

OPINION

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On the Dissertation of Dr. Jeni Iordanova Panaiotova: "Contemporary ultrasound methods for diagnose and clinical follow up of pregnancies complicated with placenta previa and placenta accreta" for obtaining PhD degree in scientific specialty "Obstetrics and Gynecology", in the field of higher education 7. Healthcare and sport, professional direction 7.1. Medicine.

The opinion is prepared on the basis of the provided Dissertation work and the demonstrated publication activity. The dissertation is designed according to the requirements for the structure of a scientific work, according to the Development of the Academic Staff Act in the Republic of Bulgaria and the Regulations for the Terms and Conditions for the Acquisition of Scientific Degrees and Academic Positions at the Medical University -Varna.

The dissertation covers a total of 141 standard computer pages. The presented results are illustrated with 48 tables, 42 figures and 18 graphs. The structure of the dissertation work includes: introduction, literature review, aim and objectives, materials and methods, results and discussion, conclusions, contributions and bibliography.

In the introduction, the doctoral student summarizes the importance of the problem of the timely diagnosis of the pathological position or attachment of the placenta and optimal management in their establishment for minimizing maternal and fetal morbidity and mortality. These are two diagnoses, not infrequently occurring at the same time, whose timely recognition is of the utmost importance. Accurate diagnosis is critical to pregnancy outcome.

The literature review presents a study and comparative analysis of the world and Bulgarian experience in the diagnosis and management of placenta previa and placenta accreta, and in particular the location of the ultrasound diagnosis - gestational age, markers, follow-up algorithm. 214 sources are covered. Through an analytical review of publications related to the topic, the doctoral student proves the relevance of the problem, both on a national and global scale. Among the cited sources, foreign language sources predominate, most of which are from the last 10 years. In this way, the up-to-date analysis of the problem is guaranteed. The literature review presents the main points of discussion in the examination of the topic. The review is comprehensive enough with a number of multicenter randomized clinical trials cited.

The set goal is sufficiently clear and specifically defined. The present work aims to investigate the incidence and risk factors for both types of placental pathology on the one hand, and to investigate the sensitivity and reliability of ultrasound markers for diagnosis. The ultimate goal is to propose an algorithm for obstetric management - follow-up and delivery in this type of pathology. To achieve the goal, 9 tasks have been set. The set tasks fully

correspond to the goal. The frequency of manifestation of the two types of pathology - placenta previa and placenta accreta in the general population and in risk groups were studied. Risk factors were investigated with an emphasis on the contribution of a previous cesarean delivery one or more times. The factors influencing the frequency of PA and PP were investigated - previous pregnancies and births, method of pregnancy and delivery, previous operations on the uterine body, ethnic origin, smoking. The accuracy of the ultrasound examination in making the diagnosis and determining the obstetric behavior was studied - gestational stage, gestational weeks in which screening is necessary, optimal period for delivery to reduce maternal and child morbidity and mortality.

In terms of the materials and methods used, the prospective nature of the study and its volume are particularly valuable – 22 604 singleton pregnancies were covered, and the collected data reflect the trends in the real clinical practice of centers for routine pregnancy monitoring. The reliability and statistical significance of the results are guaranteed by the large number of patients studied in the groups. Inclusion and exclusion criteria are clearly defined. Research methods and methodology have been precisely selected, and the various data have been processed with an appropriate toolkit of statistical analyzes to ensure the validity of the data obtained.

The obtained results are presented clearly and comprehensively, being illustrated with appropriate figures and tables. After the presentation of the results, a comprehensive discussion is attached, discussing the reasons for the observed results.

They are interpreted through the lens of published international research in the field. The results confirm the indisputable place of ultrasound examination and specific ultrasound markers in the diagnosis of PA and PP, and in particular transvaginal ultrasound examination, proving its high sensitivity and specificity. The risk factors for increasing the frequency of both placental pathologies are clearly delineated, emphasizing the leading role of previous cesarean delivery. The diagnosis of PP is very likely in 28-32 g.w., but definitive after 34 g.w. because of the "migration" phenomenon.

With regard to the diagnosis of PA, it is established with high probability already in the first trimester of pregnancy based on anamnestic data and at least 3 of several specific ultrasound markers. A valuable contribution is the analysis of the volume of blood loss during childbirth in such pathologies in different gestational stages, planned or urgent order and operative approach, which serve as recommendations for an optimal approach to delivery.

The conclusions in the dissertation are 9 in number, and they are precisely and clearly presented. The frequency of occurrence of placental pathology presented in the literature and in the studied group was confirmed, and the increase in this frequency was calculated depending on the presence of risk factors. The risk factors for the occurrence of pathological attachment and position of the placenta have been identified. The criteria and the gestational period for making the diagnoses of PP and PA with ultrasound implantation are clearly defined.

The present work provides scientific-theoretical and practical contributions in the process of determining the ultrasound diagnosis, as a leading tool for timely diagnosis of PA and PP. An

original contribution is the presented algorithms for tracking pregnancies with such a diagnosis in the early stages of pregnancy. I find the recent system for categorizing the pregnant woman with a certain degree of risk in relation to the detected placental pathology to be a valuable contribution, including in the context of determining the optimal term, method and unit for delivery.

The significance of the research presented in the dissertation is unequivocally confirmed by the publications and participation in scientific congresses related to the dissertation work. The dissertation student has 4 publications in connection with the dissertation work.

In conclusion, the presented dissertation work on the topic "Contemporary ultrasound methods for diagnose and clinical follow up of pregnancies complicated with placenta previa and placenta accreta" has a high value and scientific-practical application on a current problem in clinical practice.

I recommend to the members of the jury to vote positively for awarding with a PhD degree in the scientific specialty "Obstetrics and Gynecology" Dr. Jeni Iordanova Panaiotova.

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Assoc. Prof. Dr. Maria Yunakova

