

# **10th Panhellenic Congress of Maternal Fetal Medicine**

Organized by the Greek Society  
of Maternal Fetal Medicine

Volos, 15-17 June 2018

**BOOK OF ABSTRACTS**



Dear Colleagues,

The Hellenic Society of Maternal-Fetal Medicine has the honor and pleasure to invite you to its 10th Panhellenic Congress that will be held from 15<sup>th</sup> to 17<sup>th</sup> June 2018 in the city of Volos.

The Panhellenic Congress is the leading event of our Society, is held biannually and is dedicated to the continuing education of Obstetricians, Pediatricians and Midwives but, also, of colleagues of other specialties who take care of pregnant women and their newborns.

The scientific Committee has prepared a three-day scientific program where Greek and foreign distinguished colleagues will present the most recent developments in the field of Maternal and Fetal Medicine. The topics will cover issues of diagnosis but, also, of monitoring and treatment of the more common problems that will be encountered by health professionals that are implicated in the care of pregnant women and their babies.

The Organizing Committee invites you to participate actively in the scientific but, also, in the social events of our Congress since it remains a first-class opportunity to meet dear friends and colleagues during a successful and scientific-rich weekend in the hospitable city of Volos.

For this Congress, it has been arranged that a selection of important abstracts, will be published in the supplement issue of Hippokratia Medical Journal.

Greetings

**Professor Efstratios A. Assimakopoulos**  
Aristotle University of Thessaloniki, Greece  
Chairman of the Board Hellenic Society of Maternal-Fetal Medicine,  
Chairman of the Organizing Committee of the Congress.



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## ORAL PRESENTATIONS

### EA-01|

#### REVIEW OF MODE OF DELIVERY IN PREGNANCIES LESS THAN 18 YEARS AND MORE THAN 40 YEARS DURING 2016-2017.

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Obstetric-Gynecology department, "Tzaneio" General Hospital, Piraeus, Greece

**Background:** We evaluated the mode of delivery in two groups of women, less than 18 years and more than 40 years of age. We seek any correlations between age and mode of delivery.

**Materials and Methods:** We revised the log books of Labour ward from the Obstetric-Gynecology department of "Tzaneio" General Hospital (ObGynTzaneio) from 2016 to 2017 to note down pregnant women older than 40 years (group A) and younger than 18 years (group B) and their mode of delivery: Vaginal Labor, Cesarean Section (CS), Instrumental Assistance (InsAss).

**Results:** At ObGynTzaneio 804 labors have occurred during the exam period (2016 – 2017). 369 (45, 7%) delivered vaginally while 427 (52,0%) had CS and 10 (1,2%) needed InsAss.

Group A consisted of 51 women that account for 6,3% of total pregnancies. 18 women (35%) out of them had labor, 28 (54,9%) had CS and the rest 5 (7,4%) needed InsAss.

Group B included 67 women representing 8,3% of total pregnancies. About 35 cases (52%) had labor, 27 (40%) had CS and 5 (7,4%) required InsAss.

**Discussion:** The majority of women in group A delivered with CS, in contrast with group B where in most cases women delivered vaginally. Taking into account other studies we conclude also that young maternal age has a protective role against CS. In contrast pregnancies with advanced maternal age receive most of time CS probably due to peripartum complications such as gestational diabetes or preeclampsia. Proportions of InsAss were the same for both groups.

**Conclusion:** Pregnancies over 40 years have increased incidence of CS while pregnant women less 18 years in their majority deliver normally (cases of labor are slightly higher than CS).

### EA-02|

#### CERVICAL INSUFFICIENCY: CASES TREATED AT GENERAL HOSPITAL OF LAMIA DURING THE LAST FOUR YEARS

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Department of Obstetrics-Gynecology, General Hospital of Lamia, Lamia, Greece

**Introduction:** Cervical insufficiency is defined as the inability of the uterine cervix to retain a pregnancy during the second trimester in the absence of clinical contractions, labor, or both.

**Purpose:** To show the management of the patients who were admitted on the maternity ward in our hospital for cervical insufficiency plus the follow-up till the delivery date.

**Material and Methods:** Medical information were obtained through the medical records of our ward, for the last four years. Past medical history plus the medical chart forms were used. For patients with incomplete data, a telephone follow-up took place.

**Results:** In total, the last four years, 14 cases with cervical insufficiency were admitted and treated in our Clinic. In ten cases cervical cerclage was performed due to cervical length shortening seen on transvaginal ultrasound. Of these ten cases, three delivered before 33<sup>rd</sup> week and one case delivered at 35 weeks. Continuing, three cases delivered at 37 weeks and one case at 38 weeks. Moreover, two cases received a rescue cerclage. From these two cases, one was unsuccessful and instantly went into labor and the other one delivered successfully at 38 weeks. So far, in four cases cervical pessary

was used and labor took place in 35, 36, 39 weeks, respectively, whereas, the last one has not delivered yet.

**Conclusions:** Nowadays, cervical cerclage is still a controversial management strategy for cervical insufficiency. Therefore, careful selection of patients, based on their gynecological history, is required and following proper therapeutic protocol is advised. On the other hand, data for cervical pessary are sparse and more studies are necessary to evaluate its efficacy.

#### References:

1. Green-top Guideline No. 60 for Cervical Cerclage, RCOG
2. Clinical Management Guidelines For Obstetricians-gynecologists – Cerclage For The Management Of Cervical Insufficiency, ACOG
3. SOGC Clinical Practice Guidelines – Cervical Insufficiency and Cervical Cerclage
4. Cervical stitch (cerclage) for preventing preterm birth in multiple pregnancy, Timothy J Rafael, Vincenzo Berghella and Zarko Alfirevic
5. Cervical pessary for preventing preterm birth, Hany Abdel-Aleem, Omar M Shaaban and Mahmoud A. Abdel-Aleem

### EA-03

#### PRENATAL ASSESSMENT OF FETAL LUNG MATURITY USING ULTRASONOGRAPHIC QUANTITATIVE ANALYSIS: PROSPECTIVE STUDY IN FETUSES WITH INTRA-UTERINE GROWTH RESTRICTION

Iosiphina Stergiotou, Chrysoula Margioulas-Siarkou, Stamatios Petousis, Apostolos Mamopoulos, Apostolos Athanasiadis, Themistoklis Dagklis

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**Introduction:** Main objective of the study was to assess the predictive ability of fetal lung immaturity based on the usage of a new ultrasonographic quantitative analysis of fetal lung tissue.

**Methods:** A prospective observational study was performed during 9/2015-12/2016 in the Clinics of Prenatal Diagnosis of 3<sup>rd</sup> Department of Obstetrics and Gynaecology of Aristotle University of Thessaloniki. In the study, there were included cases with intrauterine growth restriction (IUGR) in which fetal lung maturity was assessed using Quantus FML logistics. Epidemiological, obstetrical and ultrasound parameters of pregnancies were assessed. Rates of main neonatal morbidity and mortality parameters were estimated, mainly focusing on parameters of severe respiratory disease (respiratory distress syndrome, bronchopneumonic dysplasia, transient tachypnea, apnea). These parameters were also estimated with outcome of Quantus assessment in order to assess method's reliability to predict severe lung disease.

**Results:** There were 38 pregnancies included in the study, while 2 cases were excluded because of pregnancy having delivered elsewhere. Mean gestational week at delivery was 33.2 weeks and mean gestational weight was 1545 grams. Sensitivity and specificity of method to detect RDS was 64.3% and 62.5% respectively, while positive and negative predictive values were 50% and 75% respectively. BPD rate was significantly higher in neonates characterized as having lung immaturity (23.5% vs. 0%, P=.04), while the negative predictive value to detect BPD was 100%

**Conclusion:** Fetal lung maturity assessment by using Quantus-FML may consist a reliable diagnostic method to early detect severe respiratory disease and mainly bronchopneumonic dysplasia.

## EA-04|

**TRANSABDOMINAL MEASUREMENT OF THE CERVICAL LENGTH AT 20<sup>th</sup>-23<sup>rd</sup> GESTATIONAL WEEKS FOR THE PREDICTION OF PRETERM LABOR**

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**Introduction / Objective:** The transvaginal ultrasound measurement of the cervical length (CL) at 20<sup>th</sup>-23<sup>rd</sup> weeks has been proven to be predictive for preterm labor. The purpose of this study was to examine the correlation of transabdominal measurement of the CL with the probability of preterm labor and to determine the distribution of CL in singleton pregnancies at 20<sup>th</sup>-23<sup>rd</sup> weeks.

**Materials and Methods:** In this prospective study, pregnant women were enrolled during the anomaly scan at the 3rd Department of Obstetrics and Gynecology of Aristotle University of Thessaloniki between 1/2015- 12/2017. The CL was measured by the transabdominal approach, and the 5<sup>th</sup>, 50<sup>th</sup> and 95<sup>th</sup> centiles of the measurements were calculated for each gestational age, while the outcome of the pregnancies was also studied per case.

