

Antisperm antibody detection in serum and semen of infertile men for prediction the outcome of testicular sperm extraction

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Abstract

Male Infertility treatment has reached to prominent improvements in recent years by emergence of microinjection. In this method even with finding at least one spermatozoa, through Testicular Sperm Extraction (TESE), fertility would be possible. By such facilities, the treatment of non obstructive azoospermic men would be possible and finding of at least a few sperm from testis was signified. In order to predict the probability of retrieving spermatozoa from testis, different study was performed. Immune system and its role in production of antisperm antibody was considered in this study. Sperm antigens which appear at puberty are unfamiliar for immune system and their encounter with immune system stimulate and produce antisperm antibody (ASA). So, this study evaluated the relationship between antisperm antibodies in serum and semen of infertile men with outcome of testicular sperm extraction. This study included 94 azoospermic men who needed diagnostic biopsy or TESE. ASA was detected by indirect MAR test for IgG and IgA and the correlation between level of ASA and success rate of TESE were evaluated by statistic tests. The results showed that in men with positive TESE, level of IgG was more than negative one. ($r_{\text{spearman}}=0.360$, $p=0.000$). In 40 men the result of MAR test was more than 10% and sperm found in samples of 34 men. So in this study the positive predictive value of antisperm IgG was 85% and its negative predictive value was 52%. By having the level of IgG in MAR test equal or more than 40%, its positive predictive value would be 100%.

It is worthy to note that negative ASA does not predict the absence of spermatogenesis. In other word, negative test has not predictive value. Generally our results showed that antisperm antibody in serum and semen of azoospermic infertile men has a good prognosis for finding testis spermatozoa.

Key words: Male infertility, Antisperm antibody, Azoospermia, Microinjection, Predictor factor, and TESE.

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