency of meconium amniotic fluid (p: 0,091), arterial ph at birth (0,116) and Apgar test for first and fifth minute of live (p: 0,214 and 0,134, respectively). Up to 10,53% of newborns from PCS mothers required admission in Neonatal Intensive Care Unit (NICU), in opposition to 3,37% of newborns from NPCS mothers; this result represents statistically significant differences (p 0,012).

Conclusion

In the light of this results, it is important to underline that no increased incidence of cesarean section was objectified in PCS group, opposed to NPCS group, after induction with PGE2. On the other hand, normal vaginal delivery appears to be statistically significant more frequent in NPCS, with no differences comparing with PCS in terms of instrumental deliveries. We found significantly more cases of admission in NICU in PCS (3 newborns). In our clinical practice, we use PGE2 in single pregnancies induction of labour even in PCS cases. This mechanism may also be securely used in this group, performing close maternal and fetal clinical follow-up

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E1343 - PLACENTAL ABRUPTION AFTER EXTERNAL CEPHALIC VERSION

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The external cephalic version (ECV) is a set of manoeuvres that seek to convert fetal presentation into cephalic in fetus with different presentation by external manipulation through the maternal abdomen.
In a large percentage of foetuses the breech presentation is equivalent to the performance of a planned caesarean section so ECV increases the chances of vaginal delivery. Therefore it is an effective measure to decreasing the caesarean rate.
The ECV is indicated in all pregnant women who present a fetus in different presentation of the cephalic from the 37th week of pregnancy and do not present any contraindication.

Case
A 38-year-old woman with no medical or surgical history
It was about his first pregnancy. The pregnancy was well tolerated with normal evolution.
In the 38th week of pregnancy, she went to the hospital to perform an external cephalic version due to breech presentation of the fetus.

She was admitted to the delivery room for tocolysis with ritodrine and cardiotocography. Subsequently, ECV manoeuvres were performed in the operating room with ultrasound control. Finally, the external cephalic version was not achieved.

Prior to hospital discharge, a cardiotocography recording was performed for two hours. The record was compatible with fetal well-being.
Suddenly the patient started to bleed vaginally. An ultrasound was performed objectifying a chorioamniotic detachment. The fetal heart rate was normal but on suspicion of a placental abruption an urgent caesarean section was indicated.

During the caesarean, bloody amniotic fluid was seen. With the removal of the placenta, the exit of a large blood clot was also observed.

The newborn cried in the surgical field. The APGAR test at minute of life was 8. The determination of fetal artery and vein pH was 6.95 and 7.02 respectively. He did not need neonatal resuscitation.

The ECV is a safe procedure for the mother and the fetus. Most of the complications that occur are mild like self-limiting vaginal bleeding or transient alteration of the cardiotocographic record. However, in some cases there may be complications that can suppose a risk of loss fetal well-being. In these cases it is necessary to perform an emergency caesarean section. The risk of fetal mortality is very low.

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E1364 - A SINGLE CENTER STUDY ON RIGHT SIDED CONGENITAL DIAPHRAGMATIC HERNIAS IN NEONATES

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Objective
Right-sided congenital diaphragmatic hernia (R-CDH) has not been studied extensively due to its rarity. It remains unclear that the prenatal risk stratification based on the data from left CDH (L-CDH) could be applied to R-CDH. The purpose of this study was to share our experience in the treatment outcome of R-CDH, focusing on the prenatal and postnatal prognostic factors.

Methods
We reviewed the medical records of newborn patients with prenatally diagnosed R-CDH managed at a tertiary center between 2006 and 2019. Subjects were classified into survivors (n=23) and nonsurvivors (n=15). Demographic and clinical characteristics such as size and grades of defect, liver herniation, and prenatal ultrasound-measured lung volume by observed versus expected lung area to head circumference (O/E LHR), which are known as poor prognostic factors in L-CDH, were compared and analyzed.

Results
Of 38 patients, there were 25 males and 13 females with a mean gestational age (GA) of 37 ± 3 weeks, and mean birth weight of 2954 ± 604 g. Of the 38 cases included, 23 (60.5%) survived to discharge. Mortality occurred before (n=8) and after (n=7) surgical repair. Among a total of 30 (78.9%) patients who underwent surgical repair, 15 patients (50.0%) required patch repair. Compared with nonsurvivors, survivors had significantly higher 1 minute' and 5 minutes' Apgar scores. As expected, the rate of use of high frequency ventilator (100.0% vs. 52.2%, p=0.002), surfactant use (60.0% vs. 8.7%, p=0.001), inhaled nitric oxide and extracorporeal membrane oxygenation is greater in the nonsurvivors versus survivors. However, GA and birth weight did not differ between the two groups. The incidence of high grades of diaphragmatic defect was associated with the mortality (OR 10.00, 95% CI 1.392-71.86, p=0.023).

Among the 17 patients in whom O/E LHR was available, the O/E LHR did not differ between the survivors (52.9%) and nonsurvivors (47.1%) (p=0.167). The value of O/E LHR≥45 failed to predict survival to discharge in R-CDH.

Conclusions
Our study suggests that risk stratification of R-CDH should be based on the early clinical features and surgical findings. Further research efforts are required to identify a novel prenatal marker that is reflective of lung hypoplasia of R-CDH.

Obstetrics - Multiple pregnancy

E1046 - MULTIPLE GESTATION IN UTERUS BICORNO WITH SATISFACTORY EVOLUTION OF ONE OF THE GESTATIONS AND ABORTION RETAINED IN CONTRALATERAL GESTATION IN A MATERNITY HOSPITAL IN THE AMAZON REGION CASE REPORT

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Mullerian malformations represent a set of structural abnormalities that may arise from the fusion of these ducts in the midline on failure to connect to the urogenital sinus, or failure to create an appropriate light in the upper portion of the vagina and uterus, by non-reabsorption of cells of the central vagina and the septum between the merged Müllerian ducts. The definitive cause of these anomalies is not clearly elucidated. Gestation in these cases presents a high rate of spontaneous abortion and even infertility.

Objective
To report a case of multiple gestations in bicornic uterus, which evolved with term gestation and spontaneous abortion, and to carry out a review in the literature on the subject?

Methods
It is a clinical case study with a basic descriptive approach with literature review. The study was carried out with a single sample, describing multiple and spontaneous gestation associated with the bicornic uterus in which there was spontaneous gestation with good obstetric evolution.

Results
SROF, 38 years old, 6s2d, G6 PC2PN1 A2, seeks maternity care with ultrasound showing multiple gestations in uterus with bicorno morphology, presenting in the right horn live embryo in gestational sac with gestation of 6s2d and in the contralateral horn evidencing hypotonic, irregular gestational sac, with febris in its interior and bcf absent. Orientation of the pregnant woman regarding the prognosis of the current gestation and the possibility of expectant behavior on the pregnancy of retained abortion. In this way, after 26 days, the pregnant woman evolves with increased vaginal bleeding and observed the output of the gestational sac. Afterwards, a new transvaginal ultrasonography was performed, evidencing gestation in a good evolution of 12s 2d and contralateral bicornar uterus, without ovular remains. A complete abortion is at the moment complete. During gestational period, the mother had no episodes of gestational complications as well as good fetal development. Elective cesarean section performed at 40 weeks in the maternity of the Amazon region, with exit of live fetus, apgar 8/9, with 3,215 g. Performed neonatal care and cesarean section procedure according to technique, as well as puerperal care.

Conclusion
In this case, we describe multiple gestation in a bicornic uterus in which there was spontaneous gestation with good obstetric evolution. From a reproductive point of view, this Mullerian malformation is associated with abortion and infertility. In the clinical case, it revealed a multiparous patient, with no surgical treatment for the abortion, patient presenting himself. In our case, the patient was asymptomatic, both from the reproductive and clinical points of view, and had spontaneous gestation without intercurrences, with a healthy, full term newborn. These findings could reveal a gestation with preterm labor and other obstetric complications that could be attributed to this anatomical anomaly, but here there was a good clinical, obstetric and neonatal outcome.

E1079 - A CASE WITH OVARIAN HETEROTOPIC PREGNANCY TO EXPECT THE UNEXPECTED

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Heterotopic pregnancy, the presence of intrauterine and extrauterine (ectopic) gestation simultaneously, occurs in about 1/30000 pregnancies. Its incidence has increased in recent decades secondary to a relative increase in artificial reproductive procedures. In busy obstetric clinics, it is hard to keep in mind the rare abnormalities. However, heterotopic pregnancy stays as a potential morbid condition if not diagnosed early. Here we present a heterotopic pregnancy case, a 26 years old Gravida 4, Parity 1 case who was at 6w2d of gestation by her last menstrual period was presented with mild pelvic pain and vaginal bleeding. Her vital signs were normal. The patient had mild abdominal tenderness to palpation. She had no active vaginal bleeding. Transvaginal ultrasound showed an intrauterine embryo with crown-rump length (CRL) of 6w4d along with cardiac activity. A moderate amount of free fluid (blood) was also observed. A more careful look revealed a 9.5mm hypoechoic cyst in the left adnexal region consistent with a gestational sac having 2.5mm hyperechoic structure inside, which was suspected to be embryo. Complete blood count showed mild anemia (hemoglobin 10 g/dL). Serum β-hCG level was 7351mIU/mL. Heterotopic pregnancy diagnosis was presumed. Management options were discussed with the patient. The patient was taken to the operating room and diagnostic laparoscopy was performed. A left ovarian ectopic pregnancy was seen with approximately 200mL intraabdominal bleeding. Left ovarian ectopic pregnancy removal was achieved while the ovary was left intact. After the procedure, the patient was then taken to the regular obstetric post-operative floor. She was then discharged from the hospital in stable condition. The result of her pathology reported was consistent with ovarian ectopic pregnancy. The patient was followed up until the 27th gestational week, when she had still an uneventful pregnancy so far, at the time of this presentation. Her medical history was negative for assisted reproductive procedures (ART), pelvic surgeries or endometritis/salpingitis. Some previous reports have described higher spontaneous miscarriage rates in heterotopic pregnancies than intrauterine-only pregnancies (up to 30 %). Our case did not have a first-trimester miscarriage. Ovarian implantation is uncommon even for singleton ectopic pregnancies; it's very rare in heterotopic pregnancies. The presented case had heterotopic ovarian pregnancy. Local methotrexate injections for the management of heterotopic pregnancies have been reported however, in bleeding heterotopic pregnancies with desired live intrauterine embryos, a surgical option may be the most appropriate approach. Here we presented an ovarian heterotopic tubal pregnancy managed with laparoscopic removal on whose pregnancy continued until 30th weeks so far, by the time this presentation was being prepared. Her negative history for previous tubal manipulation, infection or ART was unusual. Therefore, the first ultrasound examination of seemingly low-risk pregnancies should always include purposeful and careful look for ruling out multiple and/or heterotopic pregnancies rather than measuring CRL and confirming fetal cardiac activity alone.

E1103 - BIRTH WEIGHT REFERENCE PERCENTILES BY GESTATIONAL AGE FOR TURKISH TWINS

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Objective
Birth weight of twins are known to be less than those of comparable singletons and twin-specific birth weight percentile curves are recommended for use in clinical practice. Several countries have developed nation-specific birth weight references for twins, however Turkey still lacks such references. The aim of this study was to develop birth weight reference percentiles by gestational age for Turkish twins.

Methods
The birth records of all consecutive pregnancies resulting in twin births between 2009 and 2018 were reviewed. Only Turkish live twin births without birth defects between 24 and 42 weeks of gestation were included.

Results
A total of 2546 twin neonates were included in the analysis and smoothed birth weight percentile curves by gestational age were constructed.

Conclusion
The established birth weight percentiles represent the first birth weight nomogram for contemporary Turkish twins and could be a useful tool to assess growth of twins in clinical and research settings.

E1149 - THORACO OMPHALOPAGUS TWINS A SIMULATOR THAT HELPED TO PERFORM THIS DIFFICULT FETAL EXTRACTION AT CESAREAN DELIVERY

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Conjoined twins are rare, and in the literature their incidence ranges from 1:50,000 to 1:100,000 live births. This anomaly occurs when exist the joining of two identical twins who share one or more organs. As the Spencer classification, Thoracopagus twins are united face to face from the upper thorax to the umbilicus with a common sternum, diaphragm, and upper abdominal wall. Meanwhile, Omphalopagus twins are joined ventrally in the abdomen, often including the lower thorax.
This paper objective is to report a rare case of conjoined twins and to show how the fetal extraction, in the cesarean section, was planned using a simulator.

According to the Spencer classification, the case twins could be classificated as Thoraco-omphalopagus. In the other words, they were joined at the chest and at the abdomen and had one functional heart (IMAGE 1). Because the bad fetus prognosis, the obstetricians debated the better method to decrease surgery risks. When the twins were 35 weeks, the patient was submitted to a cesarean section. Before the surgery, a simulator was made with a pelvis model (Simulaids®) and two dolls bonded with tape. It was used to simulate the twins position seen previously by ultrasound. The objective was to minimize que uterus damage, to reduce maternal morbidity to the possible future pregnancies, who had just one child and aim to have more. During the procedure, the surgeons repeated the simulated movements they had just trained with the simulator model, and they could successfully perform the difficult fetal extraction with just a normal transversal uterus incision and with decreased surgical time.

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E1168 - NATURAL HISTORY OF MONOCHORIONIC DIAMNIOTIC TWIN PREGNANCIES WITH AND WITHOUT TWIN TWIN TRANSFUSION SYNDROME

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Objective
To evaluate the evolution of monochorionic-diamniotic twin pregnancies with and without the twin-twin transfusion syndrome (TTTS), followed up in an expectant way. **Methods**: retrospective study in which the pregnancies with and without TTTS and with mild (Quintero's stage I) and severe (Quintero's stages II, III, IV and V) disease manifestations were compared according to extreme preterm delivery, neurological impairment and the twins' nursery discharge. The extreme preterm twins who had had TTTS, or not, were compared whether they had or not neurological impairment. The $\chi 2$ or Fisher's exact test were used.

Results
Among 149 monochorionic-diamniotic twin pregnancies, 15 presented TTTS, 11 (11/15 - 73.3%) in the severe form and 4 (4/15 - 26.7%) at stage I. The extreme preterm delivery was more frequent ($p<0.001$) in the cases with the disease (11/15 - 73.3%) than in the cases without it (25/134 - 18.7%), and more common ($p=0.033$) in severe (10/11 - 91.1%) than in mild cases (1/4 - 25.0%). Neurological impairment in at least one twin was more frequent in cases with (5/8 - 62.5%) than in cases without (9/134 - 6.7%) the disease ($p<0.001$). Nursery discharge of at least one twin was more common ($p<0.001$) in cases without (132/134 - 98.5%) than in cases with the disease (8/15 - 53.0%). Neurological impairment in at least one of the twins was more frequent ($p=0.04$) in the severe (5/5 - 100%) than in the mild (1/4 - 25%) form of the disease. Nursery discharge of both twins was more common ($p=0.004$) at stage I (4/4 - 100%), than in the severe form of the disease (1/11 - 9.0%). Among the 47 extreme preterm twins, the neurological impairment was more frequent ($p=0.001$) among the ones who had (6/6 - 100%), than among those who did not have TTTS (11/41 - 26.8%).

Conclusion
Cases with twin-twin transfusion syndrome, followed up in an expectant way have bad perinatal prognosis, with high neonatal mortality and high rates of neurological arrest among the survivors.

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E1236 - DELAYED INTERVAL DELIVERY IN TWIN PREGNANCY REPORT OF CLINICAL CASES

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Introduction
The twin pregnancy is associated with a higher probability of premature birth, 16% and 4% will have a delivery respective before 34 and 30 weeks, with a high risk of morbidity and mortality. In those pregnancies that initiate extreme premature labor, it is possible to try to prolong the gestation of the second twin, improving the survival and decreasing morbidity. This situation is defined as delayed delivery or asynchronous delivery of the second twin, first described by Carson in 1980. Our objective is to disclose four cases of delayed-interval delivery in twin pregnancy to show that when facing the birth of an extremely premature twin is possible to delay the birth of the second or third fetus, using active management with cerclage and antibiotics, improving the neonatal prognosis.

Methods
A retrospective study was carried out analyzing the cases of extreme premature delivery of the first twin and deferred delivery of the second, between 2014 and 2017, at the Clinical Hospital of the University of Chile, Hospital San José and Clínica Indisa. The variables analyzed were: chorionicity, number of fetuses, maternal age, type of conception, gestational age at the time of delivery of the first twin, latency at delivery of the second twin, and management strategies.

Results
There were 4 cases of extreme premature labor and delayed delivery, 3 of them in double twin pregnancies and one triple, there were no cases in monochorionics. Mean maternal age was 33 years, and half of the cases were patients with in vitro fertilization. The mean gestational age at first delivery was 18 + 5 weeks, and the birth interval was 23 to 153 days (median 83.5 days). The management strategy was McDonald cerclage within the first hour of delivery of the first fetus once the cord was ligated and placenta in situ and broad spectrum antibiotics. The birth of the second / third fetus was in 100% of the cases by caesarean section whereas the first one was vaginal. The overall survival rate was 80%, being 100% in the cases of double pregnancies. In the case of triple pregnancy, one of the newborns die on the 27th day. 100% of the newborns that survive are neurologically healthy and no maternal morbidity associated with the management was recorded.

Conclusion
In multiple pregnancies with extremely premature birth of a twin, delaying the birth of the second is a valid and safe option to improve the neonatal prognosis and is not associated with higher maternal morbidity.

E1296 - RESULTS OF EMERGENCY CERVICAL CERCLAGE AND TOTAL CERVIX OCCLUSION IN TWIN PREGNANCIES

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Objective
Emergency cerclage was performed when the bulging fetal membranes reached or overcame the external os and when total cervical dilation was present. In this retrospective study apart from the results were evaluated as well as the effects of emergency cerclage in combination with total cervix occlusion.

Methods
In order to evaluate the current management of pregnancies in risk for abortion or very preterm birth a retrospective analysis was conducted in Clinicum Aschaffenburg, Teaching Hospital of University Würzburg of Germany, between January 1995 and July 2016. To all the study patients, 105 in total, with absence of infection or labor and uncomplicated pregnancy, was performed an emergency cerclage according to Shirodkar technique and total cervical occlusion as described by Szendi.