**Results:** A total of 2119 pregnant women were examined during the study period, while 2061 were finally enrolled in the study, meeting the inclusion criteria. The mean maternal age was 31.3±5 years, while 68.9% were primigravidas. The mean CL differed significantly ( $p < 0.001$ ) between term pregnancies (35.2 ± 4.4mm) and preterm labor group (33.9 ± 6.1mm). The optimal length of the cervix to predict premature labor before 37 weeks was 31.5mm with a sensitivity of 82.5% and a specificity of 30.3%. Finally, new diagrams on the transabdominal CL measurements in the second trimester were created.

**Conclusions:** Women who delivered preterm (<37<sup>th</sup> weeks) had an average shorter CL at 20<sup>th</sup>-23<sup>rd</sup> weeks compared to those with term pregnancies (> 37<sup>th</sup> weeks). From the ROC analysis, it was found that transabdominal CL measurement has predictive value for preterm delivery (AUC = 0.56, 95% CI: 0.510-0.601,  $p = 0.01$ ).

## EA-05|

**MANAGEMENT OF HUGE MYOMA CAUSING DYSPNEA AND COAGULOPATHY DURING FIRST TRIMESTER OF PREGNANCY AND THE SUBSEQUENT REPRODUCTIVE OUTCOME. A CASE REPORT**

**Efstathios Assimakopoulos**<sup>1</sup>, Themistoklis Mikos<sup>2</sup>, Kalliopi Dampala<sup>2</sup>, Konstantin Kubanangiti<sup>2</sup>, Alexios Papanikolaou<sup>1</sup>

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**Introduction/Objective:** We describe an innovative technique of surgical management of a huge myoma during pregnancy.

**Materials and Methods:** A 32-years-old, primiparous, 13-weeks pregnant woman, having abdominal mass resembling a full-term pregnancy was admitted to the hospital because she suffered from severe abdominal pain and dyspnea. The coagulation was deranged (INR=1.37, fibrinogen=79mg/dl, and D-Dimers=52,980mg/ml).

**Results:** Ultrasonography demonstrated a single viable pregnancy 13 weeks and color Doppler revealed close proximity of an angiomatous mass to the placental bed. MRI confirmed a 30cm degenerated intramural fibroid. Through a larger than usual Pfannenstiel incision, avoiding the placental bed, we removed 90% of the fibroid. The closure of the wide traumatic surface of the uterus was performed with 4 Shirodkar sutures, traversing the uterine tissue in a mattress fashion (like the Greek «Π» letter). Histopathology report-

ed benign leiomyoma, measuring 28\*24\*19cm and 3,655gr. Two days later spontaneous complete miscarriage took place. After eight months hysterosalpingography showed normal uterine cavity and both tubes patent and soon the patient conceived spontaneously. She had an uneventful pregnancy and she delivered by caesarean section a healthy female neonate 2570gr. All four sutures found covered by uterine serosa and were easily recognized and removed.

**Conclusion:** A large myoma of a 13w pregnant uterus causing pain, dyspnea and coagulopathy managed by myomectomy. The use of Shirodkar sutures to close the huge gap of the remaining uterus is reported. The successful outcome of a subsequent pregnancy indicates the feasibility of this approach.

## EA-06|

**OUTCOMES OF TERM LABOR INDUCTION COMPARED WITH EXPECTANT MANAGEMENT**

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<sup>1</sup>Department of Obstetrics & Gynecology of General Hospital of Chania, Greece

**Objective:** Induction of labor at term is associated with an increased risk of adverse outcomes, in particular cesarean sections, when compared with spontaneous onset of labor. The aim of our study is to evaluate maternal and neonatal outcomes at and beyond term associated with induction of labor compared to spontaneous onset of labor stratified by week of gestational age.

**Materials and Methods:** This is a retrospective cohort study involving all term and post-term (gestational age ≥37 weeks) singleton deliveries, which occurred in the Department of Obstetrics & Gynecology of General Hospital of Chania, between January 2008 and December 2017.

**Results:** The study group consisted of 3588 singleton pregnancies with a gestational age ≥37 weeks. 2810 (78.3%) woman had spontaneous onset of labor and 778 (21.7%) woman had induction of labor. Women with induction of labor were at a higher gestational age, had a higher body mass index and were more likely to be nulliparous. Young and older mothers were represented excessively in the induction of labor group as were babies with low (<2500g) and high (≥3500g) birth weight. Women with induction of labor were associated with an increase rate of cesarean delivery, operative vaginal delivery, increased rates of epidural analgesia and fetal scalp blood testing at all gestational ages. Induction of labor was associated with increased rates of episiotomy after 39 completed weeks and increased rates of 3<sup>rd</sup>/4<sup>th</sup> degree lacerations at week 39-40, in nulliparous women. Moreover, admission to a neonatal intensive care unit after vaginal delivery was more frequent after induction of labor compared with spontaneous onset of labor at all gestational weeks.

**Conclusions:** Induction of labor is associated with increased rates of adverse maternal and neonatal outcomes caused not only from the induction of labor but also by certain diseases or complications that require labor induction.

## EA-08|

**ANXIETY, DEPRESSION, AND SOCIAL SUPPORT IN INFERTILE WOMEN**

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**Background:** The impact of infertility on the psychological well-being of women has received increasing attention in recent years. Although anxiety and depression in relation to infertility have been investigated in detail, still the majority of relevant research is ig-

noring factors such as perceived social support. This study aims to examine if there exists a relationship between emotions related to quality of life, depression, anxiety and perceived social support in young women who experience fertility problems and who are currently living in Greece.

**Materials and Methods:** Eighty-eight women with infertility problems completed the State-Trait Anxiety Inventory, the Center for Epidemiologic Studies Depression Scale, the Multidimensional Scale of Perceived Social Support, and some chosen questions from the Fertility Quality of Life. In addition to the above, a detailed demographics questionnaire was also administered.

**Results:** Results indicated that statistically significant positive correlations exist between self-reported levels of anxiety as measured by STAI, depression as measured by CES-D and scores on questions from FertiQol measuring negative rating of health, poor quality of life, impaired attention and concentration, fatigue, social pressure and lack of social support as examined with the MSPSS. In addition to that, it seems that the lack of close friends, family and significant others' support, according to the demographics questionnaire, are related to more negative emotions.

**Conclusions:** The present study shows that the existence of social support from different sources can be related to less anxiety and depression. The above strong correlations indicate a field for future research, which should further investigate infertility and its relation to other emotional and social variables in larger samples from different cultural environments.

#### EA-10| PSYCHOSOCIAL DETERMINANTS OF PREGNANT WOMEN'S HIGH FEAR OF CHILDBIRTH.

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**Aim and Background:** Fear of childbirth has been found to be a factor that influences women's decision about their choice of delivery. The investigation of psychological factors that relate to fear of childbirth can help identify pregnant women with high fear of having a normal delivery and consequently a preference of having a cesarean section. This study aimed to explore the psychosocial factors that relate to fear of childbirth (normal delivery) in pregnant women, in late pregnancy.

**Methods:** 102 pregnant women, in late pregnancy, attending routine antenatal visit in two public maternity clinics were enrolled. All participants completed the CAQ (fear of childbirth) and other self-report questionnaires that measured self-esteem, optimism, neuroticism, depressive symptomatology and a questionnaire regarding previous history and previous experiences about childbirth. Pearson's correlation coefficients, t-tests and Anova were calculated between all study variables.

**Findings:** Correlations and associations between the CAQ and psychosocial variables were computed. Statistical analysis showed that low self-esteem, high neuroticism and high depression were positively and significantly associated with fear of childbirth. Furthermore, low satisfaction regarding midwifery support was positively and significantly associated with fear of childbirth. Other variables that were significantly related with high fear of childbirth were low tolerance of pain and previous emergency cesarean section.

**Conclusion and implications for practice:** The study findings may enable midwives and other health care professionals to identify pregnant women with characteristics that predispose to high fear of childbirth and to provide information and support.

**Acknowledgment:** This study was funded by the EPEE TEI of Athens, 2015

#### EA-11| INVESTIGATION OF PRETERM LABOR IN PREGNANT WOMEN IN EPIRUS

**Lambrini Kalampoki**, Theocharis Evangelou, Errikos Moulias, Eirini Karantzeni, Zoe Mparmpalia, Aggelos Dimas, Georgios Tsanadis, Theodoros Stefanos

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**Objective:** To investigate the incidence of preterm labor in pregnant women who gave birth in the Department of Obstetrics & Gynecology at the University Hospital of Ioannina.

**Material and Methods:** 2172 pregnant women who gave birth in the Department of O&G at the University Hospital of Ioannina. We also included 22 twin pregnancies, bringing the total number of infants born to 2194. Pregnant women were divided into three categories according to the gestational week at the time of delivery. The 1<sup>st</sup> category included those women who gave birth before the 32<sup>nd</sup> week of gestation, while the 2<sup>nd</sup> included those who gave birth between the 32<sup>nd</sup> and 37<sup>th</sup> week and the 3<sup>rd</sup> category those who gave birth after 37<sup>th</sup> week of gestation.

**Results:** Of all pregnant women who took part in our study 58 (2.67%) gave birth before the 32<sup>nd</sup> week of gestation, 312 (14.36%) gave birth between 32 and 37 weeks and 1802 (82.97%) gave birth to late term newborns. Furthermore, 34 (1.56%) newborns were born weighing <1000g, 72 (3.28%) weighing between 1000 and 2000g and 2088 (95.16%) weighing >2001g.

