Evaluations of WBC Cross-match Results after Lymphocyte Immunization in Women with Recurrent Spontaneous Abortion in Sarem Women’s Hospital

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ABSTRACT

Background & Aims: Recurrent spontaneous abortion (RSA) is a complication in pregnancy that results into fetus rejection by mother and several factors such as anatomical, genetic and immunological problems can be its etiologic causes. Paternal lymphocyte therapy (PLT) as an immunotherapy for these patients has been more evaluated. The purpose of lymphocyte therapy is stimulation of the mother immune system that contributes in the maintenance of fetus. This treatment enhances the immunological regulatory response using prepared mononuclear cells from the husband or third party. In present study we tried to examine the efficacy of paternal lymphocyte immunotherapy to produce suitable immune response for RSA patients by evaluation of WBC-cross-match results.

Materials & Methods: A retrospective survey was conducted in 704 volunteer subjects with RSA, at Sarem Women’s Hospital, during the years 2009-2013. Peripheral blood mononuclear cells (PBMCs) were isolated from husband and were injected into the patients, two or three times. Two weeks after the last immunization, the patient’s serum was tested for anti-paternal cytotoxic antibodies (APCA) by WBC cross-match test.

Results: Positive result of WBC cross match test was found in 319 (45.31%) of the 704 patients with RSA that received paternal lymphocytes two times. Immunization was repeated for patients with negative test result and then, positive result were observed in 219 (31.11%) of the treated women (76.42% in total).

Conclusion: Results of this study indicated that the immunization of RSA patients with paternal mononuclear cells can enhance production of APCAs in women with recurrent spontaneous abortion. Also, if lymphocyte therapy performed three times, it can increase alloantibodies production and induction of positive cross match test in these patients.

Keywords: Unexplained recurrent spontaneous abortion, Paternal lymphocyte therapy, WBC Cross-match test