

# REVERSAL OF TUBAL STERILISATION CONVENTIONAL VERSUS MICROSURGICAL TECHNIQUE

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## SUMMARY

The factors influencing results of tubal recanalisation were analysed in 14 cases done by conventional methods and 30 cases by micro surgical technique. Falope ring group had the highest pregnancy rate followed by Pomeroy's technique and tubal length of less than 4 cm had poor success rate. Ectopic pregnancy rate was 3.3% in microsurgical series and abortion rate was 7.1% in conventional method group. Proper selection of cases, type of previous operative procedure on the tube and the length of the tube seem to be prime factors in deciding the success of reversal operations of the tubal sterilisation. Microsurgical technique has better result over conventional methods.

## Introduction

The request for reversal operations are on the rise due to the availability of advanced techniques in tubal recanalisation surgery. This study includes patients who underwent reversal of sterilisation by conventional and microsurgical methods with regard to selection of cases factors influencing the results and success rate. All patients requesting reversal operations were selected after careful assessment of their history, reason for request for reversal, their potential for pregnancy, gynaecological examination and Semen analysis. Prior to 1982, Tubal reanastomosis was done by conventional method and during 1982-1985 microsurgical tech-

nique was used. Selection was done by Hulka's grading of adhesive tubal disease. The reasons for request of reversal in this series were death of one or all children due to illness or accidents. Arthur Leader (1983) reports that in this series 6% reports were from those who lost their children and 90% were for remarriage or a desire for more children. Hysterosalpingogram and Laparoscopy formed important part of evaluation of the tubes in the selection of cases. All had tubal sterilisation by Pomeroy's technique or Falope ring technique.

The clinical features of the two groups are summarised in Table I.

The incidence of pregnancy was higher and term pregnancies were more in microsurgical technique and pregnancy wastage was more in conventional method.

Table III shows higher pregnancy rate after Isthmo Isthmial followed by Isthmo

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TABLE I  
Clinical Data

	Age in years	No. of cases	Interval from sterilisation to reversal in years	No. of cases	Technique	
					Pomeroy's	Lap.
Conventional tubal recanalisation	25	6	5	10	6	8
	25-35	8	5	4		
Microsurgical tubal recanalisation	25	22	5	20	21	9
	25-35	8	5	10		

TABLE II  
Incidence of Pregnancy

	Total No. of cases	Total No. of pregnancies	Live births	Abortion	Ectopic
Conventional method	14	2 (14.3%)	1 (7.1%)	1 (7.1%)	—
Microsurgical technique	30	9 (30%)	7 (23.3%)	1 (3.3%)	1 (3.3%)

TABLE III  
Incidence of Pregnancy in Relation to Different Factors

	Pregnancy Rate	No. of cases	Interval between sterilization and reversal	Type of operation	Length of Tube	Site of anastomosis	
Conventional method	14.3%	2	2-3 yrs	Falope Ring Sterilisation	5-6 cms	Isthmo	
						Isthmial	— 1
						Ampullary	— 1
Microsurgical Technique	30%	9	2-5 yrs	Pomeroy —9	6-7 cms	Isthmo	
						Isthmial	— 6
						Ampullary	— 3

ampullary anastomosis. Tubal length in all cases were above 5 cms.

the conventional method series but 1 case ended in abortion (7.1%). In microsurgical techniques series there was 1 case of ectopic (3.3%) and 1 of abortion (3.3%).

There were no ectopic pregnancies in



TABLE IV  
Type of Operative Technique and Pregnancy Outcome

	No. of pregnancies	No. of Live births	No. of abortions	No. of ectopic
Conventional method	2 (14.3%)	1 (7.1%)	1 (17.1%)	—
Microsurgical Technique	9 (30.1%)	7 (23.3%)	1 (3.3%)	1 (3.3%)

### Discussion

The overall pregnancy rate was 14.3% in conventional method and 30% in microsurgical technique. The abortion rate was 7.1% and 3.3% respectively. The pregnancy rate was more with falope ring sterilisation in conventional method and Pomeroy's technique in microsurgical technique. The higher incidence of pregnancy reported in falope ring group by Winston and Morgara (1980) and a similar result by Boeckx *et al* (1977) is due to the possibility of isthmo isthmial anastomosis and the final length of the tube after reversal was more than 4 cms.

In this analysis the microsurgical technique series had selected mostly Pomeroy's tubal sterilisation for reversal. The incidence of pregnancy rate would have been more than 30% if falope ring sterilisation alone had been selected.

Chakravarthy from Calcutta has reported 25% of pregnancies following

microsurgical technique in 1979. Apart from it the influence of surgical skill and experience definitely would improve the pregnancy rate comparable to reported series by Winston and Margara, 1980; Gomel, 1980; Siler, 1983.

The type of sterilisation and the degree of care in applying these occlusive rings are important in deciding the results of reversibility.

### References

1. Arthur Leader: Am. J. Obstet. Gynaec. 1983.
2. Boeck, W., Vasquez, G. and Brosens: Contraception, 15: 508, 1977.
3. Chakravarthy, B. N.: J. Obstet. Gynae. India, 36: 418, 1982.
4. Gomel, V.: Fertility and Sterility, 33: 587, 1980.
5. Seiler, J. G.: Am. J. Obstet. Gynaec. 146: 292-298, 1983.
6. Winston, R. M. L. and Margara, R. A.: Microsurgery in Female Infertility Academic Press, Florida 1980.