**Conclusions:** The incidence of preterm labor was 17.03%, that is 370 preterm neonates, while the incidence of late term labor was 82.97%, that is 1802 late term neonates. Furthermore, 4.84% (106) of the neonates were weighing <2000g while 95.16% (2088) neonates weighed >2001g. From the twin pregnancies 4 (18.2%) women gave birth before the 32<sup>nd</sup> week of gestation, 9 (40.9%) between 32 and 37 weeks and 9 (40.9%) after the 37<sup>th</sup> week of gestation.

In our study we found that the incidence of preterm labor was significantly higher compared to other published reports, while the proportion of low weighing preterm neonates was almost the same.

#### EA-12| VELAMENTOUS / MARGINAL CORD INSERTION AND VAGINAL DELIVERY – AN OBSTETRICAL DILEMMA.

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**Introduction/Objective:** Abnormal umbilical cord insertion has been associated with impaired development and function of the placenta and adverse perinatal outcome. The condition poses an obstetrical dilemma in the absence of other indications for an elective caesarean delivery, especially if mother favors vaginal birth, given that both the risks for intervention before second stage of labor and for third stage complications have been reported to increase significantly.

We present a case of a successful uncomplicated vaginal delivery at term in a woman with abnormal cord insertion.

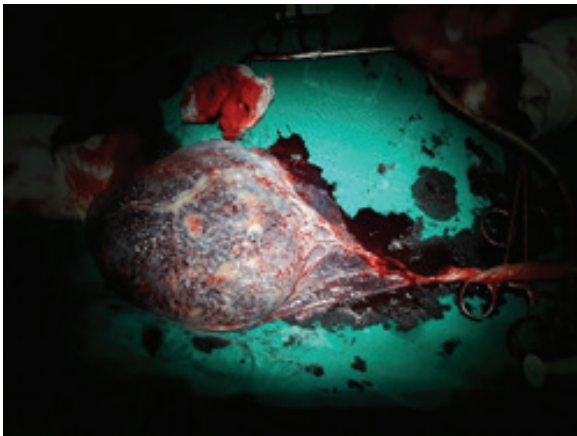
**Material and Methods:** A 37 years old primiparous with a singleton pregnancy attended our clinic's routine prenatal care outpatient protocol. The second trimester scan of fetal anatomy reported a marginal / velamentous cord insertion, but without a clear distinction between the two. Pregnancy advanced otherwise uncomplicated. After extensive counseling and mother's strong wish and written consent for a trial of vaginal labor, we decided not to opt for an elective caesarean.

**Result:** Spontaneous labor occurred at 40w+1, carried out under closed surveillance by a consultant obstetrician throughout active phase, with all sources for an emergency caesarean available. Sec-



ond stage lasted 30 minutes without abnormal fetal heart rate patterns. A female neonate 3480gr was delivered, with an Apgar score of 10 in 1<sup>st</sup> minute. Active management of third stage was completed without major complications, other than a partial tear of the cord and the need for a gentle manual removal of the placenta from the vagina. Gross examination revealed velamentous insertion of vessels.

**Conclusion:** Battledore placenta and marginal or velamentous cord insertion can be diagnosed in routine obstetric ultrasound. In the absence of clear recommendation, both elective caesarean and trial of vaginal labor can be acceptable, depending on maternal request and clinical setting, at least in those cases where sonography is not evidently indicative of velamentous insertion.



**EA- 13|**  
**INDUCTION OF LABOR IN CASES WITH FETAL GROWTH RESTRICTION: IS IT SAFE? PROSPECTIVE STUDY.**

**Stamatios Petousis**, Themistoklis Dagklis, Chrysoula Margioulas-Siarkou, Panagiotis Christidis, Apostolos Athanasiadis, Apostolos Mamopoulos

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**Objective:** To study the outcomes of pregnancies with FGR in which labor induction was performed after 37<sup>th</sup> gestational week.

**Methods:** A prospective observational study was conducted between 1/2015-1/2018 enrolling all pregnancies with fetal growth restriction that were followed-up by the High-Risk Pregnancy Unit of our Department. Singleton pregnancies in which induction of labor was performed after 37<sup>th</sup> gestational week were exclusively included in the present study. Epidemiological and obstetrical characteristics were recorded as well as the total of ultrasound parameters from the moment of FGR diagnosis and onwards. Primary outcome of the study was the rate of vaginal delivery after induction of labor as well as the rate and indications of caesarean section performed. Secondary outcomes were parameters of perinatal morbidity, specifically Apgar score in 1<sup>st</sup> and 5<sup>th</sup> minute of neonatal life, as well as Neonatal Intensive Care Unit (NICU).

**Results:** There were 212 pregnancies diagnosed with FGR during study period, of which induction of labor was performed in 40 cases. Rate of vaginal delivery was 80% (n=32), while indications of CS were failure of induction (n=4), failure of labor progress (n=3) and fetal distress (n=1). Fetal weight was independent prognostic factor of successful vaginal delivery (P<.001). NICU admission rate was 22.5% in the total of cases, while it was significantly higher in cases of CS compared with those that managed to deliver vaginally. Similarly, Apgar score in 1<sup>st</sup> and 5<sup>th</sup> minute were also significantly

higher in cases where induction of labor resulted in vaginal delivery (P<.001).

**Conclusion:** Induction of labor is a safe and effective option in term singleton pregnancies after 37<sup>th</sup> gestational week. Estimated fetal weight is the main predictor of induction- of- labor success.

**EA-14|**  
**REFERENCE VALUES OF CERVICAL LENGTH FOR EACH TRIMESTER IN LOW RISK PREGNANCIES.**

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**Introduction:** The cervical length (CL) is a useful indicator for the prognosis of preterm labour. To date, there are no defined reference values for the CL in the Greek population. The aim of this study was to create charts of mean cervical length at the end of each trimester in low-risk pregnancies.

**Methods:** This was a prospective observational study that included all pregnant women that attended the maternal fetal medicine unit of the 3<sup>rd</sup> Department of Obstetrics and Gynecology, Aristotle University of Thessaloniki for a routine first trimester nuchal scan (11+0-13+6 weeks), second trimester anomaly scan (20+0-23+6 weeks) and growth scan (30+0-33+6 weeks). In order to record the normal values of CL, all pregnancies that resulted in preterm labour (<37+0 weeks) were excluded from the study. The CL was measured transvaginally, and the 5<sup>th</sup>, 50<sup>th</sup> and 95<sup>th</sup> percentiles the length were calculated for each gestational age.

**Results:** A total of 371 pregnant women participated in the study. The mean maternal age was 32.1 ± 5.1 years. The CL did not differ between the 1<sup>st</sup> and the 2<sup>nd</sup> trimester (34.5 vs 34.5, p = 0.895), however a decrease was noted between the 2<sup>nd</sup> and the 3<sup>rd</sup> trimester (34.5 vs 31.2, p <0.001). The new charts that were constructed were compared with previously published ones.

**Conclusion:** These charts for the low-risk population can be used as reference values for the prediction of preterm labour in low-risk pregnancies.

**EA-15|**  
**KNOWLEDGE AND CONFIDENCE OF MIDWIVES AND DOCTORS CONCERNING ELECTRONIC FETAL MONITORING DURING PREGNANCY AND LABOUR: A QUESTIONNAIRE DEVELOPMENT**

**Kleanthi (Claire) Gourouti**, Katerina Lykeridou, Antigoni Sarantaki

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**Aim:** Many guidelines regarding the use and the interpretation of the electronic fetal monitoring (EFM) have been developed by many organizations. However, there are still midwives in Europe that don't implement the available evidence till now. Restraining forces, such as persistence of the traditional working practice and poor knowledge regarding the EFM, can be considered barriers of guideline implementation. The aim of this study was to develop a tool and examine the knowledge, attitudes and confidence of midwives and obstetricians regarding the use of electronic fetal monitoring and intermittent auscultation (IA) during labour.

**Methods:** This study took place in two public maternity clinics of Athens. The sample consisted of 32 newly qualified midwives and 32 newly qualified obstetricians working in the labour ward. A valid and reliable tool designed by the authors was used in order to examine the knowledge and attitudes towards EFM. Univariate, multivariate analyses and factor analyses were conducted.

**Findings:** The majority of study participants (92%) had a favourable disposition towards the use of EFM. Almost 50% of the midwives

and 72% of the doctors stated that they were confident about their skill in interpreting CTG tracings. The majority of the participants (82%) had a good level of knowledge regarding the normal parameters of EFM (baseline, variability, accelerations). However, 50% of the midwives and 55% of the obstetricians had good level of knowledge regarding the suspicious or pathological parameters of EFM (decelerations, bradycardia). Almost half of the respondents

felt that their training adequately prepared them for using EFM during labour.

**Conclusion and implications for practice:** The study findings address the training needs of newly qualified staff and express the need to improve the confidence concerning EFM. The hospitals should provide EFM training to the labour staff on an annual basis.