Results
The mean age of the pregnant study women was 29.3 ±0.5 years old and the mean gestational age at the time of the emergency cerclage was 14.9 weeks (range 12-18).The risk factors in these pregnancies are as following: mean maternal age >35 years: 37(35.23%), smoking: 45 (42.85%), history of cone biopsy: 4 (3.8%), history of Mullerian anomaly: 2(1.8%), previous miscarriages:24 (22.85%).101 out of 105 participants delivered after the 27th week of gestation (96.1%) with two study women having an abortion at the 22th week of gestation four days after the completion of the procedure and the other two women aborted at the 23th week ten days after the performance of cerclage. From the 101 pregnant women 5 (4.7 %) (delivered at term (greater than 37 week) and 85 (80.9%) between the 32nd and 34th week of gestation whereas 11(10.4%) between 29 and 31 pregnancy week. For the improvement of cerclage efficiency, in follow up treatments were included bed rest, intravenous tocolysis, antibiotics, progesterone per os administration simultaneously intramuscular injection per week and in some cases the Trendelenburg position.

Conclusion
Emergency cerclage may prolong the twin pregnancy but it results in a high rate of preterm deliveries.

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E1310 - MONOAMNIOTIC MONOCYTIC GEMELLAR PREGNANCY IN PREGNANT WOMEN ATTENDING AN OUTPATIENT CLINIC IN THE WESTERN AMAZON CASE REPORT

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Introduction

Gemelarity occurs in approximately 1% of all pregnancies and is linked to increased perinatal morbidity and mortality when compared to single gestation. Monocorionicity has been shown to be the most important isolated risk factor in twin pregnancies, this risk increases when monoamniotic, monoamyotic monocorionic twin pregnancies are associated with a higher risk of fetal malformation, prematurity, fetus-fetal transfusion syndrome and Intra-utero fetal death, by the folding of umbilical cords and interruption of flow in these. The diagnosis of Corionicity is performed by early ultrasonography in the first trimester.

Objective

To report a case of monochorionic monoamniotic gestation and its possible complications, as well as to review literature of greater relevance on the theme

Methods

The present work uses the reference of bibliographic research in order to search for information and report the rare case of a monoamniotic monocorionic twin pregnancy and its complications in a pregnant woman attended at an outpatient clinic in the Western Amazon.

Case

LLS,25 years old, twin gestation, monoamniotic monocorionics, 26s2d, G3PN1A1, attended the consultation in high-risk prenatal care on day 11/12/18, presenting chronic arterial hypertension, in use of Methyldopa 750mg a day and AAS 100 mg/day. Presented VDRL ½ and made Treatment with Bezetacil 2.4 million weekly in three doses. On day 28/02/19 with 37S4D he presented colic pain and was referred to the referral hospital for high-risk pregnancy for evaluation. The physical examination showed: PA:150x100mmHg, uterine height: 40cm; uterine dynamics: absent; fetal movements: both present; fetal heartbeat: fetus1:140 bpm and fetus 2:150 BPM. Hospitalization was performed and cesarean delivery was carried out, with weight fetus1:2400g and fetus2:2550g APGAR fetus1:8/9 and fetus2:8/9 not occurring intercurrences both newborns and mother.

Conclusion

Prenatal follow-up of multiple pregnancies should be oriented to enable early diagnosis of the alterations, being the first trimester ultrasound important for the determination of placentation, and the establishment of the prognosis and Conduct of these pregnancies. As well as perform routine exams and treat any complications.

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E1331 - AUDIT ON ANTENATAL MANAGEMENT OF MULTIPLE PREGNANCIES IN A DISTRICT GENERAL HOSPITAL IN THE UK

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Introduction
Multiple pregnancy accounts for approximately 3% of live births in the UK with a significant rise in incidence of multiple births over the last 30 years. Multiple pregnancy is associated with higher risk of adverse outcomes for both mothers and babies. In view of the recognised increased risks of complications, NICE introduced a multiple pregnancy guideline in 2011 with care recommendations to guide the antenatal assessment and management of multiple pregnancies.

Objective
1) To assess the antenatal management of multiple pregnancies in Great Western Hospital using specific criteria from NICE guidelines as standards of care.
2) To assess maternal and foetal complications in multiple pregnancies delivered at GWH.

Methods
The patient sample comprised all women with multiple pregnancies who booked at GWH and had most or all of their antenatal care at GWH over a twelve-month period from April 2017 to March 2018. Data was obtained retrospectively by reviewing maternal health records as well as hospital electronic records.

Results
Seventy patients were identified and the prevalence of MCDA, DCDA and triplet pregnancies was 17.1%, 81.4%, and 1.4%, respectively. There was an 88% uptake of Down's Syndrome screening. NICE recommends different scan frequencies for multiple pregnancies and the adherence was over 98% for both MCDA and DCDA pregnancies. Elective delivery at recommended gestations was offered in 100% of uncomplicated multiple pregnancies. NICE advises a targeted use of antenatal corticosteroids which was achieved in only 62% of patients. The prevalence of raised BMI (≥25) in this patient sample was 53%. Maternal complications included preterm labour, hypertensive disorders, postpartum haemorrhage and gestational diabetes, and were 23%, 7%, 54% and 7% respectively. Overall, 41% of patients delivered by vaginal delivery, 32% delivered by elective caesarean section and the remaining 27% required an emergency caesarean section.

The prevalence of intrauterine growth restriction in this population was 19%. There was one case of stillbirth in MCDA pregnancy following a severe IUGR early in pregnancy, with the second twin suffering a neonatal death shortly after delivery.

Conclusion
This audit demonstrated compliance with majority of NICE recommendations in the antenatal management of multiple pregnancies. This audit showed that prophylactic (untargeted) course of steroids was given in 38% of multiple pregnancies, and hence represents an area for improvement of care in the future.

E1333 - HYPERREACTIO LUTEINALIS IN TWIN PREGNANCY WITH UNEXPECTED ADVERSE PREGNANCY OUTCOME

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Case report describes pregnancy management and outcome of bichorionic biamniotic (BCBA) twin pregnancy with Hyperreactio luteinalis (HL) and accompanying severe hyperandrogenemia in women carrying female fetuses. HL with hyperandrogenism is rare condition, which may cause virilization of the mother and female fetus. According to limited data from current literature adverse pregnancy outcomes in these women are observed in 26% of cases. They are usually associated with preeclampsia, gestational diabetes and preterm delivery. The risk to the fetus depends on the timing and severity of the excess maternal androgen production.

35-year-old primigravida with twin pregnancy following frozen embryo transfer in natural cycle presented in 16th week of pregnancy with bilateral enlarged ovarian masses

The hormone panel showed extremely elevated serum total testosterone (TT) 27.3 nmol/L, free testosterone (FT) 62.2 pmol/L, androstenedione (A) > 35 nmol/L levels. MRI of abdomen and pelvis ruled out androgen secreting tumor. The HL was diagnosed. Feto-placental unit and hormones were monitored every 3 weeks. Hyperandrogenemia was progressive and in 33rd week discordant twin growth was observed accompanied with hypertension. Respiratory distress syndrome prophylaxis was preformed and methyldopa was introduced. In 34th week absent umbilical artery end-diastolic flow was detected in one twin. Within 24 hours affected twin heartbeats were negative after two reassuring CTGs. Cesarean section was immediately performed. No signs of virilization of twins were observed. Umbilical cord serum androgen concentrations have been measured in twins. Stillborn twin had significantly higher androgen levels compared to liveborn twin (TT 5.5 vs. 2.2 nmol/L, fT 131.5 vs. 51.0 pmol/L, A 33.1 vs. 8.5 nmol/L). Pathological report was unremarkable. The mother's androgen panel on the third postpartal day was still extreme (TT 39.4 nmol/L, fT 92.5 pmol/L, A 250 nmol/L). A control hormonal panel two weeks later normalized. Hyperandrogenism in pregnancy complicated with fetal brain-sparing effect could lead to accelerated exhaustion of fetal compensatory mechanisms. Therefore, in such situation prompt delivery may be a reasonable option.

E1380 - HETEROTOPIC – BILATERAL TUBAL ECTOPIC PREGNANCY AFTER TRANSFER OF 3 EMBRYOS A DIAGNOSIS NOT TO MISS

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Case

Simultaneous occurrence of intrauterine and ectopic pregnancy, defined as heterotopic pregnancy, is rare; however its incidence increases with the use of the several methods and techniques of assisted reproduction and IVF. Along with the latter, increases the occurrence of dangerous and sometimes life-threatening medical complications, which demand a high degree of clinical suspicion in order to be timely diagnosed and properly treated. We present an extremely rare case of simultaneous intrauterine and bilateral ectopic tubal pregnancy, in which the delay in diagnosis lead to a life-threatening rupture and an emergent laparotomy, several days after a first intrauterine intervention had been performed elsewhere. The patient, 38 years old, without any previous medical history but subfertility, was transferred with an ambulance to our Obstetric Emergency department, hemodynamically unstable, with a clinical presentation of acute abdomen and hemoperitoneum. A week ago, she had been submitted to a suction dilation and curettage (D&C) procedure under anesthesia, in a private centre of our city, due to missed miscarriage of a 7 weeks intrauterine pregnancy, which had been achieved by IVF. A transfer of 3 embryos was reported. Since βHCG was high (approx 20000), our initial clinical diagnosis was that of a heterotopic pregnancy, with rupture of supposed tubal gestational sac, which obviously had not been noticed previously by the doctor who performed the D&C. An ultrasound scan, not thoroughly performed on the way to the operating room, indicated as most possible site of the ectopic sac the ampullary portion of the right tube. Patient's instability and the need for urgent intervention to save her life, made us perform an open laparotomy instead of laparoscopy which in our restricted curve is more time-consuming. Indeed, a rupture of a right ampullary ectopic gestational sac was identified and right salpingectomy was performed. After controlling hemorrhage and washing away the blood and clots from peritoneal cavity, surprisingly a second intact sac in the ampullary of the contralateral tube was identified and then excised. Patient was transfused intra- and post- operatively with 4 units of RBC and transferred to the ICU, from which she was discharged one day after in a very good condition.

In conclusion, the possibility of heterotopic pregnancy, or at its extreme, the co-existence of intrauterine and bilateral tubal triplet pregnancy, even so rare, must be kept in mind in cases where a sonographically confirmed intrauterine pregnancy result in abortion, especially if an IVF cycle with transfer of more than one embryo has been preceded. A delay in proper diagnosis may put a woman's life at risk, as it can result in ineffective treatment and multiple surgical interventions, which may have to be performed on an emergency basis.

E1452 - ILEAL ATRESIA AFTER FETOSCOPIC LASER PHOTOCOAGULATION FOR TWIN TO TWIN TRANSFUSION SYNDROME

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Twin to twin transfusion syndrome (TTTS) is an important cause of perinatal morbidity and mortality that seen in 10% of monochorionic pregnancies. Fetoscopic laser photocoagulation is a treatment modality used in these cases. In recent years, cases with central nervous system, extremity and intestinal system damage such as necrotizing enterocolitis and intestinal atresia have been reported following laser photocoagulation. In this case report, we report a newborn baby with ileal atresia which developed after laser photocoagulation therapy.

A male newborn was born at 33 weeks monochorionic diamniotic gestation via cesarean to a 32-year-old woman. His birthweight was 2250 g and Apgar scores were 8 and 9 at 1 and 5 minutes, respectively. He admitted to our clinic for tachypnea and abdominal distention. Mother's medical history revealed that laser photocoagulation was performed for Quintero stage 1 TTTS at 18 weeks of gestation. Antenatal magnetic resonance imaging (MRI) showed diffuse cystic leukoencephalomalacia in the left cerebral hemispheres and intraabdominal free fluid. Abdominal distention increased at 24th hour and free air was shown under the diaphragm on direct X-ray. Laparotomy revealed intestinal atresia and perforation at a distance of 30 cm to the cecum. Ileum resection and primary anastomosis was performed. Atretic intestinal segment was seen in the pathology. Cranial MRI showed extensive volume loss in the left cerebral hemisphere and areas of periventricular cystic encephalomalacia. During follow-up, no growth was observed in head circumference. The patient was fed with total enteral breast milk without any problem and was discharged at the 37th week of corrected age.

The aim of this case report is to emphasize that intestinal complications should be kept in mind in the presence of isolated intra-abdominal free fluid in the utero after laser photocoagulation. In monochorionic twins, mesenteric ischemia due to hypoperfusion and hyperviscosity due to vascular anastomosis or thromboembolism after laser photocogulation may play a role in small bowel atresia.

Obstetrics - Fetal interventions

E1094 - ACUPUNCTURE AS AN ALTERNATIVE TECHNIQUE IN ESTABLISHING UTERINE CONTRACTIONS IN CONTRACTION STRESS TEST A RANDOMIZED CONTROLLED TRIAL

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Objective
This study aims to compare contractions produced by acupuncture technique from that of the conventional technique using oxytocin to determine if acupuncture can be an alternative method in establishing uterine contractions in CST.

Methods
This is a randomized controlled trial employed in fifty-four (54) term high risk pregnancies who were randomized into two groups: 27 patients in the acupuncture group and 27 patients in the oxytocin (control group). Acupuncture needles were applied bilaterally at two loci, Sanyinjiao (spleen 6) and Hegu (Large Intestine 4), to produce the desirable contractions that are interpretable for a CST.

Results
Subjects who received acupuncture had greater intensity (p=0.551) and significant longer duration (p=0.001) of uterine contractions than the oxytocin group. However, there was a significant shorter interval of uterine contractions after oxytocin treatment (p=0.013) than acupuncture. Furthermore, subjects who were in the acupuncture group obtained initial uterine contractions (5.29 versus 10.62 minutes; p=0.000) and achieved desirable uterine contractions (14 versus 30.89 minutes; p=0.001) faster than oxytocin. There is shorter waiting time for disappearance of the contractions in the acupuncture group than in oxytocin group (36.70 versus 57.74; p=0.000). One subject in the acupuncture group experienced minor bleeding at the needling site and 2 subjects complained of pain from needling. During the conduct of the study, it revealed that subjects in the acupuncture group spent less than in the oxytocin group due to use of lesser materials than that of the conventional method.

Conclusion
Application of acupuncture in Spleen 6 (Sanyinjiao SP6) and Large Intestine 4 (Hegu LI4) is effective in initiating and inducing uterine contractions. Acupuncture technique when compared to the conventional method using oxytocin, produces stronger and longer contractions. Furthermore, this study showed that contraction stress test can be completed in a shorter time thru acupuncture technique as it shows shorter mean time to achieve initial and adequate contractions thru this technique. Contractions also disappear in a much shorter time in acupuncture technique than in oxytocin group hence ideal for outpatient setting. The adverse effects seen in this study were mild and transient. Cost to perform a contraction stress test using the acupuncture technique is significantly lower than that of the conventional method using oxytocin. Acupuncture should be considered as an alternative technique for contraction stress test as this is, simple, practical, cheap, and safe for the women and her infants.

E1218 - CANCER OF UNKNOWN PRIMARY SITE DIAGNOSED IN PREGNANCY

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Cancer of unknown primary (CUP) is diagnosed in patients who have metastatic cancer, but have no anatomic primary site identified. Adenocarcinomas of unknown primary site comprise approximately 70 percent of CUPs and the most frequently identified sites are lung, pancreas, hepatobiliary tree, and kidney, together accounting for approximately two-thirds of cases. Our case is a 32 years old woman who went to emergencies due to hematemesis in the second trimester of pregnancy. The woman had two previous at term vaginal deliveries, and was in the 29th week of gestation when the hematemesis occurred. During the exploration an abdominal periumbilical mass was discovered. A CT was performed and a 9x7cm nodule was described, other than that a thickening of the omentum and a thickening of the stomach wall was described.

The nodule was biopsied, and a seal ring cells adenocarcinoma was diagnosed, being the primary tumor in the stomach. Due te the gestational weeks and de diagnosis of a metastatic disease the case was presented in a multidisciplinar committee and the decision was to continue with the pregnancy after explaining the diagnosis and prognosis to the patient. At 37+2 weeks of gestation induction of labour was scheduled, because of a new episode of hematemesis. PGE2 and Oxitocine was used to induce labour, and an eutocic birth was possible. Ten days after delivery a chemotherapy treatment began. During pregnancy different situations and pathologies can occur being cancer one of those. A rapid diagnosis and a multidisciplinar work group is the key to try to give the best possible solutions to these situations. The moment where the neoplasia is diagnosed is crucial also to determine whether it is better to continue with the pregnancy or to stop it in order to give to the pregnant women the right treatment.

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E1319 - COMPARE THE EFFECT OF ADMINISTRATION OF SERUM 1 3& 2 3 RINGER LACTATE & NORMAL SALINE ON THE DURATION OF LABOR THE RATE OF CESAREAN SECTION SERUM BILIRUBIN& GLUCOSE LEVELS

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Objective
Undoubtedly, due to the presence of limitations in the active phase of labor (including pain), the need for maternal venipuncture is felt in this phase. Of course Many studies have proven the need for maternal hydration in this phase; Venous hydration is one of the effective factors during labor, However, attention has not been paid to the type of fluid received and the effects of these interventions on the recipient's embryo. The point that is important in this regard is the effect of this intervention on neonatal hypoglycemia and hyperbilirubinemia, Therefore, with regard to the above mentioned cases, we decided to compare the effect of administration of serum 3/1 and 2/3, ringer lactate and normal saline on the duration of labor; the rate of cesarean section; serum bilirubin and glucose levels; and PH of umbilical cord blood In nulliparous women undergoing childbirth induction.

Methods
This study was performed as a clinical trial study on women referred to the maternity ward of Rasoul Hospital in Tehran, Akbar Abadi Hospital in Tehran, which had criteria for entering the study.
In this study, the same number of G1 and bishop score 4 pregnant women who had indications of termination of pregnancy were included ;In the first group, normal saline was injected during labor and the second group was serum 3/1/3/2 and the third group was ringer lactate 125 cc / hr for hydration.
In this study, after data collection, the information entered into the software SPSS; At first, the data were normalized using the Kolmogorov-Smirnov test.Then, in parametric mode, Chi-square, t-test, paired t-test and ANOVA were used for data analysis and in Mann-Whitney, McNemar, Kruskal-Wallis and Wilcoxon tests in parametric bread condition.

