

Stress hormones to bishop score ratio and induction to delivery time interval

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Introduction and aims of the study: Some clinical studies have shown that the combination of mechanical and pharmacologic methods may have benefits in labour induction(LI) process over the use of a single method without increasing the risk of obstetric or perinatal outcomes. The Cortisol/Dehydroepiandrosterone Sulfate(DHEA-S) ratio is considered a measure of chronic stress, which affects the hypothalamic-pituitary-adrenal(HPA) axis. The aim of the study was to find out if the hormonal ratio has an impact on the induction to delivery time interval.

Materials and Methods: The implementation of the project “Role of Metabolome, Biomarkers and Ultrasound Parameters in Successful LI” was started in Rīga Maternity hospital January 2021. Nulliparous women with singleton pregnancy, at cephalic presentation, intact membranes and Bishop score 6 or less with indication for LI at term were included. Laboratory samples were collected right before LI. Cortisol/DHEA-S ratio, as well as Cortisol/DHEA-S ratio to Bishop score index were calculated. LI was performed with a combined method–Foley catheter and Misoprostol orally. Descriptive statistical analysis was carried out using IBM SPSS 24.0software.

Results: 50patients were included into the study. The mean age of participants was 28.1years. Morning cortisol level from saliva and DHEA-S from blood were collected before the LI. Mean Cortisol/DHEA-S ratio was 13.34(SD 5.37). Mean Bishop score was 3points. The mean induction to delivery time interval was 16hours 12minutes. Significant, but weak correlation in Cortisol/DHEA-S and Bishop score index was observed from the start of the LI to the time of the delivery ($r=0.352;p=0.013$). These factors did not affect the mode of delivery ($p>0.05$). 45patients(90%) had vaginal delivery after successful LI.

Conclusions: The higher is the Cortisol/DHEA-S/Bishop score index, the longer is the induction to delivery time interval.

This research is funded by the Latvian Council of Science project “Role of Metabolome, Biomarkers and Ultrasound Parameters in Successful LI”, No.lzp-2021/1-0300.

doi:10.1016/j.ejogrb.2023.08.045

Are obese mothers at higher risk of developing postpartum depression?

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Introduction and aims of the study: Obesity, defined as having a body mass index (BMI) > 29.9 kg/m², has been associated with anxiety, major depression disorder, and other mental disorders in the non-pregnant cohort. Evidence regarding obesity and its association with developing postpartum depression (PPD) is scarce and conflicting. Our aim

is to determine if obesity is associated with a higher rate of screening positive for postpartum depressive symptoms as measured by the Edinburgh Postnatal Depression Scale (EPDS).

Methods: This study is a retrospective cohort study. After ethical approval, a retrospective review of all women who had a live singleton delivery in 2016-2017 in the Rotunda Hospital in Dublin, Ireland, was performed. The primary exposure variable, booking BMI, was gathered, and women were stratified into four of the World Health Organization BMI categories (underweight, normal weight, overweight, and obese). Other variables gathered were maternal age, parity, and mode of delivery. All women were screened for postpartum depression using the EPDS and the primary outcome measure for our study was an EPDS score of ≥ 12.

Results: Among 15,309 women studied, 4.47% of normal weight women screened positive for PPD. A statistically significant proportion of overweight and obese women screened positive: 5.85% and 5.95%, respectively. Multiparity, age over 40, and delivering via emergency Caesarean section were also associated with higher rates of screening positive for PPD among obese women.

Conclusions: Obesity may be a major and under-recognized risk factor for developing PPD. While we did not take into account psychological risk factors, this is an important stepping stone for providing preconceptional and antenatal counselling and care to obese women with regards to their mental health post pregnancy.

doi:10.1016/j.ejogrb.2023.08.046

The psychosomatic status of pregnant and puerperal women in a crisis situation of military actions in ukraine: results of 10 months of the health and social project of the odesa branch of the association of ob/gynecologists of ukraine

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2. Perinatal mental health

Objective: The socio-political state of any society determines the culture and quality of maternity care, determines the development and psychophysical health of the nation for generations to come. With the start of Russia's full-scale invasion of Ukraine on February 24, 2022, Ukraine's basic safety and security needs, especially for pregnant/puerperal women, have been disrupted.

Aim: Study of the psychosomatic state of pregnant /puerperal women who found themselves in f military operations, with the aim of stabilizing and improving the demographic situation in Ukraine.

Study design: A prospective study of the psychosomatic state of pregnant / puerperal women during the War in Ukraine by conducting an online questionnaire using The Beck Depression Inventory (BDI).

