SUPLIMENT

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M. A. Moga, Dr. C. Anastasiu, Dr. Calin Cobelschi

PLACENTAL VOLUME IN THE FIRST TRIMESTER OF PREGNANCY EVALUATED BY 3D ULTRASOUND AND VIRTUAL ORGAN COMPUTER-AIDED ANALYSIS (VOCAL) AS PREDICTOR FOR PREECLAMPSIA

Faculty of Medicine, Transilvania University of Brasov, Romania

Introduction: The placenta is an essential fetal organ, with multiple functions, that ensures the interchange between mother and fetus. All the changes in the normal development of the placenta are in accordance with its functions and any disturbance in the normal process of placentation can generate abnormal perinatal outcomes. Pregnancies affected by preeclampsia continue to be challenging for obstetricians since ancient times. The main reason for the occurrence of this entity is the abnormal placental development and in some cases, abnormal placental volume can predict the apparition of this pathology, sooner or later during pregnancy.

Objective: The aim of this study was to investigate if the placental volume measured in the first trimester by 3D ultrasound and Visual Organ-Aided Analysis (VOCAL) could be an early predictor for the apparition of hypertensive disorders, especially preeclampsia.

Material and methods: This is a prospective study conducted during the period January 2017 – December 2017. The study included a number of 140 pregnant women with singleton pregnancies and with low risk for the development of preeclampsia. Placental volume was measured by 3D ultrasound between 11-14 weeks of gestation and analyzed using VOCAL software. The affected cases were divided into two categories: early-onset preeclampsia and late onset preeclampsia, depending on the gestational age at which this hypertensive disorder was diagnosed.

Results: From the total number of patients included in our study- 140 cases, only 10 women (7,14%) developed preeclampsia: 6 cases (4,28%) developed early-onset preeclampsia (EPE) and 4 cases (2,85 %) developed late-onset preeclampsia (LPE) . The mean placental volume in normal pregnancies was approximately 43, 6 cm^3 . In preeclampsia group, the mean placental volume of the EPE was significantly reduced than the unaffected women: 36,1 cm^3. The difference between the placental volume of the women with late onset preeclampsia and the normal women was insignificant: 40,5 cm^3 vs 43, 6 cm^3.

Conclusion: A slightly smaller placental volume could be discover at the 3D ultrasound examination in the first trimester at the low risk women who will develop preeclampsia. This pathology seems to be induced by any abnormalities in the placental development, which could be identified even in the late first trimester and used as possible early predictors for the developing diseases. Despite the fail to reach statistical significance, our small study revealed placental modifications that could be more refined in the future and could find a place in the preeclampsia screening for low risk pregnancies.

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Grigoriu Corina, Anca Al. F., Virtej P., Grigoras Mirela, Cezar Cristina, Horhoianu V.V.

ALGORITHM OF DIAGNOSIS AND TREATMENT OF THROMBOPHILIA IN PREGNANCY – THE EXPERIENCE OF THE OBSTETRICS-GYNECOLOGY DEPARTMENT OF THE EMERGENCY UNIVERSITY HOSPITAL BUCHAREST

University Emergency Hospital, Dept of Ob/Gyn, Bucharest, Romania

Thrombophilias defines a group of disorders associated with an increased tendency for thrombosis. They may also be seen as a heterogeneous group of conditions which have been associated during time with a variety of pregnancy complications, including early and late fetal loss, intrauterine fetal death, placental abruption, poor fetal growth (IUGR) and preeclampsia.

Our clinical retrospective study was performed between 1st January 2006 and 30th June 2008. We evaluated 11518 pregnant women, who delivered in our Clinic, out of which 254 (2.20%) had different types of thrombophilias: antiphospholipid antibody syndrome (62.20%), factor V Leiden (16.93%), protein S deficiency (14.17%), protein C deficiency (3.94%), antithrombin III deficiency (2.76%).

Preeclampsia was present at 27.17% of patients, out of which most cases were recorded in the APLS (36.08%), followed by APCR (30%) and the protein S deficiency (8.33%). There were mild forms of preeclampsia and they occurred in the patients who started treatment late (after the 26th week of pregnancy, due to the moment of diagnosis).