## POSTER PRESENTATIONS

### AA-01|

#### PRENATAL DIAGNOSIS OF FRAGILE X SYNDROME

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**Background:** Fragile X syndrome is an inherited disorder, which is caused by a trinucleotide (CGG) expansion within the fragile X mental retardation I (FMR1) gene. The full mutations associated with methylation of the gene, which turns off transcription, result in a deficiency in the FMR1 protein, which causes severe central nervous disorders. Patients present with social anxiety, learning/behavioral problems, intellectual disability, A.D.H.D. syndrome and autism. It is the second most common cause of genetically associated mental deficiencies after trisomy 21. Fragile X syndrome has an incidence of approximately 1 in 3000- 4.000 males and 1 in 6.000-8.000 females.

**Objective:** Prenatal diagnosis of Fragile X syndrome in a high-risk pregnancy, due to previous childbearing of this syndrome.

**Methods:** Pregnant woman, 31 years old, gravida II, asks for genetic counseling. She had previously given birth to a boy diagnosed with Fragile X syndrome at the age of 4, because of behavioral disabilities and mental retardation. After P.C.R testing, it was revealed that the mother had a premutation in one of the two allele genes of chromosome X. Chorionic villus sampling was performed during the 12<sup>th</sup> week of pregnancy. Polymerase chain reaction and immunocytochemical testing were used for identification of CGG repeats.

**Results:** The fetus was female and the results of P.C.R and immunocytochemical testing revealed mosaicism. Specifically, the affected fetus had normal repeats (27 CGG repeats), premutation repeats (85 CGG repeats) and total mutation repeats (>200 CGG repeats).

**Conclusion:** It is very interesting that while the mother was a carrier of the disease, the fetus, while a girl, had the full mutation. The length of CGG sequence often increases during meiosis of female carrier's, leading to an increased risk of giving birth to an affected newborn with Fragile X syndrome.

### AA-02|

#### MANAGEMENT OF POSTPARTUM HAEMORRHAGE (PPH) WITH A DUAL BALLOON CATHETER FOR UTERINE TAMPONADE.

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**Introduction:** Postpartum haemorrhage (PPH) is a leading cause of maternal morbidity and mortality. Etiologies include uterine atony, genital lacerations, retained placenta and coagulation defects. Following conservative methods to control bleeding in atony cases, the use of uterine tamponade devices has been examined.

**Objectives:** Assessment of effectiveness of balloon tamponade in cases where uterotonics fail to control bleeding, secondary to uterine atony and abnormal placentation (previa).

**Material:** Women that delivered between June 2017 and March 2018 at the Archbishop Makarios III Hospital in Nicosia Cyprus and were diagnosed with severe postpartum haemorrhage secondary to etiologies described.

**Method:** Retrospective analysis of birth registry and patient files.

**Results:** A total of 14 women were included in the analysis. The etiology of PPH in 10 cases was uterine atony and placenta previa and uterine atony only in the remaining 4. All cases had elective caesar-

ean section for placenta previa or previous caesarean section. Mean maternal age was 34 years (range 24-41) while mean gestational age was 37 weeks (range 34-39 weeks). 12 were singleton pregnancies while 2 multiple (twin pregnancy). Mean time until balloon insertion was 45 minutes (range 24-65 minutes) following ultrasound guided placement. Mean time for placement was 4.5 minutes (range 2.5-8 minutes) and mean filling volumes were 650ml (range 500-750ml) for the uterine and 150ml (range 100-300ml) for the vaginal balloon. Mean duration of use was 18 hours (12-24 hours). Bleeding decreased and stopped in 13 of 14 cases while 1 case required hysterectomy due to continuous bleeding. Mean blood loss following insertion was 220ml (100-350ml). Transfusion with blood products was required in all cases, while day 1 mean hemoglobin was 9.3 g/dl (range 7.0-11.3 g/dl).

**Conclusions:** Balloon tamponade is a safe and effective method of postpartum haemorrhage management in cases of uterine atony and/or placenta previa where pharmacological methods fail to control bleeding.

### AA-07|

#### OUTCOME OF PREGNANCY IN CASES OF EMERGENCY CESAREAN SECTION DUE TO DECREASED FETAL HEART RATE OR MECONIUM STAINED AMNIOTIC FLUID: 2016-2017 REVIEW.

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**Background:** At the department of obstetrics and gynecology of "Tzaneio" general hospital we evaluated perinatal outcome in cases of emergency cesarean (CS) section due to meconium stained amniotic (MSAF) fluid or decreased fetal heart rate (DFHR).

**Materials and Methods:** We revised log books of delivery room from 2016 – 2017 to note down cases of emergency CS due to MSAF or DFHR. In each incidence parity, Apgar score, low birth weight (LBW) and admission of fetus to ICU were evaluated.

**Results:** During 2016-2017 804 labors have occurred. About 369 (45,7%) delivered vaginally while 427 (52,0%) had CS and 1,2% needed instrumental assistance. Out of 427 women where CS was performed 18 cases were due to non-reassuring fetal status. 16 pregnancies presented DFHR while the rest of them (2 pregnancies) demonstrated MSAF. 8 women were multipara, 2 fetuses had Apgar score < 7,2 newborns were admitted to ICU and 1 newborn had LBW. There was no recording of stillbirth in our department.

**Conclusion:** Proper evaluation and management of non-reassuring indications of fetal status results in diminished incidence of stillbirth. It is important to mention that half of the cases (8 out of 18) are multipara while rest of our recordings is as anticipated (Apgar score, ICU admission, LBW,). More information can be extracted by further investigation concerning other causes of emergency CS (pre-eclampsia, hypertension ecc.).

### AA-08|

#### EMBRYONIC ANOPHTHALMIA – A CASE REPORT

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**Introduction:** Anophthalmia is the worst form of microphthalmia and concerns the complete absence of the embryonic ocular tissue.

**Aim:** Presentation of a case with an embryo with unilateral anophthalmia.

**Methods:** 20-year-old pregnant woman, para 1, gravida 1, with free past

medical history. The first trimester ultrasound has no pathological findings. The nuchal translucency was 1,80 mm and the adjusted risk for trisomies 21, 13, 18, was 1/4014, 1/6751 and <1/20000, respectively.

**Results:** The second trimester ultrasound revealed a male embryo with right anophthalmia, with no other visible anatomic abnormalities. Embryonic karyotype was suggested and MRI of the orbits. After proper consultation, the parents declined any further check and decided to terminate the gestation.

**Discussion:** Anophthalmia is a rare illness with high probability to be linked to chromosomal abnormalities. It can be related to Goldenbar syndrome, COFS, Walker-Warburg, Merkel – Gruber syndrome, Frasier syndrome, Hydroletharus, facial cleft, Neu-Laxova syndrome, Fryns syndrome, Proteus syndrome. It can be combined with chondrodysplasia punctata, Fancon anemiai και Roberts syndrome. It can also be present at triploidies, trisomy 9, 13 and 18. Teratogenic factors that can lead to microphthalmia/anophthalmia are ethyl alcohol, phenylephrine and TORCH. In the presence of anophthalmia, ultrasound should be performed to define the special features of the syndromes described above, as well as karyotype. It can appear at the same family. Microphthalmia may appear sporadically, but it is inherited as an autosomal recessive or dominant, or even X-linked disorder. If it is due to chromosomal abnormality the prognosis is very poor. If it is unilateral the prognosis is good. In general, the prognosis depends on associated anomalies.

#### AA-13|

##### CERVICAL SPINE DISORDERS DURING PREGNANCY. CONCEPTS AND MANAGEMENT

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**Aim:** Aim of this study is to present the most common cervical spine disorders during pregnancy.

**Material-Methods:** 2 cases of cervical spine stenosis (33,3%), 1 case of post traumatic cervical spine syndrome (16,7%), 1 case of osteoporosis (16,7%) and 2 cases of cervical spine hernias (33,3%) are described.

**Results:** All 6 cases were treated conservatively

**Conclusions:** Pregnancy involves complex somatometric changes that can trigger both cervical spine disorders and also pathological biomechanic-orthotic situations. Accurate diagnosis, appropriate management and treatment of cervical spine disorders during pregnancy require multidisciplinary approach and is an essential step to improve good perinatal outcomes.

#### AA-14|

##### INTRAUTERINE PREGNANCY IN A WOMAN WITH AN INTRAABDOMINAL INTRAUTERINE DEVICE

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**Introduction:** We present the case of a 25-year old woman who came in the emergency department with secondary amenorrhea and abdominal pain. She had an intrauterine device (IUD) inserted, as a form of long-acting reversible birth control, 3 years ago. The uterus may be perforated with an IUD. Perforations may be clinically apparent or silent. Their frequency depends on the operator's skill and is estimated to be approximately 1 per 1000 insertions (WHO). In some cases, a partial perforation at insertion is followed by migration of the device completely through the uterine wall. Occasionally, perforation occurs spontaneously.

**Materials and Methods:** As for the Obstetric history, she had 2 vaginal deliveries and, as mentioned, an IUD was inserted 3 years ago. We performed TV-Scan and we diagnosed 5+2 weeks pregnancy, consistent with the LMP. Via TVS, the device was not seen neither within the uterine cavity nor inside uterine walls so we localized it with an abdominal radiography inside the pelvis. The blood test results were normal except from the elevated free  $\beta$ -hCG.

