Characteristics of immune cell changes before and after immunotherapy and their clinical significance in patients with unexplained recurrent spontaneous abortion

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ABSTRACT. To investigate the characteristics of immune cells before and after immunotherapy and their clinical significance in patients with unexplained recurrent spontaneous abortion (URSA), an analysis of 67 URSA patients, 67 sporadic spontaneous abortion (SA) patients, and 22 normal nonpregnant women (as controls) was conducted. URSA patients underwent immunotherapy using paternal lymphocytes. Peripheral blood from patients and controls was examined for lymphocytes and other markers of immune status. Before the immunotherapy, lymphocyte counts, CD4:CD8 cell ratios, and the relative proportion of natural killer (NK) cells were significantly higher in the URSA patient group than in the SA patient
and control groups (P < 0.05). After the therapy, all of these three measures were decreased, whereas the percentage of T cells was increased, and statistically significant differences before and after the immunotherapy were detected (P < 0.05). Therefore, the immune system appears to be activated in the URSA patients, and the abnormal immunologic state in the URSA patients is more severe than in the SA patients. The alterations in T and NK cells may be involved in the etiopathogenesis of URSA. Lymphocyte immunotherapy appears to be an effective treatment for URSA patients.

**Key words:** Immune cell; Unexplained recurrent spontaneous abortion