Results
Out of the 350 patients who ultimately remained at the end of the study in this clinical trial
Data after normalization and using the Kolmogorov-Smirnov test.Then, in parametric mode, Chi-square, t-test, paired t-test and ANOVA were used for data analysis and in Mann-Whitney, McNemar, Kruskal-Wallis and Wilcoxon tests in parametric bread condition.

Conclusion
Ultimately, the results of this clinical trial differed significantly from other similar studies that the outcome of this trial could make it easier to make clinical decisions.

Obstetrics - Fetal MRI

E1285 - EVALUATION OF FETAL URETEROCELE A CASE REPORT

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Ureteroceles are cystic dilatations of intravesical submucosal ureter. Most cases are associated with complete ureteral and renal duplication and are often associated with ureterohydronephrosis. The incidence was reported to be 1/500.

We report a case of fetal ureterocele diagnosed by prenatal ultrasonography. 32-year-old G1 P0, 22 weeks 6 days dicorionic-diamniotic pregnancy was referred to us by the patient due to pelviectasis. The patient's ultrasonography revealed bilateral pelviectasis, right ureterocele, and bladder distension in the right inferior fetus. Her gender was female. In the foreground, right fetal ureterocele was suspected. The upper left fetus was normal. Fetal MRI was performed for further evaluation. MRI revealed bladder outlet obstruction in the right inferior fetus and reported as right ureterocele.(Figure 1)(Figure 2) She was consulted with pediatric urology for the diagnosis of ureterocele. The patient was followed up with a multidisciplinary approach and the patient was delivered by cesarean section 36 weeks and 4 days old according to the last menstrual period. She was operated by pediatric surgery after delivery. Infant and mother were excised.

It was described by Leshnew in 1921 as a dilatation of intravesical submucosal ureter. It was classified into two groups as intravesical and ectopic by the American pediatric association. In the etiopathology, the early release of the Chwalla membrane during the embryogenesis of the urogenital sinus is accused. In the development of ureteral access, ureterocele formation with orifice not completely punctured is explained.

Duplication is accompanied by 80% of ureteroceles and 60% of them are ectopic. Intravesical ureterocele are more common in cases without duplication. In the prenatal period, megasistis, pelviectasis, hydronephrosis and oligohydramnios may be used. In postanatal period, these cases is present with cystitis and pyelonephritis. Although it is usually found incidentally, its treatment can be done in intrauterine or postnatal period. Laser incision and decompression, balloon catheterization and ureterocele cutting can be performed in appropriate cases in intrauterine period. In postnatal period, endoscopic approach, bladder reconstruction and in rare cases conservative treatment can be applied.

Prenatal diagnosis of ureterocele is important for pyelonephritis following pregnancy follow-up and postnatal follow-up. In cases of severe oligohydramnios and megasistis, termination options may be offered in the early stage and intrauterine treatments should be applied on the viability limit. In mild and moderate cases should be followed with pediatric urology, neonatology and a common approach should be followed in terms of postnatal treatment.

E1413 - CESAREAN SCAR PREGNANCY THE TREATS OF THE FUTURE THE DIAGNOSIS TREATMENT AND FOLLOW UP OF. CASE REPORTS

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Cesarean scar pregnancy (CSP) is a rare condition that occurs when the pregnancy implants in a Cesarean scar. Implantation of a pregnancy within a Caesarean fibrous tissue scar is considered to be the rarest form of ectopic pregnancy and a life-threatening condition. The incidence of CSP has been estimated to range from 1/1800–1/2500 of all Cesarean delivery (CD) performed. The diagnosis and treatment of CSP is challenging. An early diagnosis and a proper management are fundamental to prevent maternal complications. The trend toward an increasing rate of CD is reported worldwide. A previous CD increases the risk for a pathologically adherent placenta (accreta, increta, and percreta) and the magnitude of risk increases with each additional CD. Similar risks were reported for CSP. A particular complication of a pregnancy after CD is the implantation of the gestational sac in the hysterotomy scar, known as a "cesarean scar pregnancy" (CSP). The diagnosis is often difficult, and a false-negative diagnosis may result in major complications, including a hysterectomy. The diagnosis is based on finding a gestational sac at the site of the previous CD in the presence of an empty uterine cavity and cervix, as well as a thin myometrium adjacent to the bladder. Different diagnostic, radiological imaging methods, and management options have been proposed. The optimal management remains to be determined. If the patient presents with a uterine rupture or major bleeding, surgery is unavoidable. Management of diagnosed but stable patients represents a challenge. The follow-up of the patients is described. The objective of this paper was to evaluate the diagnostic method, treatments, and long-term follow-up of CSP. In this article, we describe the intramuscularly use of methotrexate (MTX) as a simple and effective office-based treatment in one patient, and second line chemotherapy with Actinomycin D, Vepesid, Methotrexate and Leucovorin (EMA/CO protocol) in other patients with CSP where MTX therapy give no results. To determinate the diagnosis, we used primarily ultrasound, but in one patient we also did magnetic resonance imaging (MRI). Patients were regularly followed up to negative results. After the treatment was completed by a proven therapy, one of the patients successfully gave birth twice by vaginal delivery; first time after 12 months, and second time after 24 months after therapy.

Neonatology - Neonatal sepsis

E1071 - DIAGNOSTIC VALUE OF SERUM AMYLOID A IN EARLY ONSET NEONATAL SEPSIS

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Objective
Early-onset sepsis (EOS) maintains one of the most important reasons for morbidity and mortality in the neonatal period. To reduce this, early diagnosis and early treatment are critical. The lack of a precise and quick marker to distinguish sepsis from non-infectious diseases is an important challenge. In this study, it was aimed to determine the cut-off value for SAA in predicting early-onset neonatal sepsis with high specificity and sensitivity.

Methods
This prospective study was carried out in a neonatal intensive care unit of a tertiary hospital. Term and preterm newborns hospitalized between the years 2014 and 2017 for suspected early-onset neonatal sepsis were included in the study. White blood cell count (WBC), platelet count (PLT), C- reactive protein (CRP), procalcitonin (PCT), and serum amyloid A (SAA), values studied at admission and at the 24th and 48th hours of admission, were recorded. The results of overall blood cultures taken in the first 72 hours were evaluated.

Results
There were a total of 519 newborns were included in the study; 67 in proven sepsis group, 195 in clinical sepsis group and 257 in the control group. Birth weight of the study population ranged between 590 g and 4760 g and gestational age was 24-41 weeks. No difference was determined between the demographic characteristics of the newborns in each of the three groups. The three groups were not different in terms of CRP and PCT values at admission. However, SAA value at admission was significantly higher in the cases diagnosed with sepsis as compared to the control group.

Conclusion
SAA is a reliable diagnostic marker for EOS and has higher sensitivity at symptom onset or in the first hours after birth as compared to CRP and PCT.

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E1184 - ACCURACY OF CEREBROSPINAL FLUID WHITE BLOOD CELL COUNT GLUCOSE AND PROTEIN IN RAPID DIAGNOSIS OF MENINGITIS IN NEONATES AND YOUNG INFANTS LESS THAN 90 DAYS OLD

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Objective
Rapid diagnostic tests (RDTs) on cerebrospinal fluid (CSF) - white blood cell count (WBCC), glucose, and protein - are widely utilized to diagnose neonatal meningitis. No systematic review and meta-analysis (SRMA) on the diagnostic accuracy of these RDTs is published.

Methods
We performed an SRMA on studies (January 1, 1950- December 31, 2016) that assessed the accuracy of CSF WBCC, glucose and/or protein (index tests) in diagnosing meningitis among neonates and infants aged <90 days. Meningitis was defined as positive reference standard test [CSF culture or gram stain or polymerase chain reaction (PCR)]. We followed standard Cochrane Handbook methodology. We used Stata-14 for analysis. We included all study designs, where the authors had either published data showing cross-classification of index test outcome and disease status, or provided these data on request. We excluded studies on well-looking infants subjected to CSF examination; which had reference standard or index tests other than those specified; published in non-English languages and conference abstracts. We pooled studies for sensitivity, specificity, likelihood ratios (LR) and diagnostic odds ratios (DOR) only if their threshold values were within pre-specified ranges: 19-25/mm3 in term and 25-29/mm3 in preterm neonates, 30-40 mg/dl, and 120-170 mg/dl for term and 150-170 mg/dl in preterm neonates for WBCC, glucose and protein respectively.

Results
From 13,211 titles and abstracts, after excluding duplicates and irrelevant studies, we selected 1023 full-text articles for review; further excluded 1003 based on full-text and included 20 studies for meta-analysis [WBCC: n=29,906 (18 studies); glucose: n=8,352 for glucose (10 studies); and protein: n=8,538 (11 studies)]. Area under Hierarchical Summary Receiver Operator Characteristic (HSROC) curves of CSF WBCC, glucose and protein were 0-89 [95% confidence interval (CI): 0-86, 0-91], 0-68 (95% CI: 0.64, 0.72), and 0-71 (95% CI: 0.67, 0.75) respectively. The pooled sensitivity of WBCC (n=9,191, 8 studies), glucose (n=1,370, 8 studies) and protein (n=8,419, 8 studies) was 77% (95% CI: 69%, 84%), 62% (95% CI: 43%, 78%), and 62% (95% CI: 50%, 73%) respectively. The pooled specificity was 77% (95% CI: 50%, 92%), 73% (95% CI: 38%, 92%) and 92% (95% CI: 79%, 97%) respectively. The pooled LR+ were 3.3 (95% CI: 1.4, 8.1), 2.3 (95% CI: 0.8, 6.9) and 7.8 (95% CI: 2.8, 21.7) respectively. The pooled LR- were: 0.30 (95% CI: 0.22, 0.41), 0.52 (95% CI: 0.28, 0.96) and 0.41 (95% CI: 0.30, 0.56). The pooled DOR were 11 (95% CI: 4, 32), 4 (95% CI: 1, 23) and 19 (95% CI: 6, 62) respectively. On meta-regression, study design, year of publication, diagnostic threshold and reference standard used were not statistically significant.

Conclusion

Overall, CSF WBCC had the best ability to diagnose meningitis in neonates and young infants, followed by protein and glucose. On pooling studies with threshold values within a pre-specified range of commonly used cut-off values, the pooled estimates of sensitivity, specificity, LRs and DOR were sub-optimal.

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PROSPERO registration number: CRD42017060045.

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E1337 - ADVANTAGES OF THE CAESAREAN SECTION IN THE SPINAL ANAESTHESIA

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Introduction
Caesarean section is surgical (accoucheur)operation in which the baby is born through the incision of the abdominal wall and uterus. It may be recommended for almost any obstretic complication, implying a threat to mother or baby.

Anaesthesiology is the branch of medicine concerned with anaesthesia and anaesthetics. It is the medical specialty concerned with the total perioperative care of patients before, during and after the surgery. It encompasses anaesthesia, intensive care medicine, critical emergency medicine and pain medicine. Anaesthesia for the Caesarean section can be general and regional (spinal, epidural, and combined spinal-epidural).

General-endotracheally anaesthesia was the only possible anaesthetical way of birthing center during a long period of time. In the last century it started to stand up for the other regional anaesthetical techniqes. Regional anaesthesia made a great progress in highly developed countries. From all regional techniques for the Caeserean section, the spinal is used quite often. The advantage of regional anaesthesia over the general is that the numerous complications are very rare, and that the mother can see her baby right away after bits birth.

Objective
-to determine the percentage of Caesarean section, compared to the region
-to determine the frequency of the Caesarean section in the spinal anaesthesia inside our hospital
-to determine the difference in Apgar score between the babies born in the spinal or in the general anaesthesia

Methods
During the period between the 1.1.2016-31.1.2019 retrospectively have been taken some dates from neonatal protocols. 2317 babies have been born.

Results
776 (33.49%) Caesarean sections have been performed. Therof the 652 (84.03%) Caesarean section were performed in the spinal and 124 (15.97%) in the general anaesthesiology. Apgar score 9/ 10 had 296 (38.14%) from 776 newborns. In the general anaesthesia Apgar score 9/10 had 21 (16.93%) newborn.

Conclusio
The advantages/benefits of the regional anaesthesia over the general are related to the woman in labor and the newborns.
When we talk about the woman in labor those benefits are:
- -reduced danger from aspiration of gizzard content
- Mother can see her baby right away and they can realize skin on skin contact\

- Truancy of unpleasant process of extubation of the woman and awakening from the general anaesthesia followed by abdominal pains
- Early rousing and preventing thrombo-embolism postoperative complications
- Longer absence of pain and reduced need for analgesics in postoperative rehabilitation process
- Taking food and liquid per os after a few hours after the operation

Babies born in the spinal anaesthesia had higher Apgar score value than those babies who are born using the general anaesthesia. The percentage of the Caesarean section using the spinal anaesthesia inside our hospital is on the higher level than in some other cities in our country
and it follows the world trends

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1425 - DISTRIBUTION OF VIRAL LOWER RESPIRATORY TRACT INFECTIONS IN BABIES BORN AT HIGH ALTITUDE BETWEEN OCTOBER 2017 AND JULY 2018

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Objective
Respiratory syncytial virus (RSV) is the most common cause of late-onset viral pneumonia in neonates. Chronic pulmonary disease, congenital heart disease and prematurity are important risk factors for RSV infection. Our country is located at above 2000 meter to sea level. The present study seeks to determine the viral pathogens responsible for lower respiratory tract infections in neonates, and investigates the seasonal distribution of causative agents, particularly RSV, in neonates born at high altitudes.

Methods
The presence of viral pathogens in nasal swabs obtained from 28 patients who were hospitalized with community-acquired lower respiratory tract infections between October 1, 2017 and June 31, 2018 was investigated by way of a polymerase chain reaction (PCR).

Results
A viral agent that may be responsible for lower respiratory tract infections was identified in 25 samples (89.2%). Respiratory syncytial virus (RSV) was the most common viral agent, being detected in 20 patients (80%), followed by rhinoviruses, which were detected in two patients (8%). H1N1 was detected in one sample (4%), human metapneumovirus was detected in one sample (4%) and parainfluenza was detected in one sample (4%). No agents were identified in the respiratory panel of the remaining three patients. Of the patients who tested positive for RSV, 10 (50%) were born prematurely; two premature babies with chronic pulmonary disease died due to RSV infection; and two patients with RSV infections were started on prophylactic therapy against RSV, and of these, one received a single dose and the other received two doses. A diagnosis of RSV infection was made in one patient (5%) in December, in six patients (30%) in January, in five patients (25%) in February, in seven patients (35%) in March and in one patient (5%) in April.

Conclusion
RSV appears as an important cause of morbidity and mortality in neonates, and particularly in preterm babies. Although preterm babies in the high-risk group receive prophylactic palivizumab therapy in the RSV season, the protection provided by this therapy is not 100 percent. Currently, in our country RSV prophylaxis is administered in five doses from October to March, although the present study detected RSV infections also between December and April. This finding suggests that RSV infections could have a distinctive geographical distribution.

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E1433 - CHALLENGES IN DEFINING EARLY ONSET NEONATAL SEPSIS DIAGNOSIS

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Objective
Early - onset neonatal sepsis (EONS) remains a significant global health problem and potentially fatal illness. Despite extensive study, identifying at-risk neonates remains challenging, especially if they are initially well appearing. Presenting clinical symptoms are unspecific and both sensitivity and positive predictive value of laboratory tests at onset of symptoms are not optimal. A positive microbial blood culture is the gold standard to define a neonatal sepsis. However, the incidence of culture confirmed early-onset sepsis is rather low, around 0.4–0.8/1000 term infants in high-income countries. This leads to overuse of broad-spectrum antibiotics for treatment of suspected sepsis with all negative sequences for the survivors due to a lack of a clear definition and a robust gold standard of the diagnosis neonatal sepsis. The objective of this clinical report is to summarize the main challenges in defining the diagnosis of a culture-negative neonatal sepsis with a focus on EONS.

Methods
Our report is based on the data of the most recent studies and the state-of-the art clinical practices in the leading neonatal centers.

Results
Neonatal sepsis is a dynamic and complex condition. A static definition of clinical symptoms reflecting organ dysfunction at a single point (disease onset) is too unspecific to define EONS and guide antibiotic therapy. A combination of risk factors, symptoms at disease onset combined with development of symptoms upon evaluation after 36–48 h has proved to be a reasonable strategy for defining the diagnosis. Moreover, the biochemical picture of neonatal sepsis changes over the first days after antibiotics has been commenced and the kinetics of inflammatory biomarkers (reflecting a host inflammatory response) should also be included in a future neonatal sepsis definition. Appropriate blood culture diagnostics requiring a minimum 1 ml blood obtained before commencing antibiotic treatment substantially reduces the number of cases with the culture-negative sepsis.

Conclusion
Clinical guidelines for diagnostic assessment and management of EONS should be based on a robust and pragmatic neonatal sepsis definition.

E1436 - CLINICAL CHORIOAMNIONITIS AND HISTOLOGIC PLACENTAL INFLAMMATION ASSOCIATION WITH EARLY NEONATAL SEPSIS

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Objectives
The gold standard for diagnosing chorioamnionitis is placental histological examination, however the delay for the final results hinder its use as an indicator to guide early postnatal therapy. Neonates whose mothers are diagnosed with chorioamnionitis should be treated with empiric antibiotics pending blood culture results. Accordingly, many uninfected neonates are exposed to systemic antibiotics. Our objective was to estimate the rate of confirmed histologic chorioamnionitis (HCA) in the presence of clinically chorioamnionitis, and to evaluate the correlation of the HCA with the inflammatory markers of early onset sepsis (EOS).

Methods
We retrospectively reviewed all neonates admitted to the 2nd Neonatal Unit of Aristotle University of Thessaloniki during 2017-2018 with suspected clinical chorioamnionitis. We recorded the clinical evidence of chorioamnionitis and the histologic report of placenta, the clinical signs and inflammatory markers related to EOS, and finally, we used the Kaiser calculator, applied to neonates ≥34 weeks gestation for the estimation of the sepsis clinical illness score (SCIS).