**Results:** Laparotomy was performed. Our patient has an intra-abdominal IUD, a copper-bearing device firmly adhered near the right ovary, enclosed by omentum, which induces an intense local inflammatory reaction. We performed right appendectomy. Then, antimicrobial treatment was begun followed by prompt uterine evacuation. The patient remained in the hospital for 3 days. We estimate again the free  $\beta$ -hCG after 1 week.

**Conclusion:** The IUD has completely perforated the uterus, the woman became pregnant and the enlarging uterus has drawn the device upward. If the strings are not visible, attempts to locate and remove the device may result in pregnancy loss. This risk must be weighed against the risk of leaving the device in place.

#### AA-15|

##### COMPARISON OF THREE SONOGRAPHIC TECHNIQUES (TRANSVAGINAL, TRANSABDOMINAL, TRANSPERINEAL) FOR THE MEASUREMENT OF THE CERVICAL LENGTH IN THE THIRD TRIMESTER OF PREGNANCY

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**Introduction / Objective:** The measurement of cervical length (CL) with the transvaginal (TV) approach is the Gold Standard method. The purpose of this study was to investigate the feasibility and to measure the CL with the transperineal (TP) and transabdominal (TA) approaches and also to evaluate the agreement between the three methods in the third trimester of pregnancy (31-34 weeks).

**Materials and Methods:** In this prospective study, 228 pregnant women were enrolled, during the growth scan in the third trimester of pregnancy (31-34 weeks) at the 3rd Department of Obstetrics and Gynecology of Aristotle University of Thessaloniki. The CL was measured by the TV, TP and TA approach. The values of the TV measurement method were used as reference.

**Results:** CL was measured successfully in 119 (52.2%) cases by the TA and in all cases (100%) by TP and TV approach. The mean maternal age was 29.7 ( $\pm$  6.1) years and median week of gestation was 32 (range: 31-34) weeks. The CL was 35.2 ( $\pm$  6.9) mm for the TV, 34.7 ( $\pm$  6.6mm) for the TA and 35.2 ( $\pm$  6.6mm) for the TP approach respectively. No statistically significant differences were observed between TA - TV measurement ( $p = 0.174$ ), neither between TP - TV approach ( $p = 0.072$ ).

**Conclusions:** According to the findings of this study, the CL at 31-34 weeks of gestation can be measured with similar precision by the TA, TP and TV approach. However, TA measurements are only possible in about half of the cases (52.2%).

#### AA-19|

##### THE EXPERIENCE OF CAESAREAN SECTION IN YOUNG GREEK WOMEN

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**Background:** The thoughts and feelings that young mothers have after prolonged labour or a failure to progress (dystocia) and sub-

sequent emergency caesarean sections are under investigated in the current Greek population. The main research question of this study is to examine how young Greek mothers perceive this experience and which factors influence them.

**Materials and Methods:** Fourteen young mothers (mean age = 38.5 years, level of education = 16 years) with pregnancies complicated by dystocia and subsequent unplanned assisted deliveries (successful caesarean sections) participated in the study. They had not officially asked for psychological help and did not have during or after their pregnancy formal diagnosis of psychological/psychiatric diseases. The method that was used were semi-structured interviews during the first month following the birth of their child.

**Results:** Results indicated that for the majority of the participants existed initially sixteen categories that were later diminished at three according to data analysis following grounded theory. The three categories-main topics that are of interest to the mothers were 1) the child's physical health, 2) the mother's physical health, and 3) mainly the mother's psychological health in the form of negative thoughts and feelings (fear, anxiety) for future pregnancies. Social support and the healthcare system were reported by women as the factors influencing their negative state.

**Conclusions:** Our findings support that even healthy young mothers after surgical operations (such as caesarean sections) do experience emotional and cognitive changes. These problems may go unnoticed by doctors and families due to lack of information for possible complications during or after their pregnancy or postpartum inadequate support. Further studies are needed for the diagnosis of risk factors that can transform personal changes of thought and emotion into severe psychological problems such as postpartum depression.

#### AA-21| PERIPHERAL NERVOUS SYSTEM DISORDERS DURING PREGNANCY. CURRENT CONCEPTS AND MANAGEMENT

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**Aim:** Aim of this study is to present the most common peripheral nervous system disorders during pregnancy.

**Material – Methods:** 2 cases of carpal tunnel syndrome (33,3%), 1 case of ulnar tunnel syndrome (16,7%), 1 case of tarsal tunnel (16,7%) and 2 cases of peripheral facial nerve palsy (33,3%) are described. All of them were in the second half of the pregnancy.

**Results:** All 6 cases were treated conservatively

**Conclusions:** Pregnancy involves complex physiological, psychological and psychosomatic changes that can trigger both peripheral neurological disorders and also pathological - hypertensive situations. Accurate diagnosis, appropriate management and treatment of peripheral neurological disorders during pregnancy, needs multidisciplinary approach, essential step to improve good perinatal outcomes.

#### AA-22| MODE OF DELIVERY IN PRIMIGRAVIDA: REVIEW OF YEARS 2016-2017

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**Background:** We studied different modalities of primigravida and their newborns in our department of obstetrics and gynecology at "Tzaneio" G.H.P.

**Materials and Methods:** We revised our department's log books

from 2016 to 2017 for different modalities concerning primigravida. For each pregnancy mother's age, mode of delivery, gestational age, fetal weight and indication of cesarean section (CS) were noted.

**Results:** During 2016-2017 806 labors were performed. About 369 (45,7%) had vaginal delivery, 427 had CS (52%) while 10 deliveries (1,2%) needed instrumental assistance. About 327 women out of 806 were primigravida (41%). From this group, 147 (45%) cases delivered vaginally, 172 (53%) required CS and 7 (2%) pregnancies had instrumental delivery. As for maternal age, 164 women were less than 25 years, 145 were between 25 and 35 years and 18 exceeded 35th year. Mean age has been calculated at 22,5 years. Gestational age at the time of delivery was less than 35w6d in 7 pregnancies, between 36w-37w in 55 cases, 183 delivered from 38th -40th week while 51 labors exceeded 40 weeks of gestational age. Gestational age in 31 cases was unknown. Fetal weight was measured less than 2500gr in 5 pregnancies, about 255 were between 2500gr - 3500gr and 67 neonates were more than 3500gr. The mean weight was calculated at 3283gr.

**Discussion:** Primigravida women occupy a large proportion of total cases of pregnancy in our department. The mean maternal age that was calculated was lower compared to national standards. This finding may be attributed to the educational and financial status of the population that is served by our hospital. Proportion of CS is lower compared to the general population. There is also a great difference concerning instrumental delivery which contributes in reducing incidence of CS. Further investigation and effort should be placed over reduction of CS because majority of cases concern operational delivery due to previous CS.

#### AA-24| SPINAL DISORDERS DURING PREGNANCY. APPROPRIATE MANAGEMENT AND CURRENT CONCEPTS

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**Aim:** Aim of this study is to present the most common spinal disorders during pregnancy.

**Material-Methods:** 2 cases of low back pain (33,3%), 1 case of failed back syndrome (16,7%), 1 case of spinal stenosis (16,7%) and 2 cases of disc hernia (33,3%) are described. All of them were in the second half of the pregnancy.

**Results:** All 6 cases were treated conservatively

**Conclusions:** Pregnancy involves complex biomechanics and orthopedic changes that can trigger both spinal and also stability situations. Accurate diagnosis, appropriate management and treatment of spinal disorders during pregnancy, needs multidisciplinary approach, essential step to improve good perinatal outcomes.

#### AA-26| CAESAREAN SECTION RATE IN A TERTIARY CENTRE BETWEEN 2000-2017: RETROSPECTIVE ANALYSIS

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**Introduction:** Caesarean section (c/s) rate has been steadily rising over the past 20-30 years. Elective caesarean section is performed primarily for a history of previous caesarean section, multiple pregnancy, placenta previa and abnormal presentation (breech, transverse). Emergency caesarean section is performed for cephalopel-



vic disproportion (CPD), abnormal cardiotocography, antepartum haemorrhage, preeclampsia and intrauterine growth restriction. The three main etiologies for a primary c/s include CPD, abnormal CTG and abnormal presentation.

**Objectives:** Estimation of c/s rate and indications within a period of 18 years to identify possible changes and trends.

**Material:** 22.304 women that delivered at the Obstetric Department of the Archbishop Makarios III Hospital in Nicosia Cyprus between 2000-2017.

**Method:** Retrospective analysis of birth registry and patient files.

**Results:** There is a steady increase in the rate of c/s over the years, starting from 17.6% in 2000, 25.49% in 2005, 35.48% in 2010, 48.7% in 2015 and 50.1% in 2017. This increase is not affected by the rate of instrumental delivery as it has remained relatively constant with a rate of 4.25% in 2000, 5.17% in 2005, 4.11% in 2010, 3.88% in 2015 and 4.15% in 2017. Mean rate of c/s is 40.5% (range 17.6-50.1%) and of instrumental delivery is 4.23% (range 2.31-5.64%). Indications for elective or emergency c/s include elective repeat in 27%, abnormal cardiotocography in 16%, multiple pregnancy in 13%, cephalopelvic disproportion in 10%, abnormal presentation in 10%, preeclampsia in 5%, placenta previa in 4%, intrauterine growth restriction in 3% and retinal detachment in 2%.

