



Pro-inflammatory cytokines in the genesis of pre-clampsia of pregnant women with iron deficiency anemia

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Abstract

Statement of the Problem: Iron deficiency and tissue hypoxia in chronic iron deficiency anemia (IDA) lead to disruption of all parts of the immune system, the level of production of key cytokines (IL-1, IL-6, IL-8, TNF- α , INF- γ), their regulatory effect on hematopoiesis and various body systems with the formation of secondary immune deficiency, which contributes to the development of preeclampsia. Preeclampsia is the main and serious obstetric pathology, is considered as an immunological phenomenon. The purpose of this study is to substantiate the need for immunocorrection for the prevention of preeclampsia in pregnant women suffering from IDA. **Metrological and Theoretical Orientation.** 96 women with IDA were examined in the III trimester of gestation: 24 - with IDA mild degree, 18 with IDA moderate, 26 with preeclampsia in the presence of mild IDA and 28 with preeclampsia in the presence of moderate IDA. Determination of IL-1 β , IL-6, IL-8, TNF α and lactoferrin in peripheral blood serum and in decidual tissue extracts the placenta was carried out by ELISA. **Findings:** The presence of a direct correlation of the obtained parameters with the severity of the pathology indicated a significant role for proinflammatory cytokines in the pathogenesis of preeclampsia. These changes were most pronounced in the decidual membrane of the placenta with the development of preeclampsia against the background of IDA. **Severity.** High activation of pro-inflammatory cytokines at the site of attachment of the placenta can be considered as a threat to the ECD / preterm delivery. **Conclusion** Against the background of the restructuring of the endocrine system and IDA, a maternal defective immune response to the antigens of the ovum arises, which is one of the main causes of preeclampsia. The results of a study of the cytokine status in pregnant women with IDA will allow genetic studies to substantiate a new immunotherapy strategy for the prevention of preeclampsia and its complications.

Biography

Professor Djabbarova Yulduz Kasymovna - author of more than 320 publications, experienced obstetrician-gynecologist, pedagogue with 50 years of experience, scientific researcher. She prepared 2 doctors of medical sciences and 17 candidates of medical sciences. Member of the International Association of Immunologists of Reproduction (since 1987). Studies have been devoted to humoral immunity (since 1971), cellular immunity (since 1982), cytokine status (since 2010) in pregnant women with iron deficiency anemia. Based on data from other researchers and our own results, a contribution is made to the immunological genesis of preeclampsia and the development of prevention of the pathology under study.

Publication

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3. Lamarca B, Brewer J, Wallace K. (2011) IL-6-induced pathophysiology during pre-eclampsia: potential therapeutic role for magnesium sulfate? *Int J Interferon Cytokine Mediat Res.*(3):59-64. <https://doi.org/10.2147/IJICMR.S16320>.



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