

Spontaneous Recovery of Spermatogenesis after Varicocele Repair in Non-obstructive Azoospermia

Introduction and Objective: Varicocele is found in approximately 15% of the general population, 35% of men with primary infertility, and 75% to 81% of men with secondary infertility. Varicocele might cause a progressive deterioration in semen quality and testicular function, ranging from oligo-asthenoterato-spermia to complete azoospermia. The benefits of varicocele repair to sperm count and motility have been confirmed in oligozoospermic men, but its effect in non-obstructive azoospermic men remains a debate. The objective: to evaluate the effect of varicocele repair on the improvement of semen quality in men with non obstructive azoospermia.

Materials and Methods: In a 2-year period, a prospective study was carried at Menofya University Hospitals on 20 non-obstructive azoospermic patients with varicocele who underwent inguinal varicocelectomy. All patients were evaluated for endocrinology profile and semen characteristics. At least two semen analyses showing azoospermia taken before the surgery and two semen analyses, at 3 months and 6 months post-operatively.

Results: An IBM compatible personal computer was used to store and analyze the data and to produce graphic presentation of the important results. Calculations were done by means of statistical software package namely "SPSS, 19 edition". The significance of the results was estimated by calculation of probability of chance "P-value". It is calculated using the Chi-Square value, student t test, Mann-Whitney test and F test. We noted induction of spermatogenesis was achieved in six men (30%) of the 20 patients with azoospermia. All of them had a pathology report of the previous testicular biopsy showing hypospermatogenesis. The improvement in sperm count in these patients ranged from 3 million to 15 million/ml.

Conclusions: Azoospermic patients may have an improvement in semen quality following varicocelectomy. This limited study demonstrates that men with azoospermia due to hypospermatogenesis have a better chance of improvement from varicocelectomy in contrast to other with azoospermia due to germ cell aplasia or maturation arrest. Histopathology can be considered as an indicator before proceeding for varicocelectomy repair in men with non-obstructive azoospermia.