**Conclusions:** Increased c/s rate over an 18-year period is significant as the rate has nearly tripled since 2000. The three main indications include cephalopelvic disproportion, abnormal cardiotocography and multiple pregnancy. Prevention strategies include reduction of multiple pregnancies, external cephalic version for breech presentation, partogram, cardiotocography training and trial of labour after caesarean (TOLAC).

**AA-29| Malformations on a fetus papyraceus in a mono chorionic diamniotic twin pregnancy: A case report and a mini-review Emmanouil Kontomanolis.** Zacharias Fasoulakis, Anastasios Lyberis, Georgios Galaziois

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**Introduction:** Vanishin twin syndrome was first described by Stoeckel et al., in 1945 and represents a multigestational pregnancy, characterised by abnormal formation of one of the fetuses, either completely reabsorbed, or mummified, or even being an amorphus mass attached to the placenta.

**Materials and Methods:** We report the physical malformations on a case of fetus papyraceus in a mono chorionic diamniotic (MCDA) twin pregnancy, in a 19-year-old primigravida without complications for the mother and the living fetus, even though no monitoring of the pregnancy after detection of fetal death was conducted.

**Results:** Great malformations were observed on the dead fetus that deceased at 18 weeks, even though fetal anatomy seemed to be normal by the time of the second level ultrasonography. The fetus' upper limbs, spine and cranium were all fully recognizable while there is a noticeable torsion of the hip area with displaced lower limbs while visceral skull was deformed [Image C].

**Conclusions:** Multiple pregnancies exhibit increased fetal and maternal complication rates. In mono chorionic pregnancies, single intrauterine fetal Demise (IUFD) is associated with elevated perinatal mortality and serious neurological disabilities for the living embryo.

Figure 1

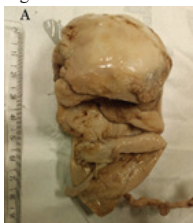
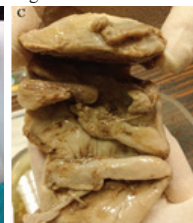


Figure 2



Figure 3



Congenital anomalies are also reported in the literature. Evaluation of the surviving fetus' brain in a single fetal death of a mono chorionic pregnancy should be performed after delivery. Fetal magnetic resonance imaging and neonatal cranial ultrasound are both recommended and provide detailed information about brain lesions and developmental delay in the surviving twin. In our case, the mother claimed that due to socioeconomic factors, she couldn't be monitored through her whole pregnancy, even after the diagnosis of fetal death and that through the previous ultrasounds there was normal development of the fetus.

**AA-30|**

**CERVICAL INTRAEPITHELIAL NEOPLASIA DOESN'T SEEM TO PROGRESS DURING PREGNANCY. DATA FROM ANTEPARTUM AND POSTPARTUM ASSESSMENT. REVIEW OF THE LITERATURE**

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**Objective:** The aim of this work was to assess the proper management of CIN during pregnancy. The objective was to diagnose and follow up pregnant women with cervical pathology. Secondly, we tried to understand the role of pregnancy as far as the progress of premalignant cervical lesions.

**Material/Method:** The main screening tool was cytology and it was initially used to screen pregnant women who had a history of HPV infection, have had any kind of treatment for CIN or had not have had a pap smear test for at least 3 years. Colposcopy was used when cytology findings were ASCUS or higher or there was a history of HGSiL (treated or not). Colposcopy guided cervical biopsy was used when cytology and/or colposcopy indicated a HGSiL lesion. During 2014-2015, at Elena Maternity Hospital - Athens, 678 pregnant women underwent pap smear screening and 12% of them (n=81) had pathology and underwent further investigation. 653 cases were due to lack of recent screening and 25 cases of known CIN. Furthermore 32 cases of treated women with LEEP had an initial colposcopy/cytology approach. Totally 710 pregnant women underwent investigation for cervical pathology during this period.

**Results:** A total of 54 women were diagnosed with lesions. 46 cases were diagnosed with LGSiL (37 cytology/colposcopic diagnosis and 9 of them confirmed with biopsy), 7 cases with HGSiL (biopsy confirmed including 3 CIN3) and 1 case of Microinvasive squamous carcinoma of the cervix (treated during pregnancy with LEEP). 37 women came back for follow up. Only one woman had a postpartum diagnosis greater than antepartum. The following table analyze these data.

**Conclusions:** Cervical pathology should be at concern during pregnancy and there are a lot of cases that are diagnosed during pregnancy. Colposcopy, cervical biopsy and conization are safe during pregnancy but need experience. CIN lesions rarely progress during pregnancy and they can be reassessed postpartum if we exclude microinvasion.

Status	Cases During Pregnancy	PP follow up	PP diagnosis free of disease (Biopsy)	PP diagnosis Cin 1 (Biopsy/LEEP)	PP diagnosis Cin 2 (Biopsy/LEEP)	PP diagnosis Cin 3 (Biopsy/LEEP)	Same Diagnosis AP vs PP	Lesion that worsened	Lesion that improved
Cin1(cytology+colpo)	39	24	3	20	1	-	20/24	1/24	3/24
Cin1(biopsy)	7	6	1	5	-	-	5/6	-	1/6
Cin2	4	3	-	2	1	-	1/3	-	2/3
Cin3	3	3	-	-	-	3	3/3	-	-
Total	54	36	5	27	2	3	29/36	1/36	6/36
MISC	1	1	1	-	-	-	-	-	1/1(after therapy with loop)

AP:Antepartum PP:Postpartum Colpo: Diagnosis based on colposcopic features without biopsy MISC: Microinvasive Squamous Ca

## AA-31|

**PREGNANCY OUTCOME IN RHEUMATIC DISEASES**

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**Objective:** Chronic inflammatory rheumatic diseases frequently affect women of the reproductive age. For these women family planning is an important issue in their life, yet this issue is characterized by a lot of concerns and conflicting information for both patients and doctors. The aim of our study is to evaluate the distribution and the obstetric outcomes of pregnancies with different types of rheumatic diseases managed in our department.

**Materials and Methods:** We study pregnancies of 63 women with rheumatic diseases, seen at our department for their antenatal care between January 2010 and December 2017, in cooperation with a specialist rheumatologist. In all patients we recorded demographic data, obstetric history, comorbidities, disease activity during pregnancy and puerperium and medication given during pregnancy.

**Results:** The most encountered rheumatic diseases were systemic lupus erythematosus (SLE, 36.5%) followed by rheumatoid arthritis (RA, 20.6%), Behcet's disease (15.8%), ankylosing spondylitis, antiphospholipid syndrome (APS), Sjogren's syndrome, scleroderma, mixed connective tissue disease and psoriatic arthritis. The mean maternal age was 31.7±4.2, the rate of nulliparity was 42.8% and the mean duration of disease was 6.3±4.7 years in the overall group. There was no significant difference for the mean maternal age and mean duration of disease between the types of rheumatic diseases. The patients' obstetrical histories revealed 2 or more miscarriages in 11.7% of the overall cases, with a highest incidence of 57.1% in the APS. Mean gestational age at delivery was 36.5±2.4 weeks and mean birth weight was 2989±543 g. in the study group. Pregnancies with APS had a significantly lower mean gestational age at delivery (33.6 ± 3.5 weeks) than the other types of rheumatic diseases.

**Conclusions:** Women with rheumatic diseases have mainly successful pregnancies and deliver healthy babies, with the coordination of an obstetrician and a rheumatologist both experienced in autoimmune diseases.

## AA-32|

**PREGNANCY LATENCY INTERVAL AFTER DIAGNOSIS OF FETAL GROWTH RESTRICTION AND CORRELATION WITH EPIDEMIOLOGICAL, OBSTETRICAL AND ULTRASOUND PARAMETERS: PROSPECTIVE STUDY.**

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**Objective:** To study the prolongation interval after the diagnosis of fetal growth restriction (FGR) and detect potential correlation with epidemiological, obstetrical and ultrasound parameters.

**Methods:** A prospective observational study was conducted between 1/2015-1/2018 enrolling all pregnancies with fetal growth restriction that were followed-up by the High-Risk Pregnancy Unit of our Department. Singleton pregnancies were exclusively included in the present study. Epidemiological and obstetrical characteristics were recorded as well as the total of ultrasound parameters from the moment of FGR diagnosis and onwards. Primary outcome of the study was the interval from FGR diagnosis until delivery (latency interval). Secondary outcome was a potential correlation with the aforementioned parameters.

**Results:** There were 212 cases included in the study. Mean maternal

age was 30.9 (± 6,7 years), mean gestational week at FGR diagnosis 33.2 (± 3.0) weeks and mean estimated fetal weight 1791 ± 516 grams (5th centile). Mean latency interval of all cases was 8.9 days. Latency interval was significantly different between cases with early and late FGR (19.9 vs. 7.7 days, P=.002). Gestational week at diagnosis was the only parameter found to significantly affect latency interval (P<.001). No significant correlation was detected with the other epidemiological and ultrasound parameters.

**Conclusion:** Latency interval of cases with FGR is mainly affected by the gestational age of FGR development and not from other epidemiological and ultrasound parameters.

## AA-33|

**MATERNAL DIABETES AND BIRTH DEFECTS**

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**Objectives:** This study aims to review the association between maternal diabetes and the development of the embryo.