Results
From 266 neonates admitted with the suspicion of clinical chorioamnionitis, 81 (30%) had HCA. Histologic chorioamnionitis was associated with earlier gestational age (31.8±4 versus 33.3±4 weeks, p=0.004) and lower birth weight (1826±840 versus 2092±849g, p=0.019). Maternal fever, prolonged rupture of membranes, foul-smell amniotic fluid and fetal tachycardia were prominent in pregnancies associated with histological chorioamnionitis. Neonates with histological chorioamnionitis had significantly higher rate of clinical symptoms indicating early sepsis (31% versus 15%, p=0.004), higher CRP at birth (1.4±1.5 versus 0.37±0.3mg/dL, p<0.001) and at 24 hours (2.2±2.4 versus 0.4±0.6mg/dL, p<0.001), and higher rate of positive blood culture (25% versus 3%, p<0.001).

When histologic chorioamnionitis was present, the administration of maternal antibiotics was related to lower CRP at birth and at 24 hours (p<0.001).

The SCIS was significantly higher in neonates with HCA (2.96 versus 0.02, p<0.001); those neonates received a full course of antibiotics in 46% compared to 4% of neonates with absent HCA (p<0.001).
For detecting HCA, the sensitivity and specificity of positive CRP at birth was 64% and 81%, while for CRP at 24 hours was 78% and 76%, respectively.

Conclusion

Clinical chorioamnionitis was not supported by histological evidence in 70% of cases. HCA was associated with increased rates of maternal and neonatal symptoms, higher inflammatory markers, and significant response to the administration of maternal antibiotics. Positive CRP at birth and at 24 hours of age had significant sensitivity and specificity for detecting HCA and could be used for ruling-out EOS and discontinuing antibiotics.

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E1453 - ILIOPSOAS ABSCESS IN A NEWBORN; TREATMENT WITH PERCUTANEOUS DRAINAGE CATHETER

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Introduction

Iliopsoas abscess (IPA) is a rarely seen in children, especially in newborn infants. It is classified as primary of secondary. Etiology is unknown is primary IPA and it develops as a result of hematogenic or lymphatic spread of microorganisms from a focus of unknown origin. Psoas muscle has a close neighborliness with retroperitoneal organs, gastrointestinal system and the muscle-skeletal system. So, psoas muscle may be affected secondarily during the infectious diseases of these systems. In present study we aimed to report treatment of a primary IPA by percutaneous drainage catheter in a newborn infant.

Case

A newborn infant who was a product of a 38- weeks gestation of a 36-years mother (5th gestation, birth weight was 2960 gr) had been treated for hyperbilirubinemia of newborn in a state hospital. Two days after discharge, he had developed swelling and redness from the left inguinal region to the left knee.
The patient was admitted to our clinic on postnatal 17th day. Physical examination revealed swelling and redness from the left inguinal region extending to the left knee, and hip movements were painful. MRI showed an abscess (24X23 mm) on left iliopsoas region. Interventional radiology team implanted percutaneous drainage catheter. Cavity was washed with isotonic solution daily. Empirically meropenem and vancomycin was administered. Staphylococcus aureus was isolated from aspirate culture, and it was sensitive to administered antibiotics. On the 4th week of treatment, CT revealed the complete resolution of abscess. Drainage catheter removed and treatment completed to 6 weeks.

Conclusion

Iliopsoas abscess is a purulent retroperitoneal collection in the iliopsoas muscle. Etiologically it may be primary and secondary. As we could not detect an etiological reason our case was accepted as a primary IPA. Previous reports indicate that results of percutaneous drainage are superior to surgical drainage and it is less invasive. By this method, deep IPAs can be treated via a small incision as in our case.

E1464 - MANAGEMENT OF TERM INFANTS AT RISK FOR EARLY ONSET GBS SEPSIS IN CORELATION WITH MOTHERS GBS SCREENING STATUS AND INTRAPARTUM ANTIBIOTIC EXPOSURE IN ALL NATURAL BIRTH BORN TERM INFANTS

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Early-onset neonatal bacterial sepsis is occurring within the first 7 days. Most infants become symptomatic within 24 hours of birth and the infection is usually result from horizontal and vertical transmission with organisms that colonize the birth canal. GBS rarely can ascend to amniotic fluid colonizing the infant or the infant may become colonized during passage through the birth canal. Maternal GBS colonization in current pregnancy, GBS bacteriuria, a previous infant with invasive GBS disease, prolonged rupture of membranes (≥18 hours) and maternal fever (>38 C) are the factors most commonly associated with early-onset GBS sepsis. At present, there is no laboratory test that has sufficient sensitivity to allow clinicians to safely rule out GBS sepsis.

The management of well-appearing at-risk term infants depends on the number of risk factors and whether maternal intrapartal antibiotic prophylaxis for GBS was used. Careful assessment and observation of these at-risk infants are fundamental component of appropriated care. In the year of 2018. we had in our hospital 2247 newborns of which 70.2 % were natural birth born and 82.2 % of them were term infants. More than 90 % of mothers had GBS screening results from 35-37 weeks of pregnancy.

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E1472 - INVASIVE FUNGAL INFECTIONS IN THE NEONATE

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Objective
Invasive nosocomial fungal infections remain a serious complication of infants's stays in neonatal intensive care units. Candida species are the third most common pathogen in neonatal nosocomial blood stream infections in premature infants, and they are associated with the second highest mortality rate. Preventive measures therefore remain the best means to reduce these infections.

Methods
This is a retrospective study conducted at the department of neonatology in Hedi Chaker Hospital, in Sfax in Tunisia between january 2005 and december 2018.

We analyzed all records of newborns hospitalized during this period and presenting a nosocomial Candida infection was confirmed.

We have retrospectively compiled epidemiological, clinical, biological and evolutionary data from the neonates files included in the study. In addition, all our patients benefited from Transfontanellar ultrasound and abdominal ultrasound in search of visceral involvement.

Results
6 episodes of fungal infections were confirmed in newborns hospitalized in our resuscitation unit. There where 3 males and 3 females. The average term was 34 GW +/- 2 weeks. The mean birth weight was 1975g. The mean age at the time of suspicion of nosocomial fungal infection was 9 days + /- 7days. In four cases, the infection was suspected after a 7-day stay in the intensive care unit. Five newborns were treated by antibiotic therapy for anterior nosocomial bacterial infection confirmed by blood culture. The main clinical abnormalities observed in infected babies, on the day of diagnosis of nosocomial candida fungal infection were: haemodynamic disorders (5 cases), thermal instability, especially fever (4 cases), neonatal seizure and hypotonia (2 cases) and secondary respiratory distress (3 cases). Laboratory findings were non-specific : leukocytosis was observed in 2 cases, leucopenia in 1 case and thrombocytopenia in 2 cases. A positive CRP was observed in only 3 cases.

Candida was isolated in 5 blood culture. 2 were Candida albicans, 2 were Candida glabrata and one case of Candida Tropicalis. Peripheral samples were positive in 2 neonates: (Cerebro-spinal fluid and urine). Complementary examinations (Transfontanellar ultrasound, abdominal ultrasound and fundus photography) had shown no deep visceral involvement. All neonates were treated with fungal treatment. The duration of the treatment was 21 days for 3 infants, 15 days for one infant, 10 days for one infant how has negative blood culture. One infant was died due a state of refractory septic shock secondary to sepsis candidiasis. Two children were diagnosed with psychomotor retardation during the follow-up period

Conclusion

Rates of invasive fungal infection are highest among neonates, especially those of low birthweight. Diagnosis may be delayed because of a nonspecific clinical presentation; difficulty in culturing the organisms. Treatment can involve a long and costly therapeutic course. Furthermore, IFI in neonates carries a high mortality and leads to significant neurodevelopment impairment in survivors.

Thus, a prospective cohort study designed to risk stratify neonates would help in the implementation of the proper use of prophylaxis and empirical therapy for invasive candidiasis.

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E1484 - A RARE BACTEREMIA IN IMMUNOCOMPROMISED NEONATE IN NEONATAL INTENSIVE CARE UNIT HERBASPIRILLUM HUTTIENSE

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Introduction

Herbaspirillum species are gram-negative Betaproteobacteria that inhabit the rhizosphere. They are found in the roots and stems of maize, rice, beans, bananas, sugar cane, pineapple, and other plants. They have been recovered from groundwater and drinking water distribution systems as well. It can colonize the airways of immunocompromised patients causing bacteremia and sepsis. In this case report, we present a case of H.Huttiense bacteremia while high dose steroid was given to a thrombocytopenic neonate born to mother with idiopathic thrombocytopenic purpura (ITP).

Case

Our patient was born as a G2P2 child from a 28-year-old mother who was followed up for eight years with the diagnosis of chronic ITP. The patient was admitted in the neonatal intensive care unit after platelet cell count was detected 70.000/mm3 in complete blood count. The mother of the patient was given methylprednisolone 24mg/day after the first trimester and was given intravenous immune globulin (IVIG) three times during pregnancy. The physical examination was unremarkable. A total of 3 g/kg IVIG transfusion was given to the infant. During the follow up, platelet cell counts was not elevated, due to recommendation of pediatric hematology 2 mg/kg/day methylprednisolone was started. Transfontanel ultrasound showed 3.5x1.5 cm intracranial hematoma in the parietooccipital area. On the second day of steroid treatment, the platelet value was found to be 27.000/mm3 and high dose steroid was recommended. Methylprednisolone was started at 30 mg/kg/day for three days and then 20 mg/kg/day for four days. On the third day of high dose steroid, fever was found 38.2 ºC. Acute phase reactants and blood culture were studied. Laboratory results revealed CRP: 44.2 mg/L, PCT: 2.57 ng/mL, IL-6: 4878 pg/mL, Plt:19.000/mm3 Wbc: 3260/uL, Leu:1550/uL. Lumbar puncture could not be performed due to thrombocytopenia and intracranial hematoma. Vancomycin and piperacillin-tazobactam antibiotherapy were initiated. High dose steroid treatment was continued. Next day the patient had Gram negative bacilli signal in the blood culture. Herbaspirillum huttiense growth was detected in both first blood culture and confirmed with repeated blood culture using MALDI-TOF-MS (matrix assisted laser desorption ionization-time of flight mass spectrometry) method. Genomic sequence of strain planned to be studied in molecular microbiology laboratory. The susceptibility test show no resistance at any antibiogram and the current treatment was continued. After high dose steroid, platelet values increased to 126.000/mm3. Control assays showed regression in acute phases. Antibiotic regimen completed in ten days. In transfontanel ultrasound, hematoma regressed to 23x1,5 cm. The control blood culture of the patient was sterile. The patient was discharged to come to the outpatient clinic.

Conclusion

Herbaspirillum Species are capable of causing bacteremia and sepsis in immunocompromised patients. In our case, it is important to highlight the high dose steroid as predisposing factor contributing to the patient's susceptibility to developing this infection. When we examined the literature in the newborn period, we found only one case who had prematurity. The newborn with H. Huttiense infection due to high dose steroid was the first case in the literature.

Neonatology - Problems of the premature neonate

E1039 - CORRELATION BETWEEN INTRAUTERINE GROWTH RESTRICTION AND HYPERTENSIVE DISORDERS IN PREGNANCIES WITH IVF PROCEDURES

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Background
Intrauterine growth restriction (IUGR) refers to a condition in which an unborn baby is smaller than it should be because it is not growing at a normal rate inside the womb. Delayed growth puts the baby at risk of certain health problems during pregnancy, delivery, and after birth. They include low birth weight. The aim of this study was to see how many women that had infants born with IUGR and the correlation between hypertensive disorders and intrauterine growth restriction.

Methods
A total of 158 patients underwent in vitro fertilization (IVF) treatment to become pregnant. They were chosen based on their previous births, if their infants had pre intrauterine growth restrictions. This was a two year study and took place in Prishtina Kosovo

Results
Out of the total number of infants born 14 of them (16%) had intrauterine growth restriction (IUGR). The highest percentage of infants born with intrauterine growth restriction had in the group of pregnant women who exhibited hypertensive disorders during pregnancy by 6 (11%) compared to infants born from the group who did not exhibit these disorders 8 (5.2%), however the difference was not significant (P> 0.05),

Conclusions
We concluded that at IVF procedures and IUGR (intrauterine growth restriction) is not correlated however women that had signs and symptoms of hypertensive disorders during pregnancy did have infants with IUGR.

E1070 - THE FIRST 24 HOUR RENAL TISSUE OXYGEN SATURATIONS IN PREMATURE INFANTS CAN PREFER ACUTE KIDNEY INJURY

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Objectives
Acute kidney injury (AKI) is frequently seen in premature infants and is important in terms of mortality and morbidity. It is known that decreased renal blood flow has a major role in the etiology of AKI in preterm infants. In this study, we aimed to investigate the role of renal tissue oxygen saturation (RSO2) in predicting the development of AKI in the first 24 hours of life.

Methods
This prospective study included 100 premature infants with a gestational age of ≤32 weeks. All infants were born with near-infrared spectroscopy (NIRS) and cerebral, renal and mesenteric tissue oxygen saturation was monitored for 24 hours. The infants were followed up for AKI development for 1 week. AKI serum creatinine (Scr) level was defined as 1.3 mg / dl after the first day of life.

Results
Mean gestational age was 28.7 ± 2.1 weeks and birth weight was 1192 ± 355 gr. In the first week of life, a total of 29 patients developed AKI during the study period. Sixteen of these cases developed at postnatal 2nd and 3rd day of AKI. Renal RSO2 values in the first 24 hours of life were lower in all hours and this decrease was significant in the first 6 hours.

Conclusion
In this study, it was found that the low renal RSO2 values in the early hours of life in premature infants may have a role in predicting the early stage of AKI and the importance of monitoring with renal function and NIRS in infants with gestational age <32 weeks was shown.

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E1072 - RISK OF PORTAL VEIN THROMBOSIS IN THE PREMATURE BABIES

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Objectives
In the neonatal period, umbilical venous catheters (UVC) are frequently used to provide vascular access. These catheters have various complications such as mechanical, infectious and thrombosis. The incidence of UVC-induced thrombosis is 65% in autopsies, 30% in venography and 1.3-43% in ultrasound scans. In this study, it was aimed to determine the rates and risks of portal vein thrombosis (PVT) in the neonatal intensive care unit (NICU). In addition, the management of these patients was discussed by reviewing the relevant literature.

Methods
In this study, infants with a catheter under 32 gestational weeks of NICU in 2016-2018 were examined. Demographic data of the patients, number of days of catheter stay, number of erythrocyte suspension from the catheter, total parenteral nutrition (TPN) intake times, catheter locations, time of thrombosis by doppler ultrasound, treatment methods and durations, thrombosis follow-up and thrombosis tests retrospectively obtained from electronic patient files.

Results
96 patients were included in the study. Fifty-two percent of the patients were male. The mean gestational age was 29 ± 2 weeks (24-32 weeks) and the mean birth weights were 1353 ± 369 gr (630-2210 gr). PVT was detected in 13.5% (n = 13) of the patients. Five of the PVTs were complete occlusive, and 8 were partial occlusion. There were no differences in terms of birth weight, gestational age, gender, Apgar scores among patients with and without PVT. Maternal preeclampsia rates, rate of low birth weight, sepsis rates, duration of catheter use, number of days of TPN administration, number of erythrocyte suspensions were similar in both groups. There was no difference between the groups in terms of hematological parameters. There was no significant relationship between UVC location and PVT development. In all patients with complete occlusion and in 6 patients with partial thrombosis, low molecular weight heparin treatment was performed on a mean of 31 ± 13.8 days and PVT was recanalization between 7-120 days in all patients.

Conclusions
PVTs that are involved in the etiology of portal hypertension in childhood are mostly asymptomatic in the neonatal period and cannot be clinically recognized. Screening and follow-up of doppler USG in terms of PVT is important for the prevention of long-term complications.

E1134 - CARBON DIOXIDE FLUCTUATIONS ARE ASSOCIATED WITH CHANGES IN CEREBRAL OXYGENATION IN PREMATURE INFANTS

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Objective
To evaluate the effects of carbon dioxide partial pressure changes on cerebral oxygenation.

Methods
In this prospective study, ≤32 gestational age and ≤1500 grams of infants who received respiratory support were included. The babies were grouped as <28 weeks and ≥ 28 weeks according to gestational age. Cerebral, renal, mesenteric tissue oxygen saturation (RSO2) and fractionated tissue oxygen extractions (FTOE) were recorded simultaneously with blood gas measurement from the first day of life of all infants. Seven hundred PCO2 results of 100 patients were evaluated. PCO2 was defined as <35 mmHg hypocarbia and> 55 mmHg hypercarbia.

Results
The median gestational age was 29 weeks and birth weight was 1147 gr. There was a positive correlation between PCO2 levels and cerebral RSO2 in both gestational week groups. Mean cerebral RSO2 was found to be 40 ± 9.4 in hypocarbia and 65.4 ± 9.2 in hypercarbia in gestational age <28 weeks. In the same group, mesenteric and renal RSO2 values were significantly lower in response to cerebral RSO2 increase during hypercarbia.

Conclusion
There was a positive correlation between PCO2 levels and cerebral RSO2 in premature infants. Changes in tissue oxygen saturation during hypo-hypercarbia are more evident in infants with gestational age <28 weeks.

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E1155 - RESPIRATORY SUPPORT IN PREMATURE INFANTS WITH CONGENITAL INFECTIONS

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Introduction
The pathology of the respiratory system is one of the main causes of high morbidity and mortality in newborns. In the structure of the causes of early neonatal mortality, respiratory distress syndrome takes the third place after birth trauma, intrauterine hypoxia and asphyxia and is 16.4%. According to the WHO (Bryce J., 2005), intrauterine infection takes the first place (19%) among the infections that cause infant mortality. The introduction of modern treatment technologies into practice, in particular, artificial ventilation of the lungs (ALV), has made it possible to successfully nursing newborns with morphofunctional immaturity, extremely low body mass and profound dysfunction of the respiratory system associated with intrauterine infection.

Objective
To study the features of respiratory support in the period of early postnatal adaptation in preterm infants with congenital infections

Methods
A selective study was conducted, which included 48 premature neonates. The average gestation period was 32 (28-35) weeks, body weight - 1830 (1040-2420) g. The examination included premature newborns with a congenital infection who needed respiratory support in the intensive care unit (main group) and 56 term newborns with congenital infections (comparison group).