Results: 731 pregnant / puerperal women took part in the projects for the period from April 7, 2022 to January 28, 2023. Of them - those are living in the zone of active hostilities (I group) - 138 (18.9%), living outside the zone of active hostilities in Ukraine (II group) - 504 (68.9%), and migrants living outside Ukraine (III group) - 89 (12.2%). There were 465 (63.6%) pregnant and 266 (36.4%) puerperal women. When comparing the psychosomatic status, it was established that in women from

the II (13.5 ± 0.36) and III (12.9 ± 0.38) groups, the indicator of the Beck scale corresponds to the variation of the norm. In women from group I, the average score on the Beck scale (17.1 ± 0.31) indicated mild depression, while the indicator ranged from 5 (mild) to 48 (severe). Post Hoc Tukey HSD (beta) analysis showed the presence of significant differences between groups (Tabl.1).

Pairwise Comparisons

HSD_{.05} = 0.2685 HSD_{.01} = 0.3386

Q_{.05} = 3.4032 Q_{.01} = 4.2910

I : II

M₁ = 0.86 M₂ = 0.68

0.17

Q = 2.19 (p = .27754)

I : III

M₁ = 0.86 M₃ = 0.64

0.21

Q = 2.68 (p = .14931)

II : III

M₂ = 0.68 M₃ = 0.64

0.04

Q = 0.49 (p = .93497)

Conclusions: Staying directly in the zone of active hostilities causes mild to severe depression in pregnant/ puerperal women with average indicators corresponding to mild depression. In general, the crisis situation of military actions in Ukraine at the time of this stage of the survey indicates, apparently, the high priority of the gestational dominant; further studies are necessary.

doi:10.1016/j.ejogrb.2023.08.047

Antenatal Depression Screening During The COVID-19 Pandemic In A German Perinatal Center

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Background: Depression is the most common perinatal psychiatric condition (in literature 10 -15%). When untreated it is related with an increased risk of postpartum depression and severe psychosocial developmental disorders in the offspring. In addition, women with depression have a higher risk of a traumatic birth experience.

Aims: The aim of our study was to confirm the high prevalence of depression in our population and to investigate possible changes during the COVID-19 pandemic.

Methods: All patients presenting for delivery (about 8000) at our department between 01.04.2020 and 31.12.2022 were asked to complete the EPDS Plus questionnaire with two additional questions on experience of violence and trauma. A total of 5308 patients completed the questionnaire. Patients with a score 10-12 were referred to participating counseling services and with a score of 13+ to perinatal mental health services.

Results: 1. The prevalence of antepartum depression in our collective was 12%. This is within the prevalence range reported in the literature. 2. History of experience of violence and trauma is significantly more frequent in the collective with depression. The higher the EPDS score, the more frequent this is. 3. The reported experience of violence increased over the course of the COVID-19 pandemic.

Discussion: With a reasonably low effort (approx. 5-15 minutes for a patient with high EPDS+ score), we could identify and treat high-risk patients for peripartum depression. The study also provides evidence,

that the COVID 19 pandemic, while not increasing the incidence of peripartum depression, may increase the rate of experience of violence.

doi:10.1016/j.ejogrb.2023.08.048

Accuracy of estimated fetal weight assessment in fetuses with congenital diaphragmatic hernia – Is the Hadlock formula a reliable tool?

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Introduction and aims of the study: Congenital diaphragmatic hernia (CDH) is defined as organ protrusion from the abdominal to the thoracic cavity. The Hadlock formula is the most commonly used tool for calculating estimated fetal weight (EFW). The anatomical nature of CDH usually leads to underestimation of the abdominal circumference, resulting in underestimation of fetal weight. We investigated whether the EFW error margin differs between infants with isolated CDH and matched controls. Apart from Hadlock, we used a new formula, designed especially for fetuses with CDH, to determine the superiority of either method

Methods: In our study, we investigated differences between EFW and actual birthweight in 42 fetuses with CDH as compared to 80 healthy matched controls. EFW was calculated using the Hadlock formula and a recently introduced formula described by Faschingbauer et al., which was tailored for fetuses with CDH.

Results: At baseline, the two groups differed only by time elapsed between ultrasound scan and delivery (mean difference in days: 0.84 vs. 5.6, p < 0.001). The birthweight of CDH neonates was significantly lower as compared to healthy controls. Mean abdominal circumference was lower in CDH newborns as compared to controls (341.1 mm vs. 320.3 mm). The results obtained with the unadjusted Hadlock formula were associated with significantly higher error in the study group than in controls (9.7% vs. 6.5%, respectively, p = 0.005). Other methods generated comparable results. In the study group, the percentage difference in EFW decreased significantly after adjusting for time elapsed between measurements and delivery.

Conclusion: The use of tailored approach for EFW assessment in CDH fetuses proposed by some authors shows no definite advantage over well acknowledged Hadlock formula. Routine biometry scan remains useful for predicting birthweight.

doi:10.1016/j.ejogrb.2023.08.049

Comparison of the results of nipt with the pregnancy outcome

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In a pregnant woman, the amount of free DNA in the circulation consists of the free DNA of the mother and free DNA of the fetus. The test