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P208. Syndecan 4, galectin 2 and DR3 as a novel factors in pathways of mild preeclampsia – protein macroarray screening.

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Context: The pathomechanism of PE is poorly known, but it is thought that the main cause of the imbalance of angiogenic and inflammatory factors is the disturbed invasion of cytotrophoblast cells into the spiral vessels, which consequently results in cell apoptosis. The ischemia of the placenta stimulates the formation of oxidative stress and apoptosis in the tissue and thus local inflammation.
Objective: The aim of this study was to analyse a panel of 40 angiogenic and inflammatory factors in the plasma of women with mild preeclampsia.
Patient(s): We recruited 21 women between 25-40 weeks gestation with diagnosed mild preeclampsia into the study group and 27 healthy women with uncomplicated pregnancies of corresponding gestational age to the control group.
Methods: We used a quantitative protein macroarray method that allowed for analysis of 40 angiogenic and inflammatory proteins per sample simultaneously.
Results: We showed statistically significant increase in the concentration of 2 proteins: DR3 (p=0.0084) LIF (p=0.0036) and a significant decrease in the concentration of 4 proteins, VEGF (p=0.0135), PlGF (p=0.0267), syndecan 4 (p=0.0097) and galectin 2 (p=0.0008), in the plasma of women with preeclampsia in comparison to the plasma of women in the control group.
Main Outcome Measure(s): Significance of DR3, syndecan 4, galectin 2.
Conclusion: Based on our findings, it seems that protein factors may play an important role in the pathogenesis of preeclampsia, and there are many proteins that have not been studied in PE to date. There are no previous studies assessing the syndecan 4, galectin 2 and DR3 concentrations in the plasma of women with PE; our results indicate that these proteins are new factors that can play an important role in the pathomechanisms of PE.
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