Results
The state at birth of all preterm neonates was very difficult due to the development of respiratory distress syndrome RDS. The following methods of respiratory support were used in the main groups of children studied: oxygen therapy with humidified oxygen, CPAP and artificial lung ventilation (ALV). One of the methods of prevention and treatment of respiratory failure in premature newborns, the clinical effectiveness of which has been proven by many studies, is non-invasive ventilation of the lungs by the method of constant positive pressure through the nasal cannulas - nasal CPAP. 10.4 ± 4.4% of premature babies with congenital infection and 11.8 ± 3.1% of full-term babies needed mechanical ventilation. In preterm infants of the main group, oxygen therapy was performed in 47.9 ± 7.2% of cases, in the comparison group of term newborns - 52.7 ± 4.8%. Non-invasive ventilation of the lungs was performed using CPAP in 15.5 ± 3.4% of the children in the comparison group, 29.2 ± 6.6% in the main group.

Conclusion
Thus, in our study, children used various methods of respiratory support in various combinations. The use of modern methods of mechanical ventilation allows minimizing disabling outcomes in premature babies. Newborns with generalized forms of congenital infection are born in asphyxia and need intensive care and resuscitation from the first minutes of life, and most have various cerebral and respiratory disorders that force them to resort to respiratory support procedures both from the first days of early neonatal and throughout neonatal period.

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E1159 - MORTALITY OF VERY PREMATURE INFANTS (ABOUT 565 CASES) IN SFAX TUNISIA

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Objective
The maternity of Sfax, is the only level 3 maternity in the whole of southern Tunisia. Advances in neonatology and obstetrics have made possible the survival of neonates with lower gestational ages and birth weights We conducted a retrospective study to evaluate hospital mortality of very premature infants in the neonatology department of Sfax.

Methods
This is a retrospective descriptive study over a 3-year period from January 2012 to December 2014 including all premature infants born before 33 weeks at the maternity of Sfax and hospitalized in the neonatal unit care.

Results
A total of 565 premature infants were included in the study. Thus, the incidence of very prematurity compared to the number of newborns in the maternity was 1.85%. We noted around 190 of very premature infants per year. 142 neonates were died. The overall hospital mortality in our study was 25.1%.
These deaths accounted for 37.8% of all newborns who died in our service during the 3 years of the study. The most significant risk factors for mortality were: low gestational age, especially before 28 weeks (58 % before this term versus 30% between 28 and 30 weeks and 12% above 31 weeks), low birth weight less than 1000 g, male sex and the lack of antenatal corticosteroid therapy.

Conclusion
The mortality of very premature infants has fallen sharply in recent years. However, the prognosis remains severe in premature infants before 28 weeks. The therapeutic management of these patients is still expensive and difficult in our context.

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E1189 - ETHICAL DECISION MAKING APPROACHES IN NICUS EXPERIENCES AND PRACTICES OF GREEK HEALTHCARE PROFESSIONALS

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Objective
International epidemiological data regarding infants born prior to the 24th week of gestation tend to be rather dejecting. The survival rates of those infants do not seem to increase, while no encouraging changes have been recorded regarding the rate of occurrence of related physical or mental disabilities. In the face of the above, a pressing bioethical dilemma is raised: should human life be saved at any cost and with any method (including highly interventional intensive care) irrespective of outcome or should limits be put in place? International literature and research identifies three general approaches of ethical decision making in relation to neonatal intensive care: (a) the "wait until certainty strategy"; intensive care is offered to all newborns; (b) the "statistical prognostic strategy"; the care to be provided is based on statistical probabilities for an unfavorable diagnosis or bad outcome of the incident; and (c) the "individual prognostic strategy"; intensive care is initiated for almost every newborn and reassessed regularly thereafter. Neonatal Intensive Care Units' (NICUs) implemented approach differs among countries and depends on multiple factors (e.g. health care system, resources, culture) prominent among them being the lack of a unified and unambiguous regulatory framework. The objective of this research is to look into the clinical experience of healthcare professionals in Greek NICUs and record the ethical decision-making approach they implement when faced with neonatal care dilemmas.

Methods
Survey research based on the EURONIC project questionnaires (weighted, international) adjusted and translated into Greek was conducted on a sample of 251 health care professionals (71 medical doctors, 98 midwives and 82 nurses) working in 17 public NICUs in Greece. This paper reports partial findings based on healthcare professionals' responses to questions about the most recent clinical event in their NICU for which they had to make a decision (individually or jointly with others) on an ethical dilemma regarding neonatal care.

Results
Significant prematurity (38.7%) or diagnosed severe neonatal brain haemorrhage (23.2%) were the most frequently identified conditions which gave rise to the following ethical dilemmas: a) continuation or termination of provided intensive care (56.7%), b) resuscitation after labour (23.9%) and c) initiation or not of intensive care (18.3%). Withholding of provided intensive care was decided in less than half of the cases (45%). Specifically, either urgent interventions were not applied (24.4%) or intensive care was not intensified (20.6%). Initiated intensive care continued normally in almost one third of the cases (34.4%). Neither resuscitation nor initiation of intensive care was decided in 12.7% of cases while withdrawal of life support or therapy provided to newborns occurred rarely (3.3%).

Conclusion

Healthcare professionals in Greek public NICUs, for the most part initiate and continue intensive care to all neonates. Nevertheless, withholding rather than withdrawing provided care is preferred for cases in which care is limited. It appears thus, that when faced with ethical dilemmas regarding neonatal care Greek health care professionals tend to prioritize the 'wait until certainty approach' followed by the 'individual prognostic strategy'.

E1197 - IMPACT OF DELIVERY METHOD ON EXTREMELY PREMATURE INFANTS VAGINAL DELIVERY OR CESAREAN SECTION

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Introduction
The optimal delivery method for extremely low birth weight infants (ELBWI) is controversial. In Japan, the proportion of caesarean section is different in institutions, from 10 % to 90 %. In our institution, cesarean section is often selected for ELBWI more than 23 weeks gestational age. But, we do not have a definite rule of delivery method. The aim of this study is to clarify the impact of delivery methods for ELBWI.

Methods
We conducted a retrospective study of singleton ELBWI less than 28 weeks gestational age and born at our hospital from 2005 to 2017. We excluded patients who were born at 22 weeks gestation or had complex malformations because of high mortality and morbidity, unfortunately. The primary outcomes examined were their mortality (discharge at death) and morbidity (respiratory distress syndrome, severe intraventricular hemorrhage, cystic periventricular leukomalacia, necrotizing enterocolitis, etc.) We measured developmental quotient (DQ) score with the Kyoto Scale of Psychological Development (KSPD) as secondary outcomes. The $\chi 2$ test and Mann-Whitney U test was used. Statistical significance was set at $p<0.05$.

Results
There were 21 infants born by vaginal delivery and 18 (86%) were survived (Group V), and there were 190 infants delivered through caesarean section and 170 (89%) were survived (Group C). There were no significant differences for gestational age, birth weight, sex. Data of umbilical cord blood pH were significantly lower in group V. There were more maternal fever and chorioamnionitis in group V. There were no significant differences in the rates of mortality and morbidity. The median (IQR) of total DQ of group V and group C were 88 (72-96) and 89 (78-97) at corrected 1.5 years. The median (IQR) of total DQ of group V and group C were 79 (62-85) and 83 (71-94) at corrected 3 years. The neurodevelopmental outcomes were not different significantly between both groups.

Conclusion
Our results suggest that prematurity alone should not be a valid indication for cesarean section. Decision of delivery method is one of important issues but neurodevelopmental prognosis might be more affected by optimal extension of pregnancy period, good oportunity of delivery, waiting of expert medical team for a baby, proper management for a long time and so on.

E1220 - THE IMPACT OF ANTENATAL CORTICOTHERAPY IN INFANTS BORN BEFORE 33 WEEKS'GESTATION A COMPARATIVE STUDY OF 565 PREMATURES

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Objective
The aim of our study was to assess the impact of antenatal corticotherapy on hospital morbidity and mortality in premature infants delivered before 33 weeks' gestation.

Methods
This is a retrospective and comparative study of all premature infants born before 33 weeks'gestation at the maternity hospital and hospitalized in the neonatology department of Hedi Chaker university hospital in Sfax between 1January 2013 and 31 December 2015. We compared the short-term prognosis in premature infants, whether antenatal corticotherapy was used or not.

Results
During the study period, 565 premature infants born before 33 WG were hospitalized. The rate of very premature babies was 1.9%.
76.1% of them had received antenatal corticotherapy.
Antenatal corticosteroid therapy has reduced the frequency of hyaline membrane disease (22.8% versus 44.4%).
The incidence of intraventricular hemorrhage and necrotizing enterocolitis was higher in preterm infants who did not receive antenatal corticosteroid therapy.
The overall hospital mortality was 25.1% in this population. It was significantly higher in case of absence of antenatal corticosteroid therapy (39.3% versus 20.7%)
The main causes of death were immaturity, severe hyaline membrane disease, healthcare-associated infections and apnea with intraventricular haemorrhage.

Conclusion
The efficiency of antenatal corticotherapy in these premature infants has been well demonstrated. It decreases neonatal morbidity and mortality.
Other areas of research should be explored, including the impact on growth, cognitive development and adult health.

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E1240 - THE NEURODEVELOPMENTAL OUTCOME AT THE FIRST YEAR OF LIFE OF ELBW AND VLBW NEONATES BY MODE OF DELIVERY

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Introduction
The optimal mode of delivery of VLBW infants remains controversial. However as in all deliveries caesarian section is becoming more prevalent. We aimed to explore the results of this trend in our own neonatal population.

Objective
The purpose of this study is to monitor neurodevelopment outcomes of ELBW and VLBW neonates by mode of delivery.

Methods
It is a retrospective study. We reviewed the hospital records of 139 neonates hospitalized during the years 2016-2018, from their follow up evaluation.

Results
57of this neonates had a birth weight<1000 gr and 82 had birth weight<1500 gr.
We also investigated the mode of delivery , the ultrasound scan findings and the need for early intervention.

Conclusion
During this period we observed a gradual decrease of natural childbirths with simultaneous increase of the survival rate. The mortality rate was higher among the neonates which were born by natural childbirth. This group had increased frequency of pathological findings in the brain ultrasound. In addition they needed early intervention during the first year of life more frequently than the neonates which were born by caesarian section. Our data are consistent with similar studies however larger series are needed to evaluate the best mode of delivery of this vulnerable population

E1321 - ACHONDROPLASIA IN TWIN

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Objective

Achondroplasia (OMIM # 100800), the most common form of chondrodysplasia, is characterized by disproportionate short stature, rhizomelic shortness, lumbar lordosis, brachydactyly, macrocephaly, frontal prominence, flattened nasal root and brachydactyly. The estimated incidence is 1: 25000 live births. The disease has autosomal dominant inheritance and is the most common cause of disproportionate short stature. It is associated with advanced paternal age and occurs in 80% of cases as a result of a de novo mutation. It occurs as a result of mutation in fibroblast growth factor receptor3 (FGFR3) gene. The FGFR3 gene encodes a transmembrane receptor that is important in regulating linear bone growth.

Case

Newborn male twin patients were evaluated for rhizomelic shortness in our clinic. They were born from the third pregnancy of a 37-year-old father and 35-year-old mother with a 31-week cesarean section. Prenatal ultrasonographic examination showed shortening of rhizomelia. The birth weight of the patients was measured as 1870 gr and 1400 gr and the height at birth was 40 cm. Physical examination revealed rhizomelic shortness, broad forehead, flattened nose root, hypertelorism, short thorax, small hand and foot, short and wide fingers, curvature of forearm and leg. Chromosome analysis and FGFR3 gene analysis from peripheral blood were requested with a preliminary diagnosis of achondroplasia.

Conclusion

Chromosome analysis of peripheral blood was performed as normal karyotype. A heterozygous mutation of c.1138G> A (p.Gly380Arg) was identified in the FGFR3 gene. Achondroplasia is a genetic disease that can be easily diagnosed during prenatal and neonatal periods. Molecular genetic testing is important to confirm clinical diagnosis and provide appropriate genetic counseling.

E1389 - BEING A REFUGEE CONSTITUTES RISK TO EARLY TERM DELIVERY

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Objective
The birth rate of Syrian refugees in Turkey arises. Therefore we aim to evaluate the birth characteristics of the infants born from Syrian refugee mothers and particularly emphasize the importance of perinatal care in refugees.

Methods
This study was conducted from October to December 2018. Medical records of Syrian and Turkish infants whose gestational age ≥37 weeks were retrospectively evaluated. Study infants in both groups were classified based on gestational age, as early term (370/7 – 386/7 weeks), full term and late term (390/7 – 416/7 weeks).

Results
The study includes 225 infants of whom 96 were Syrian and 129 were Turkish. Statistical analysis indicate a significant difference in gestational weeks, where Syrians were lower than Turkish (38.2±1.1 vs 39.1±1.4 weeks; p< 0.001). It was observed that 70% of Syrian infants were early-terms, with compare to 57% of Turkish infants (p<0.001). Syrian mothers had gained less weight throughout their pregnancies (10±4 kg vs 12±5 kg; p= 0.001) Maternal age, weight and body mass index, mode of delivery, and birth weight of the infants were similar between groups.

Conclusion
Lower socio-economic condition of Syrian mothers or the stress they are exposed to, constitutes risk to an early-term delivery. Early term deliveries and related morbidity and mortality rates may be reduced if refugees have access to appropriate perinatal care.

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E1395 - IMPACT OF MODE OF DELIVERY ON NEONATAL ADAPTATION

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Objective
The caesarean section has become the most commonly performed surgical procedure in developed countries, and its incidence is constantly increasing. Caesarean section, especially elective, carries the risk of iatrogenic prematurity, but also the risk of complications in newborns, due to lack of humoral factors and physiological mechanisms that are activated during spontaneous labor, so the objective of this study was to investigate the differences in adaptation of neonates according to mode of delivery.

Methods
This retrospective cross-section study, undertaken at maternity unit of General Hospital Čačak, included 150 newborns, 50 born by vaginal delivery (VD), 50 by cesarean section after trial of labor (CTL) and 50 by elective cesarean section (ECD) from uncomplicated in term singleton pregnancies. Commonly assessed neonatal outcome variables (Apgar at 1 and 5 minutes, required measures of resuscitation and the occurrence of transient tachypnea of the newborn – TTN) were used to compare condition at birth, using Kruskal-Wallis and Chi-square testing. Correlation between mode of delivery and neonatal outcome variables was assessed using Spirman's coefficient.

Results
In the VD group, gestational age was 37 – 40 weeks, with 12% of newborns born before 39 gestational weeks. In the CTL group, the range was 37 – 41 weeks, with 22% born before 39 weeks, while in the ECD group, gestational age was 37 – 41 weeks, but 42% of newborns were born before 39 gestational weeks, ($p<0.001$). Apgar in 1 minute did not differ significantly. Apgar in 5 minutes was significantly different between the groups ($p=0.009$) – CTL group had the lowest score, while the other two groups did not differ significantly. Delivery room resuscitation was required in 23.3% cases, which included 6% neonates in VD group, 44% in CTL and 20% in ECS group ($p<0.001$). Routine procedures (drying and stimulation) were required in 16.7% and 11.3% cases respectively, while bag/mask ventilation was required in 16% cases. TTN was diagnosed in 24% of newborns (8% VD, 30% CTL and 34% ECS; $p=0.005$). In VD, TTN was significantly less common than in CTL and ECS groups. The occurrence of TTN did not differ significantly between CTL and ECS. The mode of delivery had a significant correlation with the occurrence of TTN. Also, there was a higher likelihood of TTN in neonates of lower gestational age and in cases where TTN occurred, a higher respiratory rate was registered in neonates of lower gestational age. The association of observed variables was stronger for gestational age than for mode of delivery.

Conclusion
Method of delivery affects the adaptation of the newborn. Whenever possible, delivery should be done vaginally, and in cases of elective cesarean section, it is recommended not to be done before 39 weeks of gestation.

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E1444 - PERIVIABLE BIRTH RESULTS IN A TERTIARY HOSPITAL AND DECICION MAKING IN AN ETHICAL DILEMMA

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Objective
Gestational age has been used as a guide to resuscitation decision-making in preterm infants because it is strongly associated with prognosis. Over the last 2 decades, advances in neonatal management and medical technology, led to the improvement of the survival rates of infants born at < or = 28 weeks of gestation; however, available data on survival rates and outcomes of babies born at the threshold of viability from 22 to 25+6 weeks of gestation display wide variation by country and show that significant morbidity and disability still persists. The commitment and striving for their care has complex medical, social and ethical implications, while decision-making is a crucial issue that involves the infant, the family and the health care providers.

Methods
A retrospective analysis of collected data of infants born between 22+0 and 25+6 weeks gestation admitted to our level III neonatal intensive care unit ("Alexandra" General Hospital, Athens) over the period of 3 years (2016-2018) regarding survival rates and causes of death.

Results
A total of 47 babies born between 22+0 and 25+6 weeks
Mortality rates were 46.6%, 40% and 35.7% for the years 2016, 2017 and 2018 respectively. There were multiple causes of death, including immaturity, very low birth weight, respiratory distress syndrome, early onset neonatal infection, pneumothorax, necrotizing enterocolitis. Birth weight was an important factor for survival and for babies weighted 400-499 gr, 500-599 gr, 600-699 gr and > = 700 gr the survival rates were 0 %, 66.6%, 68.7% and 92.8% respectively.

Conclusions
Results show a significantly increased survival rate during the past two years, which is consistent with the continuous improvement in quality of maternal, delivery and newborn care provided in the obstetrics and neonatology departments of our hospital. Given to the characteristics of the maternal population referred to our hospital, such as absent or poor prenatal care, immigrants, women with serious pathology of pregnancy, as well as the recent change in legislation regarding the limit of viability at 22 weeks, we provide resuscitation to all babies above 22 weeks, followed by reassessment or intensive care, depending on each case. Apart from gestational age a number of factors such as birthweight, sex, the use of antenatal corticosteroids, singleton or a multiple gestation.

Providing resuscitation and care in periviable babies is a clinically and ethically complex issue. Decisions made by the clinicians, should ideally be based in medical and ethical reasons and should be consistent with parents wishes, without forgetting to act as the baby's advocate when needed.

