

## **Streszczenie w języku angielskim**

Prenatal diagnosis is an integral part of modern perinatology. Fetal developmental and genetic disorders are diagnosed in about 5% of all pregnancies. According to statistical data provided by the Central Statistical Office in 2019, there were just under 400,000 live births in Poland, which may indicate that developmental disorders could occur in up to 20,000 newborns.

Pregnancy, although considered a physiological state, may lead to the occurrence of disorders that pose a real threat to the life and health of the mother and her child. The most common complications during pregnancy occur as a result of co-morbidities in the mother during the preconception period. Another reason for serious complications in the development of the fetus and the course of pregnancy are abnormalities in the processes of implantation and development of the placenta. They are clinically difficult to diagnose and treat.

The main goal of prenatal tests carried out between 11<sup>+0</sup> and 13<sup>+6</sup> weeks of pregnancy is to determine the risk of the most common chromosomal aberrations, i.e. Down syndrome (chromosome 21 trisomy), Edwards syndrome (chromosome 18 trisomy) and Patau syndrome (chromosome 13 trisomy).

The aim of this study was to evaluate the diagnostic value of the double test for early identification of patients at risk of pregnancy-induced hypertension, fetal growth retardation and preterm delivery. The values of fetal biometric measurements and the concentration of human chorionic gonadotropin and plasma PAPP-A protein in pregnant blood were assessed. 100 pregnant patients in a single uncomplicated pregnancy were qualified for the study. All patients included in the study had a double screening test between 11<sup>+0</sup> and 13<sup>+6</sup> weeks of gestation to detect fetal chromosomal aberrations. Additionally, the collected data was supplemented with the patient's medical history and information.

Study results have shown that a decrease in plasma PAPP-A levels may indicate an increased risk of developing pregnancy-induced hypertension after 20 weeks of pregnancy. Moreover, the obtained results suggest the possibility of the potential use of placenta localization to predict the occurrence of pregnancy complications, such as hypertension and fetal growth retardation. Taking such tests improves the quality of perinatal care.