Role of matrix metalloproteinases in the manifestation of early and late pre-eclampsia

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The study by determining the level of MMP 2 and 9 types in serum 118 pregnant women at different periods of gestation when the manifestation of pre-eclampsia. The interrelation between the gestational period of pre-eclampsia and the level of metalloproteinases. For early pre-eclampsia characterized by abnormal trophoblast invasion. The basis of late pre-eclampsia - secondary changes of microcirculation caused by metabolic syndrome. In the area of fixation of the blastocyst is formed syncytiotrophoblastic complexes, producing - zinkevicius matrix metalloproteinases

Objective: the establishment of the influence of the level of MMP on the gestation of the manifestations of pre-eclampsia.

Methods: we Determined the level of matrix metalloproteinase-2 (MMP-2) and metalloproteinase 9 (MMP-9) in serum enzyme-linked immunosorbsent assay. The study was conducted on the basis of the maternity hospital, the establishment of health care BUT " City clinical hospital № 40". Patients: Under the supervision of 118 pregnant women with severe pre-eclampsia before 34 weeks (n= 48)-1 group after 34 weeks (n=50)- 2 group (n=20) with physiological pregnancy - control group. Early pre-eclampsia, time-limited prolongation of pregnancy ( p <=0.05), and mean time to delivery in 1 gr. from 3 to 72 hours, in 2 Gy.- from 8 hours to 7 days. The level of MMP type 2 in 1 gr. was 2 times lower (12, 72 ± 0, ng/ml) than in 2 Gy. ( p <0.01). MMP type 9, 1 gr. the average value - 16.88 in ±0,72 ng/ml, in 2 Gy. 10,41± 1,02 ng/ml ( p < 0.01). When comparing 2 groups and the control group at the level of MMP type 9 significant differences were not found.

Conclusions: the pattern suggests that the determination of the level of MMP determines the risk of early pre-eclampsia for the timely diagnosis of pregnancy complications and improve perinatal outcomes.