E1476 - DEVELOPMENTAL OUTCOMES OF POSTOPERATIVE FORMER PRETERM INFANTS IN CORRECTED 6 AND 12 MONTH OF AGE

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Objective
To compare developmental outcomes of preterm infants with infants born at same gestational age but with history of surgery due to abdominal congenital anomalies at same corrected age of 6 and 12 month

Methods
Sample included total 46 former preterms born at 34-36 weeks of gestation. Study group was 22 preterms with history of previous surgery due to intestinal congenital problems and 24 late preterms with minimal problems in early neonatal period. Assessment of development was performed by Bayley III tool. We compared mean developmental scores in cognitive, motor and language areas in serial cross-sectional analyses at each time point using multi variant linear regression.

Results
With covariates controlled at all time points at 6 months preterm infants with surgery demonstrated less optimal developmental outcomes in two major areas – motor and language development, compared with preterm infants without surgery but born early ($P < .0001$). Difference was not seen in cognitive developmental area and outcome was similar for both groups. At 12 month corrected of age motor developmental scores were still significantly low in surgery group in comparison to preterms only. They demonstrate similar scores in cognitive and language areas of development.

Conclusion
Preterm infants with surgery intervention demonstrate less developmental outcomes in motor area at 12 months, they demonstrate similar outcomes in other areas of development. Results can indicate on more in depth assessment of development of preterms after surgical pathologies.

E1483 - DO ANTENATAL CORTICOSTEROIDS IMPROVE NEONATAL OUTCOMES OF LATE PRETERM INFANTS?

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Objectives
Eight percent of all deliveries occur in the late preterm period. Infants who are born late preterm have more neonatal complications than do newborns born at term. Administration of antenatal corticosteroids (ANCS) to women at risk for late preterm delivery was shown to reduce the rate of neonatal respiratory complications. We aimed to investigate the affects of ANCS on neonatal intensive care unit (NICU) admission rates and other short term neonatal outcomes of late preterm infants.

Methods
A retrospective cohort study was conducted. After October 2017 ANCS were recommended to all women at risk for late preterm delivery in our hospital. Infants born late preterm (34 weeks 0 days to 36 weeks 6 days) between October 2017 and September 2018 whose mothers received 2 intra-muscular injections of 12mg betamethasone were included as the study group. Infants born late preterm between October 2016 and September 2017 whose mothers did not receive any ANCS were taken as the control group. Infants with maternal chorioamnionitis, congenital anomalies and incomplete course of ANCS were excluded. Two groups were compared in terms on NICU admissions, rate and severity of respiratory complications and other common problems encountered in the early neonatal period. Results: Infants in the study group (n=84) and the control group (n=103) were similar in terms of gestational age, birth weight, type of delivery and antenatal characteristics. Males were higher in number in the control group (%56 vs %38, p=0.013). Rates of NICU admissions, respiratory complications, mechanical ventilation requirement, sepsis, feeding problems, necrotizing enterocolitis, jaundice, and duration of hospitalization were similar between groups ($p<0.05$). Hypoglycaemia was more common in the study group (10.71% vs 2.91%, p=0.027).

Conclusion
Administration of ANCS to women at risk for late preterm delivery significantly increased the risk of hypoglycaemia with no improvement in neonatal outcomes. At early gestational ages it is clear that ANCS decrease neonatal mortality and morbidity and improve long-term outcomes. However, in the late preterm period these benefits are less clear. Furthermore, effects of hypoglycaemia on neurodevelopment in conjunction with ANCS exposure in late preterm born infants are unknown. We believe that caution should be exercised before routine use of ANCS for women at risk for late preterm delivery, before long-term effects are well described. Further studies should focus on long-term outcomes of ANCS as well as defining which subgroups among late preterm infants could benefit ANCS.

Neonatology - Necrotising Enterocolitis

E1398 - RECTAL LEVOTHYROXINE FOR THE TREATMENT OF NEONATAL HYPOTHYROIDISM AN ALTERNATIVE ROUTE OF ADMINISTRATION

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Hypothyroxinemia in preterm infants is a transient thyroid dysfunction with normal TSH but low fT4 levels. In cases where enteral drug administration is not possible an alternative route of therapy is required. The treatment of congenital hypothyroidism in a preterm newborn with short bowel syndrome with rectal diluted levothyroxine is presented. A male baby was born at 256/7 weeks of gestation with a birthweight of 665 g by caesarean section because of severe preeclampsia. He was intubated, transferred to the NICU on mechanical ventilation. Minimal enteral nutrition and TPN were started on the first day of life. Necrotizing enterocolitis (NEC) was diagnosed clinically and radiologically in the infant who did not pass meconium until the 4th postnatal day. Enteral feeding was stopped, nasogastric drainage and broad-spectrum antibiotic therapy were started. The baby needed surgical intervention for intestinal perforation on the 6th day of life. A long bowel segment including the jejunum and ileum was resected because of multiple perforation areas and diffuse circulatory disturbance of the intestinal wall. Only a very short bowel segment could be reserved and an enterostomy was made. TPN feeding was continued. On the 8th postnatal day, cholestatic jaundice developed and direct bilirubin levels gradually increased with STB level reaching 18.9 mg/dL, DB 14.4 mg/dL on postoperative 21st day. Cholestasis could be associated with sepsis, prolonged TPN and hypothyroxinemia. Thyroid function tests were in the low normal region on the 14th postnatal day. Control levels on the 21 st day showed hypothyroxinemia and enteral levothyroxine treatment was started (Table). There was no response to this therapy which was thought to be the result of insufficient absorption of the drug due to short bowel syndrome. As parenteral and suppository forms are not available in our country it was decided to administer the medication rectally with diluted levothyroxine tablets. Thyroid function tests reached normal levels and cholestasis resolved after this therapy. A few cases of rectal diluted L-T4 treatment with successful results has been reported in infants diagnosed with short bowel syndrome similar to our case. As there is not enough data about the rectal absorption of the enteral form of this drug, it was decided to start with a dose of 10 mcg/kg/day which is the recommended starting enteral dose. In conclusion timely treatment of hypothyroidism is important for normal growth and brain development. Rectal levothyroxine should be considered as an alternative, safe and effective route for the treatment of hypothyroidism when other routes are unavailable.

Table 1: Levothyroxine treatment and thyroid function tests
PN age (days) 14 21 28 35 42 50 60
fT4 (pmol/L) 11,20 8,45 7,20 8,50 12,30 17,50 16,00
TSH (mIU/L) 0,61 0,19 0,18 1,90 5,50 0,06 3,70
Cortisol, µg/dL 5,75 0,51 0,96
L-thyroxine route (dosage) Enteral (5µg/kg) Enteral (10µg/kg) Rectal (10µg/kg) Rectal (10µg/kg) Rectal (10µg/kg) Rectal (10µg/kg)

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Neonatology - Lung injury and long-term lung function

E1117 - A SURVEY OF OBSTETRICIANS AND NEONATOLOGISTS OPINION ON CORTICOSTEROID ADMINISTRATION FOR FETAL LUNG MATURATION

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Objective
The aim of the survey was to gain an understanding of obstetricians and neonatologist opinions on the administration of corticosteroid for fetal lung maturation due to observed variation in decision making. The results will aid in the development of guidelines for our unit in areas where there is insufficient evidence in literature.

Methods
A questionnaire survey was sent out electronically to all consultant neonatologists and obstetricians working within a tertiary obstetric unit in Qatar. Data collected included years of clinical experience, gestation at which to administer steroids for planned elective caesarean delivery or preterm labor, type and regime of corticosteroid used, frequency of repeat doses of corticosteroid.

Results
A total of 68 consultants responded. 53 of the respondents were obstetricians and 15 neonatologists. Over half of the respondents 56% (n=32) stated they would not administer antenatal corticosteroid for women undergoing an elective caesarean section between 38+0 and 38+6 weeks. 65% (n=32) would administer corticosteroids for women undergoing planned elective caesarean at less than 38 weeks. 27% (n=15) would consider a repeat dose of corticosteroids if the prior course was administered more than 14 days before. 67% (n=37) would consider a repeat dose if the prior dose was given between 24 and 25+6 weeks of gestations. 77% (n=44) stated they would administer betamethasone 12mg intramuscularly 24hrs apart. There was no significant difference in opinions between the neonatologists and obstetricians.

Conclusion
This survey indicates that there is varying opinions on the administration of corticosteroids particularly for the gestation for planned elective caesarean section. Over half would not consider corticosteroids over 38 weeks of gestation. It highlights the importance for healthcare professionals to understand the evidence for the optimal timing and benefit of antenatal corticosteroid for fetal lung maturation. Administration of corticosteroid at certain gestations has been proven to be of significant benefit. However there is also emerging evidence of possible long term effects of corticosteroids on child development, therefore it is important to determine the optimal gestations where benefit outweighs the risks and avoid repeat doses. This survey will allow us to take into consideration the opinions of consultants where there is insufficient evidence to guide management.

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E1383 - A RARE CAUSE OF RESPIRATORY DISTRESS IN NEWBORN PNEUMOMEDIASTINUM

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Introduction
Pneumomediastinum is an uncommon cause of neonatal respiratory distress and occurs in approximately 2.5 per 1000 live births. Although the most common cause of pneumediastinum is an underlying lung disease, it can be seen in newborns who underwent resuscitation during delivery without a predisposing factor. In this case report, we aimed to present a patient who underwent resuscitation in the delivery room and developed pneumomediastinum.

Case
A female baby was born at 37 weeks of gestation with a birth weight of 3675 g to a 37 year old multiparous mother by vaginal delivery. She required positive pressure ventilation by T-piece after delivery. The baby's 1st and 5th minute APGAR scores were 7 and 9, respectively. Due to grunting and tachypnea the baby was intubated and was admitted to the neonatal intensive care unit. The physical examination of the baby revealed edematous eyelids, petechiae and ecchymosis around the eyes. Breath and heart sounds were decreased on the right hemithorax. Crepitation was palpated bilaterally on the neck and upper chest wall due to subcutaneous emphysema. Pneumomediastinum was suspected due to sail sign detected on the chest X-ray. Computed Tomography scan was performed and did not show any mediastinal mass and it was related with birth trauma in our case. The baby was extubated after 24 hours. Pneumomediastinum spontaneously regressed during clinical follow-up and the baby was discharged on the 7th day of life.

Conclusion
Pneumomediastinum is a rare cause of respiratory distress and initial diagnosis by chest X-ray can be difficult in some cases. Pneumomediastinum should be considered especially in patients with respiratory distress who underwent resuscitation after a traumatic delivery. The "sail sign" is an uncommon radiological appearance of pneumomediastinum. Careful conservative management can result with spontaneous resolution without longterm sequelae.

Neonatology - Neonatal Nutrition

E1136 - ANTENATAL EDUCATION FOR CHILDBIRTH AND PARENTING PREPARATION DURING PREGNANCY IN GREECE

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Objective:
Pregnancy, labour and puerperium are especially sensitive periods for women. The preparation of pregnant women and their partners during pregnancy (antenatal classes) for childbirth and parental role is provided by midwives, who meet the emotional and psychological needs of the couples. This specific antenatal education and parenting preparation is a necessity for woman and her partner. The aim of this research is to study the preparation degree of the couples for childbirth and parenthood during antenatal period in Greece and to what degree this antenatal preparation is related to public health issues, such as feelings and women's emotional experience during pregnancy, type of birth and breastfeeding.

Methods
We studied the opinions of 244 mothers (giving birth in the last 2 years). Outcome measures were assessed through self-administered questionnaire. Demographic and obstetric data were collected from participants.

Results
Although the majority of women mention positive feelings during their pregnancy, a big percentage (80.5%) say that they were anxious about the progress of the pregnancy; furthermore, 72.3% say that they were concerned about their maternal role, 74.5% were afraid for the embryo's health during pregnancy and 69.9% for the labour process. The percentage of women that have attended antenatal classes and parenting preparation programmes during pregnancy is 34.8%. All of them say that the programmes were interesting and helped them to a big extent to have positive feelings for pregnancy, labour and puerperium. The participants in these programmes: a) had normal births to a bigger degree than the ones that did not participate (Pv=0), b) exclusively breastfed (Pv=0.015) for a period bigger than 6 months (Pv=0) and c) chose caesarian section to a smaller percentage (Pv=0).

Conclusion
Antenatal education for childbirth and antenatal parenting preparation programmes may have a beneficial main effect on normal birth percentage and breastfeeding rate. There is a need for greater effort to increase antenatal education and parenting preparation awareness during pregnancy in Greece.

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E1442 - HUMAN MILK AND PRETERM NEONATES

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Objective
Human milk is thought to be the optimal nutrition for term and preterm infants during the first 6 months of life. While the nutrient composition of human milk is ideal for term infants, it is insufficient to meet the needs of the growing preterm infant. Under that consideration, human milk is fortified with BMF-Breast Milk Fortifiers so it can help achieve a satisfactory growth for preterm infants. The purpose of the study is to compare body weight and head circumference between preterm infants who were fed with human milk and those who were fed with formula milk.

Methods
A total of 800 neonates were studied, of which 250 were fed with modified formula milk for preterm infants, 300 with human milk and 350 with human milk fortified with BMF. Statistical analysis with t-test was used.

Results
Infants were reviewed at 6 months of age (chronological age) and it was found that the body weight of those who were fed by formula milk was above 95th percentile, regardless of prematurity. Those who were fed by human milk had a body weight that was at 45th- 50th percentile and those who were fed by human milk fortified with BMF had a weight between 55-75th percentile. Regarding the head circumference, it was in 75-85th percentile for those fed by formula milk, in 50-75th percentile for those fed by human milk and in 50th percentile for those fed by human milk fortified with BMF.

Conclusion:
Evidence indicates that human milk is the best nutrient uniquely suited not only to term but also to preterm infants and human milk fortified with BMF was proven to be ideal according to the growth charts at 6 months. Feeding with formula milk was associated with increased risk for metabolic syndrome in adulthood as body weight was above 95th percentile at 6 months. In the future, research needs to address the nutritional management in specific groups of preterm infants such as IUGR infants and the quality improvement of fortifiers.

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E1443 - HUMAN MILK AND IUGR NEONATES

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Objective
Human milk is the best source of nutrition for both term and preterm infants during the first 6 months of life, granting health benefits both in the short and long-term. For preterm infants, human milk is recommended to be fortified with BMF-Breast Milk Fortifiers so as to help to achieve a satisfactory growth in premature infants. Neonates with intrauterine growth retardation (IUGR) are a special group of infants with an increased risk of milk intolerance and necrotizing enterocolitis. There are no clear guidelines regarding the optimal feeding of these infants and feeding practice varies between the various Neonatal Intensive Care Units. The purpose of this study is to compare the body weight of term and preterm IUGR infants who were fed with human milk, human milk fortified with BMF and formula milk at 6 months of life (chronological age).

Methods
A total of 950 IUGR neonates were studied, of which 300 were premature (between 30 and 35 weeks of gestation) and 650 were term. Regarding the premature IUGR infants,80 were fed with human milk, 86 with human milk fortified with BMF and 94 with formula milk. Statistical analysis with t-test was used.

Results
Regarding the term infants, those who were fed with human milk, at 6 months of age had a weight that was between 50-75th percentile at growth charts, while those that were fed with modified formula milk had a weight above the 95th percentile. Regarding the premature IUGR infants, those fed with formula milk at 6 months of life had a weight that was at 95th percentile, while those fed with human milk had a weight between 50-75th percentile.

Conclusions
The term IUGR neonates who were fed with formula milk had a weight above the 95th percentile as well as an increased risk of developing metabolic syndrome in adulthood. On the contrary, postnatal catch up growth at 2 months of age occurred for those that were fed with human milk. The preterm IUGR neonates that were fed with formula milk had also increased risk of developing metabolic syndrome in adulthood. The preterm IUGR infants fed with human milk fortified with BMF, at 6 months of age had a weight that was between 50-75th percentile, a fact which signifies the impact of feeding with human milk fortified with BMF in infant's weight.

Neonatology - Hypoxic ischemic encephalopathy

E1025 - EARLY DETECTION OF HYPOXIC ISCHAEMIC ENCEPHALOPATHY BY METABOLIC CHANGES IN UMBILICAL CORD BLOOD

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Perinatal asphyxia is a major cause of acute pediatric mortality and long-term neurologic sequelae among survivors.

Objective
To evaluate metabolic changes in umbilical cord blood in asphyxiated newborns and to correlate them to the brain damage

Methods
Seventy live-born term newborns from singleton pregnancies with perinatal asphyxia (investigated group) and 40 healthy term newborns (control group) were included to the investigation. Blood samples for metabolic parameters were collected from the umbilical vein.

Results
Brain damage occurred in 44/70 (62,9%) asphyxiated newborns having hypoxic-ischemic encephalopathy (HIE): 25 (56,8%) had Grade I; 12 (27,3%) Grade II; and 7 (15,9%) had Grade III HIE. Investigated group had significantly higher levels of magnesium and potassium, while levels of sodium, calcium and glucose were lower compared to the controls. Metabolic acidosis was predominant in investigated group. Positive correlation was found between magnesium (rho=0,708;p<0,0001), potassium level (rho=0,819;p<0,0001), and the grade of HIE, while calcium (rho=0,820;p<0,0001), glucose (rho=0,819;p<0,0001) and sodium levels (rho=0,783;p<0,0001) were in negative correlation with the severity of HIE. In multivariate regression model the best predictors for severity of HIE were low pH and hypoglycemia.

Conclusion
Perinatal asphyxia might produce metabolic changes in umbilical cord blood which express significant correlation with the severity of HIE.

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E1150 - ASSOCIATION BETWEEN LOW APGAR SCORE AND MATERNAL LABOR AND FETAL VARIABLES PRELIMINARY RESULTS

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Objective
Apgar score, despite being an ancient tool, is still widely utilized. The low scores, especially in the fifth minute, are associated with higher short time neonatal morbidity and mortality, and also with long term consequences, even in the absence of other serious neonatal complications. The purpose of our study is to access what maternal/ fetal aspects are associated with low Apgar scores in the fifth minute in term pregnancies.

Methods
We are conducting a case-control study with term live births assisted in a public teaching hospital in São Bernardo do Campo, Brazil. We named cases the births of neonates with Apgar score of six or less in the fifth minute, and controls the first and second birth of neonates after the cases, with Apgar of seven or more in the fifth minute. Were excluded (for both cases and controls): less than 37 weeks pregnancies, breech presentation, multiple pregnancies. Were assessed maternal, fetal and labor variables.

