

反覆性流產夫婦接受細胞免疫治療之臨床結果報告

Clinical outcome of paternal lymphocyte immunotherapy in couples with recurrent pregnancy loss

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Study Question:

To explore the efficacy of paternal leukocyte immunotherapy in couples with recurrent pregnancy loss (RPL) based on human leukocyte antigen (HLA) determination.

Study Design, Size, Duration:

This is a retrospective study. We reviewed 188 couples consulted for fertility issues having medical record for HLA determination at Chi-Mei medical center from March 2013 to August 2021. Eighty-one couples with history of two or more times of pregnancy loss without any identified cause were included. Among which, 27 couples with at least three pairs of HLA sharing and treated with paternal lymphocytes immunotherapy were enrolled for the study. Fifty-five couples were excluded for the following reasons: ectopic pregnancy, experience of having one or more live birth offspring and having less than three pairs of HLA sharing.

Materials, Setting, Methods:

Couples fulfilled the inclusion criteria who had at least three pairs of HLA sharing were suggested to have paternal lymphocytes immunotherapy. Those who agreed to undergo treatment were treated every 4 weeks for six times adjustably. In couples who had paternal lymphocyte immunotherapy, blood retrieval was performed on the husband. The blood sample was centrifuged. The buffy coat was retrieved and injected subcutaneously on one site of the women's forearm. We reviewed the pregnancy outcomes including the clinical pregnancy rate, on-going pregnancy rate and the live birth rate.

Main Results: The mean age and mean body mass index (BMI) of the women in this study group were 35.4-year-old and 23.3. The clinical pregnancy rate was 68.9%; on-going pregnancy rate was 65.5%. The live birth rate was 41.3%.

Conclusion: The relationship between human leukocyte antigen (HLA) sharing and recurrent pregnancy loss (RPL) have been hypothesized that these women may be unable to produce blocking antibodies reacting to paternally encoded alloantigens expressed at the trophoblast level. Paternal leukocyte immunotherapy may be beneficial in modulating this condition. According to our results, we recommend couples who suffer from recurrent pregnancy loss with at least three pairs of HLA sharing should receive paternal lymphocytes immunotherapy.