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ANTISPERM ANTIBODIES IN VASOVASOSTOMY

Gholamreza Pourmand*, MD, & Firouzeh Akbari**, MD

** Associate Professor, Tehran University of Medical Sciences, Faculty of Medicine, Sina Hospital: Department of Urology.*

*** Assistant professor, Tehran University of Medical Sciences, Faculty of Medicine, Arash Hospital: Department of Ob/Gyn.*

SUMMARY

Two hundred and forty patients, who had undergone vasectomy from 1977 to 1985 and subsequent vasovasostomy ,were studied for the presence of sperm-specific antibodies by using the Kibrick's gelatin agglutination test. The number of successful pregnancies and the presence of agglutination were also considered in this survey. Sixty-nine pregnancies occurred in total and agglutination was present in 49% out of 51% positive specimens by the Kibrick Test.

The average sperm motility was slightly higher in the negative Kibrick group than in the positive Kibrick group. The obtained data indicated that there seems to be a relationship between the increased titers and percentage of agglutination in semen samples.

KEY WORDS: *Infertility; Kibrick Test; Reversal vasovasostomy;Vasectomy.*

INTRODUCTION

Many studies have been done regarding autoimmunity and male infertility during the years with a wide range of results (1-3). These studies might be influenced by many factors including failure in the follow up of patients, female-related factors and the average age of patients.

In this study, we analysed semen analysis following vasovasostomy as a primary parameter in an attempt to eliminate some of the above mentioned factors. Multiple semen analysis could be studied during a period of six months whereas pregnancies would take several years to be achieved.

MATERIALS AND METHODS

Two hundred and forty vasovasostomies were performed in the last seven years using Zeiss operating microscope. Three closed layers were achieved in all cases using 9-0 nylon sutures. Ringer's lactate and hydrocortisone were used for irrigation at the site of the vas incision to prevent post-operative inflammation. The mean age of our patients was 39. The oldest patient was 64 and the youngest was 22 years old.

Blood samples were obtained from each of the patients prior to vasovasostomy. The shortest length of time since vasectomy was one month and the longest was 26 years, the average being 79 months.

The sera were separated and tested by using the Kibrick Test for the presence of sperm-specific antibodies (4).

The same semen donor was employed in all cases, having previously been tested for his own sperm-specific antibodies. Known positive and negative semen samples were used as a control each time. Positive serum titers ranged from 1:4 to 1:2048.

Multiple semen analyses were obtained from each of the patients; the first was taken 18 days post-operatively and continued until pregancy was achieved or when patient was not found to be followed up.Each sample was tested specifically for the presence of agglutination (5).

RESULTS AND DISCUSSION

The analysis of the patients' sera, by the Kibrick Method, showed 51% with positive and 49% with negative antibody. Significant agglutination was present in 46.86% of those patients with the positive Kibrick results and in only 23.73% with the Kibrick negative results.

A one hundred and eighteen out of 240 patients studied were seronegative by the Kibrick Test. The data obtained from the rest of the patients revealed a wide range of positive values. This study also indicated the relationship between percentage of pregnancies and the level of positive titers; the higher the positive titers, the lower the percentage of pergnancies achieved. In some instances, this relationship was not supported by the data possibly due to the small patient population studied or other unknown factors. In addition, the data indicated that the percentage of agglutination is directly proportional to the positive titers.

The data seems to indicate that the prognosis of pregnancy becomes weaker as the serum-specific antibody titer increases.

It has not yet been proven whether or not the observable agglutination in the semen analysis is an adequate criteria for the occurring chances of pregnancy; however, the data suggested that there may exist an important correlation. There are other factors which can influence the findings of the agglutination that cannot be determined by the sperm-specific antibody studies. Among these factors are debris, leukocytes, bacteria, and inherent qualities of the specimen (6).

However, current testing methods such as the Kibrick Test at least provides some useful information for evaluating such groups of patients who may wish to become fertile.

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