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EDITORIAL

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Editorial

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Modern perinatal medicine is an increasingly specialized field that makes use of state-of-the-art technological and diagnostic inventions. The developments increase our ability to assess how the pregnancy is progressing, predict pathologies, and intervene during gestation. This progress requires that all of us should keep up with the frequent discoveries. At the same time, even within the maternal-fetal medicine domain, individual specialists tend to focus rather on some selected pathologies, as it is otherwise extremely difficult to keep abreast of the dozens of new reports and publications that appear each week on scientific and publisher websites. Reading their paper editions is slowly becoming a thing of the past, as most articles are first made available online. Thus, medicine — like other disciplines — is witnessing an accelerated pursuit of knowledge.

One of the topics that have been the subject of intense research in recent years is the so-called utero-placental compartment. The way in which trophoblast development and invasion progresses can lead to either success or (frequently) failure of pregnancy. Beginning in the first weeks after embryo implantation, the trophoblast develops the villous tree and penetrates deep into the maternal tissues, thus creating a unique system that allows the fetus to grow in the intrauterine environment for months to come. Disorders of this process can be diverse and multifactorial. Among the main factors impeding the development of this compartment are chronic maternal diseases on the one hand, and immunological disorders on the other. Understanding the causes and the exact mechanisms behind them will certainly be a challenge for us to face up to in the coming decades. We are now at the stage of properly selecting the group of patients burdened with an increased likelihood of developing preeclampsia or hypotrophy caused by placental abnormalities. Both the conditions, although with completely different clinical presentations, share impaired placental development that manifests itself most often in the second half of pregnancy. Our success in understanding the common pathomechanism has led to a tremendous transformation over the last two decades of how preeclampsia is defined. The traditional diagnosis based on hypertension and proteinuria presented in 2003 by the National Heart, Lung and Blood Institute (NHLBI) [1], which is widely recognized, was modified in 2013 by American College of Obstetricians and Gynecologists (ACOG) [2] to include other organ changes, as well. In 2018, The International Society for the Study of Hypertension in Pregnancy (ISSHP) [3] supplemented the diagnosis by adding utero-placental compartment dysfunction with the clinical presentation of fetal growth restriction and/or umbilical artery flow abnormalities. The definition announced this year [4] includes, beside the aforementioned aspects, also placental abruption and, most interestingly, abnormalities of the placental angiogenesis parameters (sFlt/PlGF). Our improved insight into the causes of the condition moves us away from defining it as a disease to perceiving it rather as a syndrome with a wide variety of clinical presentations, where supervision requires the assessment of both perinatal and neonatal outcomes [5].

Accurate selection of pregnant patients at risk of developing placental pathologies is therefore increasingly important. An excellent set of tools has been provided by the Aspirin to prevent preeclampsia (ASPRE) study [6], the efficiency of which is still the subject of research [7]. The algorithm it proposes, which takes into account both ultrasound and biochemical parameters, as well as medical history, has proven highly useful as a basis for the preventive introduction of acetylsalicylic acid. Currently, most researchers are convinced that similar predictive efficacy can also be achieved in the second trimester of pregnancy [8, 9]. However, the greatest challenges that lie ahead are in monitoring gestation and deciding whether to terminate pregnancy in women demonstrating the various clinical forms of placental insufficiency [10]. My belief is that a combination of the traditional physical examination methods such as blood pressure measurement, cardiotocography, ultrasound, and amniotic fluid volume assessment [11] with modern methods for assessing placental function will be crucial in ensuring proper management.

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This new definition of placental insufficiency that accounts for its varied severity pertains to nearly 10% of all pregnancies. This large proportion of women at risk of developing this pathology requires the care of a very highly trained staff of specialists. It is also extremely important to educate the patients themselves.

Raising awareness by educating both gynecologists and our patients regarding pregnancy-related issues is the task that we assigned to the PRENATALPROJEKT platform, which I was the initiator of. The rise in significance of the modern means of communication and social media has provided opportunities for us to communicate with our target audiences regardless of what time of day it is or where on the globe we live. Language barriers are also less and less of an obstacle. Our meetings are open to the public, and the content conveyed is carefully selected to suit the audiences. More and more (not only academic) centers in Poland are joining the Project, which helps us to get to know each other and integrate our community. So far, we have organized more than a dozen meetings over the past two years, attracting an audience of several thousand people. The training courses and lectures that originally focused on issues of placental insufficiency now cover a variety of problems of perinatal medicine in general. Our cooperation, also realized through the Perinatology Section of the Polish Society of Gynecologists and Obstetricians (PTGiP), is growing in scope and now involves dozens of excellent specialists from all over the country. Our plans go as far into the future as 2023. In the coming years, we would like to go beyond the borders of Poland and establish cooperation in educating women with colleagues from Europe, with a special focus on Central and Eastern Europe. We would also like to encourage the younger generation of doctors to extend their research interests and become involved in educating women. In cooperation with the PRENATALPROJEKT Foundation, we are developing appropriate tools to assist us in achieving these goals.

In the meantime, I wish to encourage you to read the next issue of the journal "Ginekologia Polska" which, thanks to the efforts of the Society, but above all of the Editor-in-Chief, is increasingly well-recognized in the Community.

Conflict of interest

All authors declare no conflict of interest.

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