

# REVERSAL OF STERILISATION USING MICROSURGICAL TECHNIQUES

By

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## SUMMARY

Twenty-eight cases of reversal of sterilisation were done using 8-0 nylon and the OPMI 6 microscope and full microsurgical techniques. The results of microsurgery were found to be far superior to those of macrosurgery. The best results were obtained when sterilisation was done at the isthmus and conception too was much earlier in these cases.

### *Material and Methods*

Twenty-eight cases of reversal of sterilisation have been done over a period of one year. Pre-operative laparoscopy was done to ascertain the site and type of sterilisation and estimate the length of the remaining tube. The operation was scheduled at any time in the cycle except during menstruation.

8-0 nylon was used for the anastomosis which was done in 2 layers excluding the mucosa with full microsurgical techniques. A splint was used intra-operatively but removed after the anastomosis was completed. The time duration that the peritoneum was kept open is noted. No special liquids e.g. dextran were left in the peritoneal cavity. Post-operatively only antibiotics were given. No adjuvants e.g. steroids were administered and hydrotubation never done. The patient was asked to

attempt pregnancy in the next cycle. Hysterosalpingography was done within 3 months if no conception occurred. Laparoscopy advised 6 months later if no conception occurred.

### *Results*

#### 1. Average interval between sterilisation and reversal:

0-2 years	11 cases
2-5 years	11 cases
More than 5 years	6 cases

#### 2. Reasons for reversal:

Death of one or more children	19 cases
Remarriage	7 cases
Desire for more children	1 case
Child morbidity	1 case

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## 3. Route and type of sterilisation:

Laparoscope	13 cases	}	Bipolar	2
			Bands	11
Minilap	12 cases		Madlener's	7
Puerperal	6		Pomeroy's	6
Interval	6		Simple	1
With caesarean section	3 cases		Filshie clip	1

## 4. Comparison of success rate with different types of sterilisation:

Type	No. of patients	Pregnancies
Pomeroy	4	1
Madlener	3	2
Simple ligation	1	1
Filshie clip	1	1
Bipolar coagulation	1	1
Bands	4	4

## 5. Results—average 6 months for conception:

Total number of cases	28
Too early for follow up	11
Attempted follow up	17
Replied	14
Pregnancy	10-70%
Patency	14-3 unilateral

## 6. Failed cases—4

- 1—Patient's husband in Saudi Arabia
- 3—Unilateral patent tubes—ampullary anastomosis.

*Discussion*

In a country like India where on the one hand family planning and sterilisation on mass scales is absolutely essential and on the other hand child mortality is so high, the patient who has been induced to undergo a sterilisation operation by a bar-

rage of propaganda and monetary incentives should in all fairness be offered a high success rate after a reversal of the operation.

On analysing my data it will be seen that out of the 28 cases of reversal of sterilisation, 19 cases had a reversal due to death of one or more children. Our success rate of microsurgical sterilisation reversal of 70% at about 6 months correlates well with those of Gomel (1980) who reports a pregnancy rate of 64.4% at around 6 months and 80% over a period of 18 months or longer. Siegler and Peres (1975) published results of conventional non-microsurgical reversal of sterilisation to obtain a pregnancy rate of 39% but the mean intrauterine pregnancy rate following reversal by conventional techniques is 31%.

Therefore microsurgery appears to offer the best chance for successful reversal of sterilisation. But even the success after microsurgery is limited by the damage done to the fallopian tubes at all time of sterilisation. Therefore to give the patient the maximum chance for success with microsurgery various factors known to affect the results of reversal were evaluated.

1. *Time interval from sterilisation to reversal*

We found no correlation between the success rate of reversal and the time inter-

val between sterilisation and reversal as mentioned by Vasquez *et al* (1980) who found that the sooner the sterilisation is reversed the more likely is the patient to become pregnant and that from an interval of 5 years onwards the success rate rapidly declines.

## 2. Site of sterilisation

The most important observation that was made in this study was that patients who had reversal following sterilisation in the isthmus had 100% results following the reversal operation and conceived earlier i.e. in 1st-4th post-operative cycle as compared to those patients who had a reversal of sterilisation in the ampullary portion where the results were poorer and where they conceived earliest in the 6th cycle. Out of 4 cases who did not conceive 3 had an ampullary anastomosis and all 3 cases had only unilaterally patent tubes with few post-operative adhesions.

Winston (1978) too has reported that the highest success rate was achieved when the ampulla remained undamaged by the method used for sterilisation.

Therefore in general, the shorter the ampullary segment, less successful is the reconstructive surgery.

## 3. Type of sterilisation

Seiler (1983) found that the pregnancy rates were not different following reversal in the Pomeroy, coagulation and Falope ring groups. Our numbers are of course too small to be statistically significant but we found that with Pomeroy's we had only 1 pregnancy out of 4, while with clips, bands and bipolar coagulation where

only small lengths of the tube were destroyed reversal was very successful.

## 4. Final length of tube after reversal

The length of the remaining tube has also been stressed in literature as being a very important factor for a successful reversal. Fortunately we have not had any tubes less than the critical 4 cms length so we are unable to opine on this matter.

So in conclusion—

(1) Reversal of sterilisation with microsurgical techniques gives far superior results to those of macrosurgery.

(2) The ideal site of sterilisation with possible reversal in view is the isthmus.

(3) Ideally small lengths of tubes should be excised if at all at time of sterilisation. Bands, clips and bipolar cautery are ideal methods.

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## References

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