**Methods:** We searched all data in databases PUBMED, MEDLINE COCHRANE, from 2008 to 2018 and the guidelines of European countries, USA and Canada.

**Results:** Maternal diabetes appears to have a toxic impact on the development of the embryo and significantly increases the risk of congenital malformations in humans. The congenital malformations associated with diabetic pregnancy arise before the seventh gestational week. Diabetic embryopathy can affect any developing organ system, including the central nervous system (CNS), skeletal system, renal system, cardiovascular system, and gastrointestinal system. Uncontrolled diabetes has profound effects on congenital anomalies, and recent evidence increasingly indicates that some of these effects are lifelong and may contribute to adult obesity. Pregnant women with fetuses with diabetic embryopathy may have chronic or unrecognized hyperglycemia and elevated levels of glycated hemoglobin. Despite that there is not a universal statistical agreement, a high number of investigators find that malformations in infants occur three to four times more often in insulin dependent mothers, than women with a non-diabetic pregnancy. Maternal insulin-dependent diabetes has been associated with congenital malformations, which have become increasingly prominent, even when other causes of mortality and morbidity were reduced or eliminated. Numerous other factors including vascular disease, hypoxia, ketone and amino acid abnormalities, glycosylation of proteins, or hormone imbalances could be teratogenic. During the first trimester, fetuses exposed to insulin analogues only, had a lower chance of congenital anomaly than those exposed to human insulin only. Moreover, a possible lower risk of congenital heart defects among fetuses only exposed to insulin analogues needs further investigation.

**Conclusions:** Preconception control of diabetes and monitoring throughout pregnancy are important in reducing the impact of diabetes on the fetus and newborn. A large-scale prospective study is required to determine early fetal loss rates and assess the effect of diabetic control on malformation rates.

## AA-35|

**THE USE OF EPIDURAL ANALGESIA DURING LABOUR, ITS EFFECTS ON LABOURING WOMEN AND THEIR NEWBORNS AND THE ROLE OF MIDWIVES**

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**Introduction- Objective:** The continued evolution in epidural analgesia industry, changes in catheter solution, new drugs selection and latest epidural analgesia methods, show significantly flats of female

satisfaction and reduction of the complications in pregnant women and their fetuses and newborns. The aim purpose of this study is to analyze epidural analgesia during labour, its effects and complications to the parturient and the fetuses – neonates and finally to show the advantages and disadvantages in labour.

**Methods – Materials:** A review of the articles with recent literature on epidural analgesia use and the use of the protocols and the Guidelines that concern the epidural use and its safety use in pregnant women.

**Results:** It is supported that EA causes prolongation of the stages of labour, otherwise it's accelerating the stages of labour with the proper use of drugs. Depending on the methods and according to the latest data, EA is used by various methods and allows to the parturient to change positions, to walk or to sit. Its effect on breastfeeding, in different studies began from the first day. Use of EA should be done with great care because it all depends on the correct assessment of the interest rate, correct choice of medicines and methods, right timing and the appropriate conditions of each country.

**Conclusions:** Midwives are responsible of communication with laboring women, they decide which women are able to get EA, while helping the anesthesiologist to place the catheter of EA. Because of the low dose drugs it's been observed an increase in duration of analgesia, smaller percentages of pain, satisfaction rates, less significant complications in newborns – infants and breastfeeding, and finally a better experience of the labour, because pain during labour and the defining of it during parturition, is a factor for fear in a subsequent pregnancy.

#### AA-38| Embryonic micrognathia: A case report

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**Introduction:** Micrognathia is the hypoplasia of the mandible. The incidence is 1/30.000 births.

The reasons are:

- Chromosomal abnormalities (triploidy, trisomy 18).
- Genetic syndromes (Robin syndrome, Robert Syndrome, Treacher-Collins syndrome).
- Teratogens.

**Aim:** Presentation of a case regarding an embryo with micrognathia.

**Materials:** Pregnant woman 26-year-old, gravida 1, para 1, with spontaneous conception and no past medical history visited the outpatient center of ob/gyn department of the general hospital of Edessa. The ultrasound revealed micrognathia. The adjusted risk for trisomy 21,13 and 18 was 1/6692,1/6185 και 1/16290 respectively.

**Results:** Micrognathia may be a family feature but sometimes it is related to genetic syndromes. Prenatal diagnostic invasive procedure was suggested in order to investigate chromosomal and genetic syndromes. The parents decided to perform chorionic villus sampling and DNA analysis with chromosomal microarray analysis (CMA).

**Discussion:** Analysis of the genetic material revealed male embryo with a deletion of 925.000 bases at the chromosomal area 1p21.1, that contains 1 registered gene at the database OMIM: COL11A1. There are no references at the international bibliography or the Database Genomic Variants or the Database of Chromosomal Imbalance and phenotype in Humans Using Ensemble Resources, regarding normal people or patients with this finding at the chromosomal area 1p21.1. According to the existing bibliography and the database ONLINE Mendelian inheritance in Man, mutations at the gene COL11A1 have been linked to the appearance of clinical features of Marshall and Stickler syndromes, that contain micrognathia, hearing loss, vision problems and skeletal abnormalities. After proper counselling the parents decided to terminate the gestation. Parental

examination was suggested with a-CGH/FISH, which revealed the same base deletion at the mother of the embryo.

#### AA-40|

#### CHILDBIRTH IN THE PLACES FOR "NATURAL BIRTH" AND EFFECTS ON BREASTFEEDING IN GREECE TODAY

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**Introduction:** The objective of this study is to identify how and to what degree the birth experience in places that promote "natural birth" (birth without medications and interventions), such as the rooms "like at home" or rooms with a birth pool in Greek maternity clinics, affect the initiation and the course of breastfeeding.

**Material and Methods:** This work is based on post-doctoral research on "natural birth" places in maternity clinics in Athens and Thessaloniki, as well as on my experience as a breastfeeding counsellor, in combination with findings from my doctoral thesis and on the literature on birth and breastfeeding. The research was conducted through observations, photographs, gathering of information on the clinics, and interviews with mothers on their birth experience. For this presentation the narrations of 16 mothers, 11 midwives and six obstetricians were utilized.

**Results:** The women who gave birth in those birthing suites mentioned that they had a positive labour and delivery experience with or without a minimal use of medications and interventions and that they were in a good physical and emotional condition postpartum, a fact that made the beginning of breastfeeding smooth in most cases. An important finding was that the birth experience empowered the mothers to cope with the difficulties of breastfeeding when these occurred. It was also observed that most newborns were alert at birth and thus had the ability to nurse immediately and with a relative ease.

**Conclusions:** The rooms for "natural birth" gave the possibility to women and their infants to experience a spontaneous intervention-free birth. Thus, they indirectly helped both of them to be in a good psychophysical condition after the birth, and therefore breastfeeding was smooth and problem-free in most cases. Hence, it was found out that such places contribute to the initiation and the success of breastfeeding.

#### AA-41|

#### PRENATAL DIAGNOSIS OF EDWARDS SYNDROME

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**Background:** Trisomy 18, also known as Edwards syndrome, is the 2nd most common chromosomal trisomy (after Down syndrome) at a rate of 13% among all chromosomal abnormalities and an incidence of about 1 per 6000 live births. It is caused in 95% of all cases by the presence of an extra chromosome 18 (3 in total number). 5% of cases are due to mosaicism. The extent and gravity of the anomaly depends on the ratio of normal and abnormal cells.

**Methods:** A 28 years old primigravida, with no obstetric history, came to the Obstetric department of the General Hospital of Messinia for pregnancy monitoring. At gestational age of 12 weeks she underwent the first trimester ultrasound. Findings of the ultrasound were thickening of the nuchal translucency at the level of 7,5mm, in-



creased impedance to flow in the fetal ductus venosus, great tricuspid regurgitation along with generalised oedema of the fetal body. Subsequently the mother underwent chorionic villus sampling. The result of the prenatal chromosomal control was abnormal female karyotype - 47,XX,+18. Finally, genetic testing was performed to both parents with normal outcomes.

**Results:** The patient was scheduled for a termination at gestational age of 13<sup>+1</sup> weeks due to fetal pathology.

**Conclusion:** This case report is reported due to the rareness of the disease and the sonographic findings. Great suspicion and awareness is indispensable in such cases, especially when Edwards syndrome is caused by an unbalanced translocation where both parents ought to undergo genetic testing. This is of great importance for future gestations.

#### AA-42|

### BILATERAL CONGENITAL FETAL CHYLOTHORAX. A RARE CASE OF A THIRD TRIMESTER PREGNANCY

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**Introduction:** Pleural effusion is rare during fetal and early life and its most common manifestation is chylothorax. The severity of the disease depends on the amount of the fluid, the trimester of the pregnancy and the necessity for therapeutic paracentesis.

