

P63. Interrelation of paracrine factors and factors of proinflammation in patients with PCOS

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Context. At present, the pathogenesis of PCOS is not fully understood. **Objective:** A study of the relationship between paracrine and proinflammatory factors in the pathogenesis of PCOS

Methods: The concentration of cytokines-interleukins, tumor necrosis factor and AMF-was determined by the enzyme immunoassay using a set of monoclonal antibodies from Immunotech (France).

Patients. The diagnosis of PCOS was based on the Rotterdam criterion 2003.

3 groups: 1 group -15 patients with PCOS and WC <80 cm;

2 nd group - 15 patients with PCOS and WC > 80 cm;

3d group consists of 30 patients with PCOS and obesity.

Control group - For control values of AMF and cytokines, 18 women with a normal menstrual cycle and normal body weight, as well as 20 women with a BMI> 25, were identified.

Main Outcome Measure. When comparing the results of research of the level of cytokines-IL-1 β , IL-6 TNF α in the women of the control group, in the group of obese women was observed increased concentration - 36.7 ± 2.0 pg/ml, 28 ± 2.7 pg/ml and 28.1 ± 2.7 pg/ml vs. 28.3 ± 2.4 pg/ml, 25.9 ± 2.4 pg/ml and 27.1 ± 2.3 pg/ml ($P < 0.05$) respectively, i.e. adipocytes promote the synthesis of proinflammatory cytokines. The highest rates were observed with obesity, which positively correlated with the level of AMF.

In the process of analyzing obtained results, we derived the cytokine regulation index of IL-6 /AMF, which was in women with BMI <25 7.18 ± 0.36 , and in women with BMI> 25 -5.02 ± 0.05 .n average, in women of the control group, the cytokine index was 8.3 ± 1.1 .

Results. The level of the cytokine index decreased as the level of AMP increased. So in patients with PCOS and normal BMI, the IL-6 / AMF ratio was 1.6 times lower than the control value ($P < 0.05$), and compared to patients with PCOS and with WC> 80 cm, this index was lower in 2, 4 times ($P < 0.001$). And in women with obesity and with PCOS the ratio of IL-6 / AMF was lower by 3.5 times ($P < 0.001$). However, it should be noted that among women with PCOS with a BMI <25 and WC <80 cm in 4 women (13.3%), the cytokine index was higher than 8. That is, in these women, the AMF level was within the normal range.

Conclusions. Thus, there is a correlation between the factors of pro-inflammation and paracrine factors, which leads to an imbalance in the system of regulation of the selection and development of follicles and the resulting high alertness to apoptotic cell death.