

PRODUCTION OF ANTISPERM ANTIBODIES AND CYTOKIN SECRETATION (IL-10, IL-12) IN INFERTILE PATIENTS (PILOT STUDY)

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Aim: The presence of antisperm antibodies (ASA) in the sera of infertile patients suggests development of humoral immune response against sperm antigens, but studies analyzing the cellular immune response against these antigens are insufficient. Cytokines could influence the interaction between the gametes, early embryonic development and implantation. The aim of the present study was to investigate the humoral and cellular immunity in patients with reproductive disorders and mastering hypothesis about the link between both types of immunity and infertility.

Materials and methods: Sera from 28 patients suffering from infertility (according to the WHO strict criteria) were examined against a positive and negative control using ASA detection methods and ELISA for monitoring cytokine secretion (indirect ELISA by using spermatozoa antigens and sandwich ELISA for detection of cytokines IL-10 and IL-12).

Results: Secretion of ASA in clinically significant concentrations was established, as well as secretion of cytokines IL-10 and IL-12 in tested patient group when compared with the control group. According to this data different groups of positive reactive patients could be established – these secreting one of the cytokines and positive for ASA, these positive for both cytokines and ASA, and these positive for IL-10 and IL-12 but with a lack of clinically significant quantity of ASA.

Conclusion: These results confirm the correlation between the examined factors and infertility, as well as the great diversity and individuality, which could be found amongst infertile couples. These studies could clarify the etiopathogenetic mechanisms which lead to infertility and could contribute to better infertility diagnostic methods.

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