RISK FACTORS FOR PREMATURE LABOUR DURING THE WAR IN UKRAINE

Miscarriage is one of the most pressing problems in obstetrics. It creates a risk of premature birth and the likelihood of giving birth to babies with morphological and functional pathologies. More than 70% of perinatal pathology is due to preterm birth, with a high proportion of stillbirths. The etiology of miscarriage is extremely diverse. The main factors are genetic, immunological, endocrine dysfunctions, infectious diseases, etc. [1].

Both acute and chronic stress can cause allostatic overload or a long-term imbalance of homeostasis mediators, which leads to disruptions in the endocrine and immune systems of the mother, placenta and fetus. Such a homeostasis disorder during pregnancy increases the likelihood of preterm birth. Pregnant women traditionally have high rates of anxiety and depressive disorders, and many of them are susceptible to various stressors during pregnancy. Such possible life stressors include financial and relationship problems, which exacerbate the biological, social and psychological changes that are characteristic of pregnancy. External stressors of global social life or disasters of various kinds also contribute to stress during pregnancy [2, 3].

The perinatal period is characterised by a high risk of psychological stress [4], which leads to depression and increased anxiety. The effect is significantly amplified in times of war and migration caused by it [5]. As a result, the likelihood of difficult pregnancy and childbirth increases [6]. Pregnant women who are currently exposed to the factors of war in Ukraine are at risk of pregnancy pathologies, and the diagnosis of such conditions is relevant [7].

A classic pathology of pregnancy is a Rh conflict between the fetus and the mother's body. However, the prerequisites for this pathology are well known, and pregnant women at risk of Rh conflict are usually registered in time and their clinical and biochemical parameters are constantly analysed by a doctor. The highest risk factor, in terms of the difficulty of prediction, is preterm birth.

We analysed the clinical and biochemical parameters of pregnant women registered at the perinatal centre of the Cherkasy Regional Hospital in 2018 (before COVID-19 quarantine and war) and in 2022 (the first year of war). The leukocyte populations, C-reactive protein and fetal fibronectin levels were determined. It was found that the percentage of pregnant women with elevated levels of fetal fibronectin who subsequently had preterm births was virtually the same in 2018 and 2022. In 2022, there was a slightly higher percentage of pregnant women with elevated C-reactive protein levels who subsequently delivered preterm. However, in 2022, compared to 2018, there was a significantly higher proportion of pregnant women with elevated granulocyte counts who subsequently delivered preterm. Elevated levels of granulocytes, in particular
Conclusions: The main factor behind the increase in preterm births in 2022 is the mobilisation of peripheral blood neutrophils induced by chronic stress due to martial law in Ukraine.

References: