

17th World Congress of the Academy of Human Reproduction

15–18 March 2017
Rome, Italy

TITLE

THE CONCENTRATIONS OF VEGF AND ITS RECEPTOR IN PRE-ECLAMPSIA

AUTHOR/S

Darmochwal-Kolarz D (PL) [1]

ABSTRACT

Objective: The aim of the study was to estimate the concentrations of Interleukin-17 (IL-17), Interleukin-23 (IL-23), as well the concentrations of growth factors – Transforming Growth Factor (TGF- β), soluble Vascular Growth Factor (sVEGF-A) and its receptor (sVEGFR-1) in peripheral blood of patients with preeclampsia and healthy women in the third trimester of normal pregnancy.

Methods and Patients: Thirty four patients with preeclampsia and 35 healthy women in normal pregnancy were included to the study. The concentrations of IL-17, IL-23, TGF- β 1, sVEGF-A and sVEGFR-1 were estimated using the immunoenzymatic method.

Results: In the group of patients with pre-eclampsia the concentrations of IL-17 were significantly higher when compared to healthy women with uncomplicated pregnancy (3.9 pg/ml vs. 2.4 pg/ml, $p < 0.05$). There were no differences in the concentrations of IL-23 in both studied groups (1.93 pg/ml vs. 1.95 pg/ml, NS). In the group of patients with pre-eclampsia the concentrations of TGF- β 1 were significantly lower when compared to the control group (15092 ng/ml vs 17834 ng/ml, $p < 0.05$). Furthermore, the concentrations of sVEGF-A were significantly lower in the group of patients with pre-eclampsia in comparison with healthy women in normal pregnancy. The concentrations of sVEGFR-1 were significantly higher in the sera of patients with pre-eclampsia when compared to the control group (3.58 ng/ml vs. 0.7 ng/ml ($p < 0.001$)).

Conclusions: The results obtained suggest the up-regulation of Th17 immune response in preeclampsia. It seems that the decreased number and function of Treg cells may be responsible for the activation of inflammatory response in this disorder. In preeclampsia the predominance of Th17 immunity can act through the modulation of Th1/Th2 immune response.

INSTITUTE

[1] University of Rzeszow