Results:
We collected data of 17 cases and 22 controls. We already have some significant results, because the case-control strategy allows us to have them even in the beginning of data collection. Among 17 cases, 16 had at least one risk factor that is available before labor for low Apgar score (maternal disease, absence of prenatal care, fetal growth restriction, post dates pregnancy, advanced maternal age, oligohydramnios), compared with 11 among 22 controls, p= 0.003. In 16 cases submitted to cardiotocography, 9 had abnormal findings, compared to only one among 19 controls, p= 0.001. With respect to the variables that are available throughout labor, we had an average of 440.9 minutes between rupture of membranes and the birth for the cases and of 195.2 minutes for the controls. Despite not significant yet (p= 0.08), it seems to be a strong tendency, and we believe the difference will become significant as the sample becomes larger.

Conclusion
Despite not finished yet, we found some significant associations. One interesting finding is the likely association between time of ruptured membranes and the outcome. Traditionally, longer periods of ruptured membranes were considered risk factor for chorioamnionitis/fetal infection, but not for low Apgar scores. However, a recent study showed a strong association between this variable and hypoxic/ischemic encephalopathy. We expect to have at least 50 cases and 100 controls. We intend to utilize the variables available before labor and in early labor to build a risk score for low Apgar in the fifth minute.

E1359 - NEURODEVELOPMENTAL OUTCOME OF SEVERE ACIDEMIC TERM INFANTS

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Objective
This study aimed to evaluate the perinatal factors associated with neonatal mortality and neurologic morbidity in term infants with severe acidosis.

Methods
We retrospectively reviewed the data of term infants with severe acidosis from January 2012 to December 2016. Severe acidosis was defined as initial pH of less than <7.0 and BE≥-12 mmol/L. We searched the clinical characteristics, morbidities of mother and infants, and neuroimaging results. Also infants were divided by neurodevelopmental impairment and evaluated the relating perinatal factors.

Results
Twenty three term infants had severe acidosis. Meconium stained amniotic fluid was found in 43.5% and neonatal resuscitation with positive pressure ventilation and endotracheal intubation was needed in 43.5% and 26.1%. Among 8 infants with HIE, stage 2 or higher were 87.5%. Four infants (17.4%) showed abnormal brain imaging taken before discharge. On the analysis, the longer duration of invasive mechanical ventilation (P=0.049) and increased need for gavage feeding (P=0.021) were found in neurodevelopment impairment group.

Conclusion
The presence of HIE and abnormal findings of brain imaging before discharge were found to be associated with abnormal neurodevelopmental outcome in term infants with severe acidosis. Even if the brain imaging test was normal, we should consider the long-term follow-up of severe acidemic term infants.

Neonatology - Neonatal Brain Injury and Neuroprotection

E1106 - THE EFFECT OF PERINATAL HYPOXIA ON ELECTROLITES IN TERM NEWBORNS

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Introduction
Under hypoxia conditions, intracellular accumulation of calcium ions occurs as well as disturbed balance of other ions (K +, Na + and Cl^-). Hypoxia prevents the flow of potassium through the cell membrane. Sodium accumulation in the cell during hypoxia is the immediate cause of intracellular accumulation of water, and chlorine ions passively follow sodium ions.

Objective
To the influence of perinatal hypoxia on electrolytes in term newborns

Methods
The study included 50 term newborns with hypoxia, delivered naturally or by caesarean section who were exposed to oxygen therapy after birth due to the development of respiratory distress syndrome with Apgar score (AS) of less than 7 (range 1-10) and pH less from 7.20. The control group consisted of 50 healthy term newborn babies, delivered naturally or by caesarean section with no need for oxygen therapy. In the first and second hours of life in both groups of neonates pH, pCO2, pO2, HCO3, BE, Na +, K +, ionized Ca ++ were determined from arterialized capillary blood. On the second day of life, Na +, K+ total Ca ++, Cl- , they were determined from venous blood in both groups.

Results
Comparison of pH, pCO2, pO2, HCO3 and BE in the first hour of life in the newborn with hypoxia showed lower pH, higher pCO2, lower pO2, lower HCO3, and higher BE ($p<0.01$). In the second hour of life in newborns with hypoxia, lower pH, higher pCO2, lower pO2, and higher BE ($p<0.01$), as well as lower HCO3 values were obtained without statistically significant difference ($p>0.05$).
By comparing Na + concentration in the first hour of life from arterialized capillary blood in the hypoxic newborn, lower values of ($p<0.01$) were obtained, lower concentrations of Na+ were found in the second hour of life, but without statistically significant difference ($p>0.05$). By comparing the K+ concentration in the first hour and the second day of life, a higher ($p<0.01$) was obtained, in the second hour of life a higher K+ value was found, but without statistically significant difference ($p>0.05$). By comparing the concentration of ionized Ca++ in the first and second hours after birth (arterialized capillary blood), as well as Na +, total Ca++, Cl- plasma levels on the second day of life, lower concentrations ($p<0.01$) were obtained.

Conclusion
A statistically significant difference in the concentration of electrolytes in neonates with hypoxia opens the possibility of using new markers of perinatal asphyxia.

E1152 - PROSPECTIVE SURVEILLANCE STUDY OF SEVERE HYPERBILIRUBINAEMIA IN THE NEWBORN RISK FACTORS FOR NEUROTOXICITY

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Jaundice in the neonatal period is an extremely common condition. This condition is usually benign and resolved spontaneously. However, in case of intense jaundice, the newborn may be exposed to dangerous neurological complications responsible for permanent damage, due to the neurotoxicity of free bilirubin.

Objective
To identify the risk factors for the occurrence of neurosensory complications of severe hyperbilirubinemia.
Summary

Methods
This is a cohort, analytic, and single-center prospective study conducted between January 2014 and December 2016 in newborns with severe neonatal jaundice with a BST> 200 mg / l hospitalized at neonatal units.133 newborns were collected during this period. A multivariate logistic regression analysis to determine the factors involved in the development of neurosensory sequelae.

Results
Severe jaundice accounted for 7.8% of all neonatal jaundice. The mean age was 3 days, and the neurological signs at admission were present in 18.8 % of newborns. Favorable clinical and biological evolution has been the rule in the majority of cases. From a neurological and sensory sequelae point of view, 8 children had abnormal psychomotor development ranging from a simple psychomotor delay to severe overall developmental delay and 5 children had pathological PEA. The risk factors for development of neurosensory sequelae identified by logistic regression were: male sex (OR: 2 CI: 95% (0.6-0.9)) (p = 0.04), gestational age less than 38 SA (OR: 2.4 CI: 95% (0.9-7.8) (p = 0.02), the delay of management beyond 24 hours (OR: 2.32 CI: 95% (1.99-7.42) (p = 0.042), the presence of neurological signs in the acute phase (OR: 3.06 CI: 95% (1.26-13) (p = 0.01) and a BST level greater than 300 mg / l (OR: 2.7 CI: 95% (1.34-9.53) (p = 0.008).

Conclusion
The evolution towards the more and more early exits of maternity leads to a resurgence of neurological risk. This neurological risk prompts us to pay more attention to this pathology. Thus, we can only insist on a rigorous evaluation of risk factors, an early detection of newborns at risk of developing severe jaundice.

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E1293 - A SURVEY OF OBSTETRICIANS AND NEONATOLOGISTS OPINION ON THE GESTATIONAL AGE FOR ADMINISTRATION OF MAGNESIUM SULPHATE FOR FETAL NEUROPROTECTION

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Objective
Magnesium sulphate given to women shortly before delivery has been shown to reduce the risk of cerebral palsy and protects gross motor function in those infants born preterm. The evidence on the use of magnesium sulfate at < 30 weeks of gestation as opposed to < 34 weeks is not clear. Although statistical significance was more likely to be demonstrated for outcomes in the trials recruiting women up to 34 weeks of gestation, this was partly due to increased sample size and statistical power. Most guidelines recommend using up to 32 weeks but there is no international consensus.
The aim of the survey was to gain an understanding of our obstetricians and neonatologist opinions on the gestational age of administration of magnesium sulphate for neuroprotection to aid us in the development of local guidelines for our unit.

Methods
A questionnaire survey was sent out electronically to all consultant neonatologists and obstetricians working within a tertiary unit in Qatar. Data collected included years of experience and gestation at which to administer magnesium sulphate for fetal neuroprotection.

Results
A total of 68 consultants responded. Of the respondents 53 were obstetricians and 15 neonatologists. The majority of the respondents 75% (n=51) stated they would administer magnesium sulphate to women who present in preterm labor between 24 and 30 weeks of gestation, 8.8% (n=6) between 24 and 32 weeks and 8.8% (n=6) between 24 and 34 weeks. There was no significant difference in opinions between the neonatologists and obstetricians.

Conclusion
This survey indicates that there is varying opinions on the upper gestational age for the administration of magnesium sulphate for neuroprotection. The majority would administer magnesium sulphate between 24 and 30 weeks of gestation. There is a need for further research into this area in order to develop international consensual recommendations.

E1400 - THROMBOSIS OF TORCULAR HEROPHILI IN A NEWBORN

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A G1P0 28-year-old mother delivered vaginally a baby boy at 40+6/7 weeks of gestational age, birth weight of 3300 g and head circumference of 35.5 cm. The Apgar scores at 1 and 5 minutes were respectively 5 and 9. He had no postnatal adaptation problems and the physical examination was normal. It was reported that antenatal ultrasound at the 22nd week of gestation showed an anechoic cystic mass measuring 46x34 mm in the posterior fossa of the fetal brain with irregular hyperechogenic areas and flow towards the cystic mass at the level of the confluence sinus. The preliminary diagnosis was "thrombosis of torcular herophili". Antenatal magnetic resonance imaging (MRI) at 28th week of gestation showed a dilated confluence sinus, thrombosis and expansion of superficial collateral vessels, changes due to slow blood flow whereas the deep venous system was patent. On the first postnatal day brain MRI and MR venography was performed which revealed thrombosis in the left transverse and confluence sinuses, foci of bleeding in the Sylvian fissure, old thrombi within the torcular sinus and a normal brain parenchyma (Figure 1 and 2). These findings confirmed the antenatal diagnosis of thrombosis of torcular herophili. The etiologic investigation of thrombosis was done and the results were as follows: Protein C, protein S, antithrombin, homocysteine levels were normal; antiphospholipid and anticardiolipin antibodies, Factor V Leiden, Prothrombin 20210 mutation were negative. Antithrombolytic therapy was not given. At the first postnatal week, a control brain MRI was performed which showed regression of the thrombosis of torcular herophili with old foci of bleeding in the Sylvian fissure. The neurological examination was normal. The patient was discharged on the 20th postnatal day. Neuromotor development of the baby was normal at 5 months of age. The follow-up continues without any treatment. In conclusion thrombosis of torcular herophili is a rare sinovenous thrombosis. It is defined by the presence of a thrombus in the cerebral veins/dural sinuses or cessation of blood flow with or without parenchymal infarction. It may show a tumor-like, non-specific mass in the posterior fossa. It may regress spontaneously or ischemic brain lesions secondary to thrombosis may cause antenatal or postnatal morbidity and mortality. Fetal MR imaging should be performed in suspected cases. The babies should be monitored closely in terms of serious postnatal problems.

E1402 - IS FACIAL ASYMMETRY IN THE NEWBORN ALWAYS RELATED TO FACIAL PARALYSIS

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Facial paralysis should be considered in newborns with facial asymmetry. This may be due to birth trauma or developmental causes. In rare cases, facial asymmetry may be caused by isolated congenital agenesis of the mimic muscles of the face. The incidence of congenital facial paralysis is 1.2-2.4 per 1000 births. A newborn case with agenesis of frontal muscle group is presented as a rare cause of congenital peripheral facial paralysis. A G2P1, 28-year-old mother gave birth by cesarean section to a baby boy with 39 1/7 week of gestational age and 3180 g birthweight. There were no perinatal complications. The cord blood gases were normal and 1 and 5 minute Apgar scores were 9/9. The parents were non consanguineous and there were no other family members with congenital anomalies. Physical examination revealed that the nasolabial fold was flattened on the right, the right eye was open, and there was drooping of the lower lip which became prominent especially during crying (Picture-1). Other system findings were normal. As there was no history of birth trauma, congenital facial paralysis was considered. Imaging studies for the etiologic investigation and accompanying anomalies including echocardiography, cranial and abdominal ultrasonography, brain and acoustic MRI were normal. The needle electromyography (EMG) showed no bioelectric activity in the right frontal muscle. These findings suggested agenesis of right musculus orbicularis oculi and right musculus frontalis. The baby was discharged at the 15th postnatal day with outpatient follow-up. The same findings persisted in the EMG which was repeated at 3 months-of-age. The outpatient follow up still continues and there is no regression in the physical findings. Physical therapy treatment is in progress. The most frequent cause of facial asymmetry in the newborn is either traumatic or congenital peripheral facial paralysis. Traumatic facial nerve paralysis may be considered in cases with forced prolonged delivery, forceps application, and compression of the maternal sacral bone during face delivery. Unlike congenital facial paralysis, trauma-related nerve injuries resolve within 3-6 months. Congenital facial paralysis may be isolated or associated with genetic syndromes. These include Möbius syndrome, Goldenhar syndrome, CHARGE syndrome, Poland syndrome and hemifacial microsomia. Less frequently agenesis of congenital isolated muscles may mimic nerve paralysis.

E1408 - EFFICACY OF LEVETIRACETAM AS FIRST LINE THERAPY FOR NEONATAL CLINICAL SEIZURES AND ITS LONG TERM OUTCOME AT 12 MONTHS OF AGE

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Objective
To investigate the efficacy of levetiracetam (LEV) as a first-line therapy in neonatal seizures and its long-term neurodevelopmental outcome at 12 months of age

Methods
Sixty seven neonates, who received intravenous (IV) LEV as a first-line therapy for treating seizures between 2013 and 2017 were retrospectively evaluated. Drug efficacy was assessed using five clinical parameters: (1) seizure cessation time, (2) the use of the antiepileptic drug at discharge, (3) medication cessation time in follow-up, (4) electroencephalography (EEG), (5) the occurrence of post-neonatal epilepsy during follow-up. Neurodevelepmental outcome of the infants were assessed with Ankara Development Screenning Inventory (ADSI) at the 12months of age.

Results
Symptomatic seizures were identified in 82% of the neonates (preterm: 44, 65.7 %, term: 23, 34.3 %). The EEG confirmation was obtained in 36 (57.1%) of the neonates with clinical seizures. On the 7th days of life, LEV was effective as monotherapy in 43 (64%) neonates, whereas add-on therapy was required in 24 (36%) neonates. At the 1 year of follow-up, 76% of infants were achieved drug-free state with LEV monotherapy. The remaining 9 (18%) infants stayed on LEV monotherapy and 3 (6%) had LEV+ add-on therapy. A favorable neurodevelopmental outcome was defined in 63.8% of the infants with ADSI at the end of the 1-year follow-up with LEV monotherapy.

Conclusion
This retrospective cross-sectional study demonstrated that IV LEV is an effective first-line therapy for treating neonatal clinical seizures and that LEV monotherapy effect was sustained during the long term follow-up.

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E1416 - ROLE OF NEUROPROPHYLAXIS IN PRETERM BIRTH

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Introduction
The incidence of preterm birth in developed countries is estimated at 7.5% of all births. Incidence of preterm birth in our Clinic is very similar. One of the most daunting complications of preterm birth is cerebral palsy (CP). It is the most frequent cause of child disability. The prevalence of CP is between 2 and 2.5 per 1000 live born babies. Few studies have proven that CP was less frequent in preterm babies who had been exposed to magnesium sulphate antenatal.

Objective
The aim of this review was to evaluate effects of antepartum intravenous magnesium sulphate given to women in danger of preterm birth as the neuroprotection of a new-born. We compared those infants with the ones who didn't receive neuroprotection. Participants and methods: We used data from medical records of patients that had preterm delivery in our Clinic in period from January 1st 2017 till May 1st 2019.We included patients that had delivery between 22nd and 32nd week of gestation. Medical history of total of 130 women were included in our review, of whom 17 in total received neuroprotection with MgSO4. They were administered 4 mg of MgSO4 in bolus during 20 minutes, and therapy was continued with infusion of MgSO4 1 mg/h during 12 hours. We studied medical history of mothers and new-borns. We observed side effects of therapy on mothers. We divided new-borns in 2 groups by the fact weather they received MgSO4 neuroprotection before delivery or not. We compared brain ultrasound findings and ophthalmological findings of new-borns divided in those 2 groups. We also compared Apgar scores, length of hospital staying, birth weight of new-borns divided in those 2 groups. For numerological data we used basic mean time interval and distribution. For evaluate differences in described variables for 2 heterogeneous groups we used Mann Whitney u test for nonparametric distribution: for evaluate differences between proportions among independent samples we used x2 test and Fischer's exact test. A value of $P < 0.05$ was considered significant. Statistic evaluation of data was marked with IBM SPSS statistic program (ver. 15.0, SPSS Inc., Chicago, IL, USA)

Results
We found no significant difference in brain ultrasound findings and ophthalmological findings between groups of new-borns who received and didn't received neuroprotection (Chi square test, p=0.775 for brain ultrasound findings and P=0.809 for ophthalmological findings). Also we didn't find significant difference in Apgar scores between these 2 groups in 1st and 5th minute (P =0.107 for AS in 1st minute; P =0.869 for 5th minute; Mann Whitney test), or for number of days in hospital (P=0.513, Mann Whitney test).

Conclusion

In our review we didn't find significant difference in US and ophthalmological findings between groups of new-borns that received and did not receive neuroprotection. These results might be as such since we had small sample of patients. Bigger and longer studies should be managed, since that kind of studies already confirmed benefits of neuroprotection for preventing of CP in preterm born children.

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Neonatology - Hemodynamic monitoring of the sick neonate

E1224 - CLINICAL PRESENTATION AND MANAGEMENT OF NEONATAL HYPERTENSION

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Objective
To recall the clinical presentation, causes and therapy approach of neonatal hypertension (HT).

Methods:
This report is a retrospective study of 12 cases of neonatal hypertension in the neonatology department of Sfax between 2007 and 2017.

Results
There were 7 boys and 5 girls. The mean term was 34 weeks of gestation (30 to 38 WG). The mean age at diagnosis of hypertension was 7 days (2 to 22 days). A routine monitoring has revealed the HT in 11 cases. Hematuria was seen in one infant.

