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ULTRASOUND PREDICTION OF FETAL BIRTH WEIGHT IN PRETERM DELIVERY
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Key words: estimated fetal weight, birth weight, ultrasound, Hadlock formula.

Introduction. The prediction of fetal birth weight is crucial for establishment of a correct birth plan. It gives to the obstetrician a lot of useful information concerning the possible evolution of labor, appearance of complications, the need for specific obstetrical intervention and delivery by cesarean section and at an equipped center. The internationally accepted set of quality indicators for patient safety in obstetrics, eg. prenatal morbidity and mortality depends and increase in abnormal birth weight range fetuses. The two main methods to predict the fetal size are: clinical estimation and ultrasound measurement. The clinical evaluation of fetal weight is based on abdominal palpation of fetus, determination of fundal height, body mass or abdominal circumference of the mother is subjective and not standardized. This is why the ultrasound examination is thought to be more helpful and accurate.

The goal of the study was to assess the precision of the ultrasound in the prediction of fetal birth weight.

Material and methods. This is a descriptive, non-experimental study of pregnant women hospitalized during 2017 in the Obstetrical department of Municipal Hospital No 1, Chisinau, Republic of Moldova. The pregnant patients were admitted to the hospital because of the pregnancy complication, or for delivery or because of a high possibility of spontaneous onset of labor in the next few days. All the patients who were included in the study fulfilled the inclusion criteria. All the patients underwent ultrasound examination by the same experienced sonographer. The obtained fetal measurements were: Biparital diameter, Head circumference, Femur length, Humerus length and Abdominal circumference by Gray-scale two-dimensional ultrasound. The results of these ultrasound data (head circumference, abdominal circumference, femur length, humerus length) was used to calculate the actual fetal weight. Birth weight was best estimated by different formulas: Chepard: $\text{Log}_{10}\text{BW} = 1.7492 + 0.0166 (\text{BPD} +) + 0.0046 (\text{AC}) - 0.00002646 (\text{AC} \times \text{BPD})$ Campbell: $\text{LnBW} = 4.564 + \text{Log}_{10}\text{BW} = 1.326 - 0.0000326 (\text{AC} \times \text{FL}) \times 0.00107 (\text{HC}) + 0.00438 (\text{AC}) + 0.0158 (\text{FL})$, Hadlock $\text{Log}_{10}\text{BW} = 1.304 + 0.005251 (\text{AC}) + 0.01938 (\text{FL}) - 0.00004 (\text{AC} \times \text{FL}) - 0.000016 (\text{FL})^2 - 0.0000169 (\text{FL})^3$, Warsof $\text{LnBW} = 2.792 + 0.108 (\text{FL}) + 0.000036 (\text{AC} \times \text{FL}) + 0.00316x (\text{BPD}) + 0.0045 (\text{AC}) + 0.01623 (\text{FL}) - 0.00027 (\text{FL} \times \text{AC})$, Combs $\text{BW} = (0.00023718x (\text{AC})^2x (\text{FL})^2) + 0.00003312 (\text{HC})$, Ott $\text{Log}_{10}\text{BW} = 0.004355 (\text{HC}) + 0.005394 (\text{AC}) - 0.00008582 (\text{HC} \times \text{AC}) + 1.2594 (\text{FL} / \text{AC}) - 0.326 + 0.00451 (\text{SDI}) + 0.383$, Deter $\text{EFW} = 101.335 - 0.0034 (\text{AC} \times \text{FL}) + 0.0316 (\text{BPD}) + 0.0457 (\text{AC}) + 0.1623 (\text{FL})$. All the pregnant women delivered within 48 hours from the ultrasound examination. The newborns were weighed 2 hours after the delivery using a graduated scale and the actual birth weights were recorded. The data collection was made by extraction of the important information from medical files of the hospitalized patients, in accordance with the elaborated questionnaire for this research. Statistical processing was performed using the program "Microsoft Office Excel".

Results. The total number of 200 pregnant women were included in the study. From these 100 term and 100 who delivered prematurely. The average age of mothers of children was 29.07 years, the age ranged from 21 to 42 years. The average weight of neonates at birth was 2057 gr. The difference between the estimated fetal weight by ultrasound and the birth weight of the fetus varied from 10 grams to 520 grams. The deviation from birth weight in the formulas corresponded to: Shield 187g, Hadlock 362, Deter 572g. The average difference was 355.71 grams. The difference <300 grams was 47.62%, > 300 grams was 52.38%.

Conclusion. The ultrasound evaluation showed to have an average sensitivity in the predicting the foetal weight at birth (47.6%). From the used formulas the Hadlock formula shows less deviation from neonatal weight in term deliveries, and Shield formula in preterm. Accurate diagnosis of intrauterine fetal weight can be achieved by improvement of methods for assessing the foetal biometry.

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CONDUITA TERAPEUTICĂ ÎN HEMORAGIA DIN POSTPARTUM

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Introducere: Hemoragia din postpartum reprezintă o cauză importantă de morbiditate și mortalitate maternă. Cauzele cele mai frecvente sunt: atonia uterină, soluțiile de continuitate, aderențele anormale ale placentei și coagulopatie.

Material și metode: Am revizuit baze de date medicale internaționale cu studii randomizate, meta-analize referitoare la tendințele actuale despre histerectomia postpartum și tehnicile alternative în hemoragia din postpartum.