**Purpose:** To present a rare case of bilateral congenital chylothorax and its successful treatment.

**Case:** A 33 years old woman G3P2, with two previous c-sections, at 31 weeks of her pregnancy was referred to our Department from a district hospital due to fetal bilateral pleural effusion that was found during an ultrasound examination. Her pregnancy till 31 weeks was without any serious complications. She was hospitalized for 13 days. During her stay consecutive paracenteses were performed and steroids were administered in order to achieve fetal lung maturation and lung expansion. Cultures of the fluid were negative and the molecular karyotype was normal. A c-section was performed at 33 weeks of pregnancy. A female baby was born with a weight of 2375 gr that was intubated immediately after birth. Bilateral Bilau catheters were placed. The analysis of the pleural fluid showed a concentration of 98% lymphocytes and 2% neutrophils that is consistent with chylothorax. Infant circulation was supported with fluids and inotropic drugs. The infant remained intubated for 9 days. During that period the infant received antibiotic treatment and was fed on day 5 with MCT milk without complications.

**Outcome:** During the following days the quantity of the pleural fluid was gradually diminished, the Bilau catheters were removed. The chest x-ray was normal. The infant was discharged on day 28 with instructions.

**Discussion:** Congenital chylothorax is a rare condition. A prolonged fetal pleural effusion can lead to serious lung hypoplasia and high fetal mortality and morbidity. Consecutive paracenteses of the fluid allow the lungs to expand enabling a better prognosis for the fetus!

#### AA-44|

### MANAGEMENT OF PREMATURE RUPTURE OF MEMBRANES AT TERM

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**Objective:** Premature rupture of membrane (PROM), a spontaneous rupture of the amniotic membranes before the onset of active labor, is prevalent in 8–10% of pregnancies at term. The aim of our study is to estimate maternal and neonatal risk in women with low Bishop-score, undergoing induction of labor following a prolonged latency period of PROM at term.

**Materials and methods:** We study all women who were admitted for PROM at term (37<sup>+0</sup> to 41<sup>+6</sup> weeks of gestation). Perinatal outcome of women who underwent labor induction due to prolonged (>24 h) PROM (induction group) were compared to those of women with spontaneous onset of labor within 24 h from PROM (control group).

**Results:** Overall, among 7658 deliveries during the study period, 621 (8.1%) admitted with term PROM. Of them, 329 (52.9%) were eligible for the study, 81 (24.6%) underwent labor induction with prostaglandin E2 (PGE2) due to the lack of spontaneous onset of labor 24 h after PROM onset (induction group) and 248 (75.4%) had spontaneous onset of labor within 24h of PROM (control group). There were no significant differences between the groups in the rate of spontaneous or operative vaginal deliveries. Women who underwent PGE2 induction had higher rate of cesarean delivery than those who had spontaneous onset of labor (16.8 vs. 6.0%). Cesarean delivery for suspected chorioamnionitis, placental abruption or fetal distress was comparable between the groups. No differences were found between the groups in the rate of intra- or post-partum fever, post-partum hemorrhage or need for blood products transfusion.

**Conclusions:** Women who underwent induction of labor following a prolonged PROM were at an increased risk for caesarean section and specifically due to labor dystocia compared to those with spontaneous onset of labor, however, with no increased risk for adverse neonatal outcome.

#### AA-45|

### GENETIC POLYMORPHISMS OF MATRIX METALLOPROTEINASES 1,2,3 AND INHIBITOR OF MATRIX METALLOPROTEINASE 2, DO NOT PLAY A ROLE IN THREATENED PRETERM LABOUR. A PROSPECTIVE STUDY

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**Introduction and Aims:** Extracellular matrix proteins metalloproteinases (MMPs) and their inhibitors (TIMPs) are involved in the breakdown of fetal membranes before delivery. Our aims were to investigate the occurrence of any polymorphism on genes coding for MMPs 1-3 and TIMP 2 in preterm labouring patients as a potential source of this phenomenon.

**Methods:** A prospective, cross-sectional population study was performed in outpatient antenatal and fetomaternal clinics in a Greek teaching hospital. Group A (control) included 66 women with no symptoms of premature labour. Group B (research) comprised 66 women, exhibiting the classic symptoms of threatened preterm labour. The genes for MMPs 1-3 and TIMP 2 were quantified via the application of the ELISA method and detected by performing a polymerase chain reaction (PCR). Restriction Fragment Length Polymorphism (RFLP) was applied to digest PCR products using restriction enzymes.

**Results:** Main outcome measures were concentration of polymorphic genes encoding for MMPs 1-3 and TIMP 2. No statistically significant difference in polymorphism (MMP 1-3 and TIMP 2), both in the distribution of genotype as well as allele frequencies were detected between the two groups. Genotypes and allele frequencies

of MMP 1-3 and TIMP 2 in relation to gestational age less/greater than 32 weeks for the premature labour group also demonstrated no statistically significant difference ( $p=0.724/p=0.736$  respectively).

**Conclusions:** The gene polymorphisms of MMP 1-3 and TIMP 2 are not associated with premature rupture of membranes/contractions, as well as age of pregnancy at preterm labour. More studies are required to further investigate other possible polymorphisms.

**Keywords:** Matrix metalloproteinases, Preterm labour, Genetic polymorphism

AA-47|

#### PREVENTION OF MOTHER-TO-CHILD TRANSMISSION IN WOMEN AFFECTED BY HIV: A DATA REVIEW

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**Objectives:** This study aims to review the latest data to determine the ideal way to give birth in case of HIV-positive pregnant women, included data about the transmission of HIV during pregnancy, labor, delivery and breastfeeding.

**Methods:** We searched all data in databases PUBMED, MEDLINE COCHRANE, from 2008 to 2018 and the guidelines of European countries, USA and Canada.

**Results:** HIV-1 epidemiology is changing and prevention of mother-to-child transmission (PMTCT) strategies have been continuously optimized over time. However, the correct management of infected women during pregnancy, is crucial for PMTCT and cases of vertical transmission continue to occur. New issues regard the optimal antiretroviral-therapy regimen for pregnant-women with good immunological control, the use of intrapartum zidovudine (ZDV) in pregnant women with low-viral-load, the optimization of prophylaxis in the settings where breastfeeding is recommended and use of combined-neonatal-prophylaxis (CNP) in infants at high-risk for MTCT. Complete viral control has been achieved in most infected pregnant women and led to change the recommended mode of delivery, since vaginal-birth has become a safer option, and is now largely recommended. During the past 20 years, there's a decline in perinatal infection of HIV from 15-20% to 1-2% due to elective-caesarean-section in all HIV-positive women. Using new antiretroviral drugs (efavirenz, tenofovir, emtricitabine, ritonavir-boosted atazanavir) the benefit of elective-caesarean-section in women with low viral load is questioned. Nowadays, experts suggest vaginal birth for women with low viral load. However, there is still argument on determining the viral load under which a woman can undergo vaginal labor, ranging from 50 to 1000 HIV-RNA copies/ml. Recent studies demonstrate that in women with low viral load, there is no difference in perinatal infection ratio regardless of the way of birth.

**Conclusions:** Data are accumulating on efficacy, effectiveness and safety of different PMTCT strategies, however, further researches are needed to optimize the management of infants at extremely low-risk for MTCT, as well as in those presenting with high risk for infection. In women with effective antiretroviral-therapy and low-viral-load, vaginal-birth can safely take place. Elective caesarean section is mandatory in cases of failure of the retroviral therapy and inability to control the viral load.

AA-48|

#### INTRAPARTUM DECELERATIONS: CLINICAL SIGNIFICANCE AND OUTCOME

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**Introduction:** Intrapartum fetal surveillance is used to prevent adverse fetal or neonatal outcome associated with hypoxia and metabolic acidosis. Hypoxia and subsequent metabolic acidosis lead to short term (hypoxic-ischemic encephalopathy) or long-term complications (cerebral palsy), in a minority of cases. Decelerations are considered the most ominous of abnormal cardiotocographic patterns.

**Objectives:** The recognition of abnormal cardiotocographic patterns, as well as their clinical significance.

**Material:** 303 pregnancies that were delivered following a suspicious or pathological (abnormal) cardiotocograph at the Archbishop Makarios III Hospital in Nicosia Cyprus between 2015-2016 were included.

**Method:** Retrospective analysis of birth registry and individual patient files.

**Results:** 303 cases of suspicious or pathological intrapartum cardiotocography that required delivery expedition, despite conservative methods to resuscitate were conducted. The rate of intrapartum abnormal traces (suspicious and pathological) that required delivery expedition was 303/1582 (19.15%). A total of 251 primary caesarean sections were performed and 52 instrumental deliveries. The rate of primary caesarean sections with an indication of "abnormal cardiotocography" was 251/969 (25.90%), and in the total caesarean section rate was 251/1279 (19.62%). Instrumental delivery for this indication is the commonest one with 52/91 (57.14%). The rate and type of deceleration recorded were late 107/303 (35.31%), variable 69/303 (22.77%) and early 40/303 (13.20%). During the first stage of labor, late were 91/251 (36.25%), variable 59/251 (23.50%) and early 14/251 (5.57%). During the second stage, early were 26/52 (50%), late 16/52 (30.76%) and variable 10/52 (19.23%). Association with low 5-minute Apgar score and meconium stained fluid exists only with late, repeated decelerations.

**Conclusions:** Abnormal cardiotocographic trace is the commonest indication for a primary caesarean section by 25.90% and the second commonest in total. Instrumental delivery due to this indication was the commonest by 57.14%. Prompt identification between ominous and benign features is required in order to avoid unnecessary interventions.