The HT was secondary to the aorta coarctation in one case, compression of the renal pedicle with a cystic lymphangioma in one case, corticotubular necrosis complicating perinatal asphyxia in one case, and umbilical artery catheterization in 9 cases. Arterial thrombosis was recognized in 3 babies.

Nine infants have required continuous intravenous infusions of nicardipine during a period of 5 to 15 days. Oral antihypertensive agent (captopril) was necessary in 4 cases. The hypertension has resolved within neonatal period in 11 cases. The outcome was quiet good for a neonate with corticotubular necrosis.

Conclusion
Blood pressure in neonates depends on a variety of factors.
Umbilical catheterization is the most common cause of neonatal hypertension. Its use in neonatal intensive care units should be very limited. The long-term prognosis depends on the underlying etiology.

E1259 - NEONATAL SPONTANEOUS DESCENDING AORTA THROMBOSIS

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The well-known conditions that stimulate the excessive thrombin production and the formation of thrombi are: cardiac diseases, polycythemia, kidney diseases, asphyxia, dehydration, septicemia, necrotizing enterocolitis, respiratory distress syndrome (RDS), genetic defects of fibrinolysis (protein C, protein S, antithrombin deficiency), mutations of factors II or V of coagulation.
Thrombophilia can be defined as a predisposition to form clots inappropriately. Thrombotic events are increasingly recognized as a significant cause of mortality and morbidity. The predisposition to form clots can arise from genetic factors, acquired changes in the clotting mechanism, or, more commonly, an interaction between genetic and acquired factors. Spontaneous thrombosis of the aorta in the new-born is known to be a very rare event and to have a high mortality risk.

We will present the case of a male, normal weighted, delivered at term new-born baby with a normal Apgar score. Soon after birth he developed a thrombosis of the thoracic descending aorta with an unknown aetiology, with fulminant evolution to death. In the first 2 days of life, the baby was in the rooming-in department, breastfed. In the 3rd day of life moderate skin pallor appeared, bilateral hydroceles, pelvic moderate oedema and decreased urinary output appeared. Paraclinical tests highlighted metabolic acidosis, normal cells blood count, but an abnormal kidney and liver function. The treatment was total parenteral nutrition with amino acids restriction, Sodium Bicarbonate 4,2%, Dopamine, diuretics and antibiotherapy. The patient had a diuresis of 1 ml/kg/day and neurologic impairment with repeated apnoea crisis and hypertonia and he needed mechanical ventilation in SIMV system. In the 4th day appeared profound coma, shock, oedema, and the decreasing of the diuresis to 0,5ml/kg/day. The baby died in the 5th day because of liver deficiency, kidney deficiency, severe metabolic acidosis with Base Deficit (-21mEq/l). The following diagnosis was recorded in his medical papers: Multiple organ failure, metabolic acidosis, hyperammonemia, raising the suspicion of a metabolic disease. The anatomopathological diagnosis was: Coarctation of the aorta, thrombosis of the thoracic aorta, liver and kidney deficiency, intraventricular hemorrhage, with the persistence of the suspicion of the metabolic disease. The main discussion was about which was the first event who determined the evolution towards the multiple organ failure: the congenital heart disease, which determined the decrease post stenosis blood flow, or the metabolic disease (from glycogenosis or amino acids group) or thrombophilia?

After clinical aspects, evolution, paraclinical and anatomopathological results we could conclude in this case that the Coarctation of the aorta was the first event and the spontaneous thrombosis at the descending aorta level was secondary to the congenital cardiac disease.

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E1393 - CEREBRAL TISSUE PERFUSION DURING TRANSITIONAL PERIOD IN NEONATES HAVING TENDENCY FOR NEONATAL HYPOGLYCEMIA DEVELOPMENT

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Objective

Aim of this study is to evaluate the regional cerebral tissue oxygenation and cerebral blood flow within first 24 hours of neonates who have risk for neonatal hypoglycemia (NH) development.

Methods

We conducted a prospective case control study. A total of 50 neonates were sub-grouped as the study group (n=25); neonates who have risk factors for NH development and the control group (n=25) of healthy term neonates. Continuous regional cerebral tissue oxygenation (rScO2) was measured by near-infrared spectroscopy (NIRS) beginning from the first hour to 24th hours of life. rScO2 and oxygen saturation detected by pulse oximeter were recorded and fractionized tissue oxygen extraction (FTOE) was calculated. Middle cerebral artery (MCA) flow was evaluated by doppler ultrasound through the sphenoidal fontanel twice at the first and 24 hours of life. Angel independent doppler indices such as pulsatility index (PI) and resistive index (RI) were measured.

Results

The mean gestational age of infants was 36.6 ± 1.8 and 37.8 ± 1.4 weeks and the mean birthweight of infants was 2748 ± 785 and 3035 ± 614 grams for study and control groups respectively ($p>0.05$). Hemoglobin levels of both groups were similar ($p>0.05$). Plasma glucose measurements performed at starvation with 3 hours intervals were similar in both groups ($p>0.05$). Regional cerebral oxygen saturations (rScO2) were continuously measured higher in the study group and significantly higher at 1st, 12th, 21st and 24th hours of life ($p<0.05$). FTOE values were continuously lower in the study group which were significantly lower at 1st, 3rd, 12th, 21st and 24th hours of life ($p<0.05$). The mean MCA Pulsatility Index (PI) values at the first and 24th hours of life were significantly higher in the study group ($p<0.05$) and no significant difference in mean MCA Resistive Index (RI) values were detected.

Conclusion

Increased PI reflects increased vascular resistance and higher rScO2 values may suggest increased in cerebral perfusion which develops as a compensatory auto-regulatory response mechanism. Significantly lower FTOE values in the study group may dedicate decreased cerebral tissue oxygen extraction that results from impaired cerebral perfusion even in the presence of auto-regulatory mechanisms. We suggest that, even if clinically significant symptoms of neonatal hypoglycemia has not developed, long term neurological outcomes should be followed in infants having risk factors for neonatal hypoglycemia development due to impaired cerebral perfusion.

E1397 - CHORIOANGIOMA AS A RARE CAUSE OF NON IMMUNE HYDROPS FETALIS

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Antenatal ultrasonography (USG) at 20th week of gestation of a G2P1 mother showed a placental mass of size 3x3 cm, suspected to be an organized hematoma or a vascular malformation. After 24 weeks of gestation polyhydramnios developed while the size of the mass gradually increased reaching 11x11 cm at 30th week. A female baby with hydrops fetalis was delivered by caesarean section due to fetal distress at 31+3/7 weeks of gestation and the placenta was sent for pathological examination. The birthweight of the baby was 2160 g (>97p), height 44 cm (90-97p), head circumference 32 cm (>97p). Apgar scores at 1, 5 and 10 minutes were 5/6/6 respectively, cord blood analysis revealed normal blood gases, total bilirubin level 2.8 mg / dL and hct 31 %. The blood groups of both the mother and the baby were 0 Rh positive, direct Coombs' test was negative. The general condition of the baby was poor; she was hypotonic, pale, with generalized edema, hepatosplenomegaly and ecchymoses on the inguinal region (Figure 1 and 2). The baby was intubated immediately after delivery in the operation room and transferred to the NICU. Pressure support plus volume guarantee ventilation was started and surfactant was administered.
The results of the initial laboratory investigations and imaging studies for the etiology of hydrops fetalis were as follows: serum albumin 1.6 g/dL, total bilirubin 5.4 mg/dL, calcium 6.4 mg/dL, other electrolytes and urea, creatinine, AST, ALT levels were normal. Echocardiography, transfontanel USG, abdominal USG were normal whereas pleural effusion was detected on chest USG, 8 mm on the right and 4 mm on the left side. Expanded newborn screening tests for inherited metabolic diseases, hemoglobin electrophoresis, G6PD levels were normal. Serology for TORCH, syphilis, parvovirus-B19 were negative. Coagulation tests (INR, PT, aPTT) were elevated and the platelet count was 43.000 / mm3. Repeated administration of fresh frozen plasma, albumin, platelet and red blood cell transfusions was needed. On the third postnatal day her general condition improved, edema resolved and she was extubated. Minimal enteral nutrition and TPN were started on the first day of life and full enteral feeding was reached on the 13th postnatal day. The baby needed phototherapy in the the first hours of life, and continued intermittently for a total of 9 days. The result of the pathological examination of the placenta was reported as placental choriangioma which was accepted as the cause of hydrops fetalis (Figure 3 and 4). The patient was discharged on the 24th day of life (Figure 5 and 6).

In conclusion the placental pathologies as a cause of non-immune hydrops fetalis are rare and can be overlooked. Chorioangioma is diagnosed in about 0.5-1 % of placentas. It is frequently associated with fetal and maternal complications such as polyhydramnios, preterm labor, hydrops fetalis, hemolytic anemia, fetal thrombocytopenia, cardiomegaly, intrauterine growth restriction and placental separation. Placental chorioangioma should be considered in the etiology of non-immune hydrops fetalis emphasizing the importance of histopathological examination of the placenta.

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E1467 - NEONATAL PULMONARY HYPERTENSION

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Persistent neonatal pulmonary hypertension (PNPH) complicates the course of approximately 10% of infants with respiratory failure, and is a source of considerable mortality and morbidity in this population.

Objective
To describe these neonates and to analysis their outcome

Methods
This is a retrospective review of neonatal cases of PNPH, within a period of 7 years (2010 to 2017) in the neonatology department of Sfax.

Results
There were 245 babies. The identified risk factors of PNPH were: male sex (60,4%), mother diabetes (16.7%) cesarean delivery (75.9%), hypotrophy (18.4%). All patients had respiratory failure. The transitory distress was the most frequent etiology (43.3%), followed by hyaline membrane disease (18%), malformations (13.5%), meconial aspiration syndrome (9.8%) and infections (9.8%). Mechanical ventilation was necessary in 79.6% cases. High frequency oscillation was used in 61.5 % patients. Pulmonary dilatators were used in 39.5% cases (inhaled nitric oxyde:37.1%, Sildenafil: 2.4%). Secondary infections happened in 27.3% babies. Mortality rate was 28.2%. Neurologic disabilities were noted in 13% of cases at the age of 12 months. Both mortality and neurologic outcome were statistically associated with severe PNPH, low Apgar score, mechanical ventilation and nitric oxide use.

Conclusion
The approval of inhaled nitric oxide has dramatically changed treatment for PPHN, although it has not reduced mortality. In addition, developmental deficit remains a serious morbidity after hypoxic consequences of PPHN.

Neonatology - Mechanical and noninvasive ventilation

E1276 - EPIDEMIOLOGICAL CLINICAL AND EVOLUTIONARY PROFILE OF HYALINE MEMBRANE DISEASE IN FULL TERM NEW BORN

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Hyaline membrane disease (HMD) is a respiratory condition due to functional deficiency in pulmonary surfactant. This pathology is well known in premature neonates but is still unknown or even denied in full term neonates.
Descriptive retrospective study within the NCIU of the Tunisian Military Hospital over a period of 3 years from January 1st, 2016 to December 31st, 2018.
Disease frequency was 12.5% of the total respiratory distress of full term newborns admitted during the study period. The majority of newborns were "out born". Sex ratio was 1.6. Mean gestational age at birth was 38.12±0.96 gestational weeks. The most frequent mode of delivery was caesarian section in 82% of cases. Mean birth weight was 3306±520 g. Mean age of newborns at admission was 12.05±14.25 hours. "Out borns" were aged 19.15±14.43 hours. Mean age of "in borns" was 1.57±1.09. Respiratory distress was immediate for all newborns. Chest-x ray showed alveolar syndrome in 90% of cases. Association with intra-thoracic effusion was noted in 17.6%. All newborns had mechanical ventilation at an average age of 16.88±14.46 hours. All newborns were treated with exogenous surfactant at an average age of 21.85±17.39 hours. Pulmonary arterial hypertension was found in 58% of cases. The trend was favorable in 88.2% of cases. The 4 deaths were attributed to a care-associated infection in one case and persistent pulmonary arterial hypertension in 3 cases. HMD in full term newborn is a real entity. It seems essential to consider this diagnosis in a newborn with respiratory distress in order to avoid any delay in management, source of very serious complications. Elective caesarian section is the main risk factor. We recommend an obstetric-pediatric collaboration to ensure a better prognosis for these newborns.

Neonatology - Early origins of adult disease

E1115 - SMALL FOR GESTATIONAL AGE NEWBORNS IN CANTONAL HOSPITAL ZENICA IN THE 6 MONTHS PERIOD A RETROSPECTIVE CASE SERIES STUDY

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Objective
To identify the prevalence of SGA newborns and most frequently associated risk factors for this condition, evaluate anthropometric characteristics and most commonly present neonatal complications.

Methods
A retrospective case series study included the history of all SGA newborns in the 6 months period (November 2018-April 2019) in Cantonal Hospital Zenica, Bosnia and Herzegovina. Newborns with birth weight below 10th percentile (adjusted for gestational age and sex) were defined as SGA. The data was collected from the medical records, both obstetric and neonatal.

Results
In the observed period a total of 1240 live births has been recorded. 43 newborns (3.47%) were defined SGA. 79.07% of them were from a singleton and 20.93% from twin pregnancy. 46.51% of pregnancies were terminated with a caesarean section, 53.49% with a vaginal delivery. The median age of mothers at the time of delivery was 28 years. The majority of mothers were nulliparous (65.12%), 34.88% multiparous. In 25.58% pregnancies IUGR has been verified. 16.28% of mothers had history of PIH, 4.65% had premature SGA baby born from the previous pregnancy.

Of all SGA newborns 44.19% were males and 55.81% females. Regarding the gestational age 86.05% were born at term, 11.63% as late-preterm and 2.32% as preterm (less than 34 wg). The mean birth weight was 2354.42±398.49 grams. Mean ponderal index of all SGA newborns was 2.49±0.21. There was no significant difference in comparing PI of newborns with verified IUGR during pregnancy (2.48±0.23) and newborns without verified IUGR (2.49±0.20). In terms of neonatal complications the most frequent was hypothermia; 51.17% of all SGA newborns (irrespectively of gestational age) were treated in thermoneutral environment for the average duration of 2.47±1.69 days. Other recorded complications included low blood calcium levels (7.5%), meconium stained amniotic fluid (7.5%) with no symptoms of MAS, thrombocytopenia (2.5%). No birth asphyxia, low blood glucose levels, polycythaemia, PPHN, NEC have been recorded. All newborns survived to discharge. The mean age at discharge was 5.57±3.79 days (median 4 days); mean weight at discharge 2353.75±235.24 grams.

Conclusion
The prevalence of SGA newborns for the observed period was not high. No serious neonatal complications have been recorded and no case of neonatal death in this group. It is of great importance to identify those high risk newborns and treat them with precaution. Still, all SGA newborns need to be referred to the careful follow-up after the neonatal period, because of remaining higher risk for neurodevelopmental disorders, persistent short stature, obesity, insulin resistance and other metabolic and cardiovascular disorders in the later childhood and adulthood.

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E1291 - 46XX PURE GONADAL DYSGENESIS A DIAGNOSTICAL PROCESS AND EXPECTATIONS OF THE THERAPY

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Background
A normal menstrual cycle requires a complex interaction between the ovary/pituitary gland/hypothalamus axis and the genitals. Any alteration such interaction could cause amenorrhoea. There are essentially two types of amenorrhoea: primary amenorrhoea, where the patient has not menstruated yet,and secondary amenorrhoea.Primary amenorrhoea is a present in a patients with normal secondary sexual characteristics, but no menarhe by age 16,or patients who have not had menstrual flow by age 14 and are lacking normal secondary sexual characteristics.

Case presentation
Woman 23 year old,who is consulted her family doctor worried about her lack of menarche but limited breast development also.Family records not include any serious illness.The patients personal medical record include anomaly of the urinary tract(ren arquatus). A physical exam: height1.75;weight53kg;BMI17.3.She presented armpit and pubic hair. Mammary development was lack. Her external genitals were normal, and her clitoris was of normal size, trough the himen annulare visible is part of the vagina. Blood analyses showed normal haemogram and biochemistry, elevated levels of follicle stimulating hormone(FSH) and luteinizing hormone(LH) and low levels of oestradiol. In September 2018 values were: FSH=56.2mU/ml;LH=20.8mU/ml;TSH=1.94mU/ml;oestradiol=74pmol/L;prolactine=138mIU/L;progesterone=1.2nmol/L;testosterone=0.92nmol/L;androstendione=2.94nmol/L. A pelvic ultrasound: The uterus measurements 30x19x27mm,endometrial line was not visible. The right side ovary was streak,ultrasonic homogenous, didn't show visible follicles.Her left side ovary presented similar characteristics, measuring 16x19mm. A vaginoscopy was performed: Vaginal mucosa appears normal, the depth of the vagina was 5-7cm, it was visible very small cervix with a punctuate ostium. Her peripherical blood karyotype was 46XX.A diagnostic laparoscopy was performed: Uterus with hypoplastic shape and small size ovaries with smooth and nacre coloured surfaces were only discerned.A biopsy of both gonads was performed. The pathological report showed a thinned cortex in both ovaries with a fibrous looking stroma. The primary follicles were absent. Gonadal karyotype was 46XX. Replacement hormonal therapy with oestrogen and progesteron cyclic was applied. Menstrual bleeding has not started after six mounts. Therapy was continued.

Conclusion
Gonadal dysgenesis is an infrequent cause for primary amenorrhoea. In cases lacking breasts development, a hormonal study should be performed. In the case hypergonadotropic hypogonadismus, karyotype study is recommended.The most common probable cause for primary ovarian failure is autoimmunity, patients also have a higher risk of developing other immunological disorders, immunological screening especially for hypothyroidismus is recommended.A mosaicismus in gonadal karyotype as a frequent cause gonadal dysgenesis, regardless of a normal peripherical karyotype, ovarian biopsy with testing the karyotype of the gonadal tissue is recommended. The lack of female sexual hormones could cause early bone loss and osteoporosis and also represents an important risk factor for neurological, metabolic and cardiovascular health problems, hormonal replacement therapy is recommended.An early diagnosis is extremely important in order to promptly begin treatment for the management of symptoms,provide emotional support to the patient and reduce the risks associated with this illness.In case this condition was discovery in early teenage period,it could be expected from this therapy to develop secondary sexual characteristics.However,in your case considering that the patent approached us much later the therapy is applied in order to prevent low oestrogen condition diseases.

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