SHORT PAPER

Comparing Serum Levels of Th17 and Treg Cytokines in Women with Unexplained Recurrent Spontaneous Abortion and Fertile Women

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ABSTRACT

Background: Increased evidences have shown that unexplained recurrent spontaneous abortion (URSA) is associated with inflammatory responses and breakage of immunological autotolerance. Therefore, the balance between Th17 and Treg cells may elucidate the pathophysiology of URSA. Objective: To investigate the serum concentration of regulatory and inflammatory cytokines associated with Treg and Th17 in both normal and URSA females. Methods: Forty-six women with URSA and 28 non-pregnant control women with at least one successful pregnancy were included. Serum was obtained from both groups and stored at -70°C. The serum concentrations of IL-17, IL-21, IL-22, IL-10, and TGF-β were quantitatively determined by ELISA. Results: The levels of IL-17, IL-21, and IL-22 in sera were significantly higher (P<0.001, P=0.01 and P<0.001, respectively) and TGF-β serum concentration was significantly lower (P=0.02) in URSA women compared with normal controls. Conclusion: Our results suggest that enhancement in Th17-associated cytokine levels and reduction in TGF-β may be one of the factors involved in URSA.


Keywords: Cytokines, Th17, Treg, Unexplained Recurrent Spontaneous Abortion

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