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P213. Disturbancies of the balance of vasoconstrictors and vasodilatators in the maternal blood plasma in the genesis of preeclampsia

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Context: One of the important symptoms of preeclampsia is hypertension above 140 / 90 mm Hg. It is known that one of the most significant systems of the human body in regulation of blood pressure is to be renin-angiotensin system.

Copeptin is a glycopeptide, part of the pre-hormone molecule of the antidiuretic hormone. Copeptin takes a part in sodium level regulation and considered to be one of the biomarker of cardiovascular diseases.

Objective: The aim was to study renin, angiotensin II (1-8) and angiotensin (1-7) significance and copeptin in the early- and late- onset preeclampsia pathogenesis.

Methods and participant(s)The study included 69 pregnant women of reproductive age on 28-40 gestation weeks: 12 patients suffered from early-onset preeclampsia (EPE), 17 women – late -onset preeclampsia (LPE) (with clinical manifestations up to and after 34 weeks of gestation, respectively). The control groups consisted of 30 patients with a physiological pregnancy after 34 week of gestation (Late norma–LN); and 10 with preterm labor up to 33 weeks of gestation (early norma–EN). Detection of markers in blood plasma levels was performed by quantitative enzyme immunoassay using Renin (active) ELISA (IBL International GMBH, Germany), Angiotensin 1-7 (Ang1-7) (Cloud-Clone Corp., USA), Human ANGII EIA (RayBiotech, Inc., USA) kits, Copeptin (Cloud-Clone-Corp., USA). The differences were estimated as statistically significant at $p<0.05$.

Result(s): The level of vasoconstrictor angiotensin II (1-8) in EPE group was 23,8±5,1 pg/ml and was significantly higher compare to EN group (9,7±1,2 pg/ml; ?<0,05). In LPE and LP groups angiotensin II (1-8) was (15,5±1,2 pg/ml and 14,7±1,9 pg/ml, respectively; p>0,05).Vasodilator angiotensin (1-7) level in EPE group was significantly lower than in EN (379,7±23,0 pg/ml, 771,7±44,2 pg/ml, respectively; ?=0,0001), but in cases of LPE and LN angiotensin (1-7) level was 388,3±27,3 pg/ml and 390,7±13,9 pg/ml, respectively (?>0.05). ?opeptin concentration was significantly higher both in EPE group than in EN (365,6±73,5 pg/ml and 96,3±15,3 pg/ml, respectively; ?=0,02) and in LPE group than in LN (421,2±75,5 pg/ml and 276,3±58,6 pg/ml, respectively; ?=0,04).

There were no significant differences in renin concentrations in groups of comparison (?>0,05).

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