

VARICOCOELECTOMY AND I.U.I. IN FAILED POST VARICOCOELECTOMY CASES

K. JAYAKRISHNAN

SUMMARY

In infertile men presenting with varicocoele as demonstrable cause of infertility, varicocoelectomy improves sperm parameters and restores fertility.

Out of 77 cases who underwent varicocoelectomy, semen improvement occurred in 67.5% and 35.00% conceived.

Out of 20 patients recruited for IUI after waiting for a period of 12 months after varicocoelectomy, in 4 (20%) conception occurred.

For those after 12 months of waiting period, IUI serves as an optimistic method of treatment. The highest pregnancy rate occurred during first year postoperatively and after 3-4 cycles of IUI. Varicocoelectomy in men with clinical varicocoele and abnormal seminal characters and IUI in failed post varicocoelectomy cases, thus serves as optimum method of treatment of male infertility.

INTRODUCTION

It is estimated that nearly 15-20% of the male population are affected by varicocoele.

W.H.O. special program of research in human reproduction has reported a deterioration in semen concentration and a

motility over a period of time in men with varicocoele and direct relation between size of varicocoele and depression of sperm count.

Ligation of left spermatic vein has been established as current therapy when varicocoele is diagnosed. Improvement in semen parameters has been reported by some authors.

Despite extensive use of spermatic vein ligation, the success is only a mean of 43 percent whereas improvement in semen quality has been reported in 24-53 percent.

In the present study we have taken failed varicocoelectomy cases, as 12 months of waiting for pregnancy after internal spermatic vein ligation, for I.U.I.

MATERIAL AND METHODS

Subjects attending infertility treatment clinic at SAT Hospital, Medical College Trivandrum were selected for study.

The subjects taken for study were infertile for atleast one year, aged between 27-45 years of age, with visible or palpable varicocoele, with abnormal semen analysis and negative PCT.

The subjects were submitted for semen analysis on 2 different occasions with a gap of 3 weeks.

The female partner was evaluated for menstrual pattern and ovulation and tubal patency while hormonal evaluation was done whenever indicated.

Two thousand and ten Infertile couples were seen in out patient clinic during the period between 1990-1994.

RESULTS

A total of 77 cases of varicocoele underwent surgery. 65 cases who had varicocoele, and opted out of surgical intervention and in whom female partner had no demonstrable cause of infertility served as a control group.

Out of the 77 cases who underwent surgery, seminal improvement occurred in 52 (67.5%) and 27 (35.00%) conceived.

Post operative hCG was given in dosage of Inj. hCG 2000 IU twice weekly (Dubin & Amelar) in 25 patients (32%), and has given good results compared to the group not receiving the drug.

60% of patients had Modified Palomos Surgery, whereas 40% had scrotal approach for ligation of vein.

(Table I) out of 20 patients recruited for Intrauterine insemination 14 had failed

Table I
IUI IN FAILED VARICOCELECTOMY

	Number	Total 102 cases
Total Number of patients after failed varicocoelectomy	20	19%
Pregnancy	4	20%
Initial sperm motility	36.83±12.5%	
Sperm motility after preparation	81.16±12.7%	
Mean increase in motility	46.59±13.05%	

Table showing Total number of patients recruited for IUI after failed varicocoelectomy, pregnancy rates after IUI, and mean increase in motility after sperm washing.

varicocelectomy and 6 had recurrence of varicocele and had varicocelectomy done twice.

Pregnancy with IUI was achieved in 4 patients (20%) in first 4 months of treatment.

(Table I) out of total number of 86 cycles IUI was done in 174 occasions. The initial sperm motility was $36.83 \pm 12.5\%$ while after preparation the motility increased to $81.16 \pm 12.7\%$. There was a mean increase in motility of $46.59 \pm 13.05\%$.

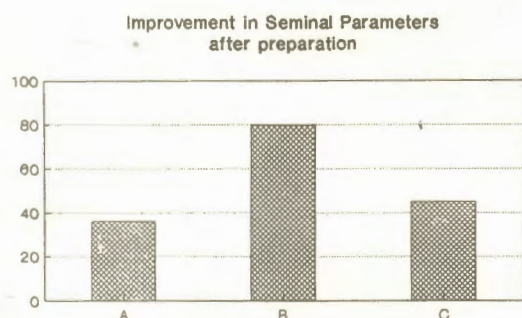


Figure 1

- A. Initial sperm motility
- B. Sperm motility after preparation
- C. Mean increase in motility

Sperm washing has been shown to increase the sperm motility from initial sperm motility of $36.83 \pm 12.5\%$ to $81.16 \pm 12.7\%$, a mean increase in motility by $46.59 \pm 13.05\%$.

Out of 66 patients in control group 45 couples were followed up. They did not receive any treatment for 12 months. If no pregnancy occurred at the end of observation period, they underwent surgery. In this group 5 pregnancies (11%) occurred during observation period.

Semen analysis was done once in 3 months or until pregnancy was reported.

DISCUSSION

The relation between left sided varicocele, abnormal semen parameters and infertility is generally accepted but not fully elucidated.

It has been documented that untreated varicocele leads to progressive testicular damage.

Bsat and Masabni (1988) found that improvement in semen quality occurs in 85% cases of clinical varicocele. Whereas Dhabuwala and Hamids (1992) claim that out of 38 patients with clinical varicocele a pregnancy rate of 47% was achieved after surgery.

Macleod (1965) has stressed the importance of stress pattern in semen with increased number of tapered forms and immature forms.

Beside there are patients who remain infertile despite surgical correction with no significant improvement in semen parameters. Many investigators have less impressive results with varicocelectomy and even doubt the efficacy of operation.

The present study has been a controlled, prospective randomised trial. The mean age period of infertility, seminal parameters, improvement in semen quality and pregnancy rates have been compared.

Varicocelectomy has been definitively found to improve the seminal parameters in 67.5% of cases, while 35.06% have conceived following surgery.

In the untreated group a low

pregnancy rate of 11% was recorded. In 35% of cases there was a deterioration in motility and count.

In 20 patients of failed varicocoelectomy IUI seemed to be the choice of treatment. Sperm washing has been found to increase the motility by 46% and should be offered to couples after a waiting period of 12 months.

It is therefore concluded that varicocoelectomy is treatment of choice in oligoasthenospermic

patients and IUI is reserved for failed varicocoelectomy cases after a period of 12 months.

REFERENCES

1. *Bsat FA, Masabni R. Fert. and Sterl. 50 : 321, 1988.*
2. *Dublin L, Amelar R.I. Fert. & Ster. 22: 469, 1971.*
3. *Dhabuwala B, Hamids. Fert. Sterl. 57: 854, 1992.*
4. *Macleod J. 16: 735, 1965.*
5. *W.H.O. laboratory manual for examination of human semen and sperm mucus interaction. Belsey MA, Eliasson, R, Galleges AJ. Singapore, Press Concern 1980, 1-93.*