

An experimental study on inhibitory effect of Chinese medicine tai-bao on antisperm antibody

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OBJECTIVE: To investigate whether Chinese medicine Tai-bao could inhibit antisperm antibody in experimental mice.

METHODS: The experimental immunoinfertility mice were due to antisperm antibody induced by injection of human sperm membrane antigens. The experimental immuno-infertile mice used in the present study were divided into four groups including Tai-bao high dose group (46.8 g.kg-1.d-1), Tai-bao low dose group (31.2 g.kg-1.d-1), prednisone group and normal saline group. The enzyme linked immune sorbent assay (ELISA) and microcytotoxic assay were used for detection of antisperm antibody. The change of levels of antisperm antibody before and after treatment, pregnant rate, and the number of implantation were investigated in tested mice.

RESULTS: The pregnant rates in normal saline group, prednisone group, Tai-bao high dose group and low dose were 38.89%, 47.06%, 70.00% and 75.00% respectively. The rate of pregnancy in Tai-bao low dose group was significantly higher as compared with normal saline group ($P < 0.05$). The rate of implantation in Tai-bao low dose group was significantly higher than that in prednisone group ($P < 0.05$). The results of detection of cytotoxic antibody to sperm showed that cytotoxic percentages in Tai-bao high dose group (63.0 +/- 10.3%) and prednisone group (56.3 +/- 13.7%) were significantly lower ($P < 0.05$ and $P < 0.01$) than that in normal saline group (72.84 +/- 5.05%).

CONCLUSION: Chinese medicine Tai-bao possesses regulatory effect on reproductive immune function, inhibitory effect on antisperm cytotoxic antibody, and promoting effect on pregnancy.