

ECTOPIC PREGNANCY FOLLOWING STERILIZATION

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SUMMARY

In a study of 239 Consecutive cases of ectopic gestation during a 8 year period (1980-1987) 29 patients were found to have had previous tubal sterilization, giving an incidence of 12.1%. There is a four fold increase in the incidence of ectopic gestation following tubal sterilization between 1984-1987 compared to the earlier four years. A higher incidence of ectopic gestation was seen following puerperal sterilization by Pomeroy's technique. However 20.7% of patients have had laparoscopic sterilization earlier. Maximum number of ectopic gestation was seen in the distal portion of the divided tube.

Introduction

Though number of etiological factors have been attributed for the occurrence of ectopic gestation, in recent years, with the tremendous increase in the family planning programmes, tubal sterilization has definitely increased the risk of ectopic pregnancy. The cause of ectopic pregnancy following tubal sterilization may be due to 1) formation of tuboperitoneal fistula 2) Reunion of cut ends and 3) due to faulty technique resulting in unligated tube.

Methods and Materials

There were 239 cases of ectopic gestation during a 8 year period from 1980-1987, when 93173 deliveries took place.

Observation and Discussion

The ratio of ectopic pregnancy to intrauterine pregnancy was 1 in 389. The incidence of ectopic pregnancy between 1980 and 1983 was 1 in 444, whereas between 1984 and 1987, the incidence of ectopic pregnancy had gone up to 1 in 343 births. Table I.

TABLE I
INCIDENCE

Year	Total No. of Deliveries	No. Of Ectopic Pregnancies	Incidence
1980 - 1983	48846	110	1 : 444
1984 - 1987	44327	129	1 : 343

In this series there were 29 patients who have had previous tubal sterilization, giving an incidence of 12.1%. Between

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Accepted for Publication on 16-2-90.

1980 and 1983, the incidence of tubal sterilization in ectopic was 4.54%, whereas between 1984 and 1987 the incidence was 18.6%, which shows a four fold increase when compared to the earlier years. This increase may be attributed to the implementation of immediate post partum sterilization during this period, where sterilization was done on congested & edematous tube, resulting in more tubal damage. Table II.

TABLE II
INCIDENCE OF TUBAL STERILIZATION

Year	No. of Ectopic Pregnancies	Tubal Sterilization	%
1980 - 1983	110	5	4.54
1984 - 1987	129	24	18.6

Harelson et al reported 5 cases out of 96 ectopic pregnancies and in Paul et al series 7 cases had tubal ligation out of 100 ectopic pregnancies.

When the time of previous sterilization is studied, the incidence is very high following puerperal sterilization, 40% in the first group and 58.3% in the IIInd group and this may be again explained due to performance of sterilization in a congested and edematous tube. Kamala Jayaram in 1987 gives an incidence of 76.7% following puerperal sterilization.

Out of 29 cases, 23 patients had been sterilized by Pomeroy's technique and 6 patients by laparoscopic method. Out of the 6 cases, 5 cases were done between 1984 and 1987. Taly et al and Kamala Jayaram have not reported any ectopic pregnancy following laparoscopic sterilization.

In 45.9% ectopic gestation occurred within 2-5 years, in 25% in less than 2 years and in 29% between 6-10 years. Table V.

In 62% of cases previous tubal sterilization was done in the Institution and in

TABLE III
TME OF PREVIOUS STERILIZATION

Year	Puerperal		Along with LSCS		Interval		Along with Se		Along with Hysterotomy	
	No.	%	No.	%	No.	%	No.	%	No.	%
1980 - 1983	2	40	-	-	1	20	2	40	-	-
1984 - 1987	11	45.8	3	12.5	2	8.4	7	29	1	4.2

TABLE IV
TYPE OF TUBAL LIGATION

Year	Pomeroy's Technique		Laparoscopic Sterilization	
	No.	%	No.	%
1980 - 1983	4	80	1	20
1984 - 1987	19	79.2	5	20.8

TABLE V
INTERVAL BETWEEN TUBAL LIGATION AND ECTOPIC

	1980 No.	1983 %	1984 No.	1987 %
Less than 2 years	2	40	6	25
2 - 5 years	2	40	11	45.9
6 - 10 years	1	20	7	29.1

20.7% of cases in the peripheral hospitals. In 17.3% the place of previous sterilization was not known.

Sterilization scar was seen in the ampullary region in 55.2% of patients, in the isthmic region in 31% of cases and in the cornual region in 6.9% of patients. (Falope rings). In 6.9% of cases the evidence of scar was doubtful and unligated tube was suspected.

TABLE VI
SITE OF PREVIOUS TUBAL LIGATION

Place	No.	%
Isthmus	9	31
Ampullary	16	55.2
Cornula	2	6.9
Scar doubtful	2	6.9

In 17.2% of patients, the site of ectopic was proximal to the tubectomy scar and this may be due to transport of ovum through tuboperitoneal fistula. In 82.8% of cases ectopic pregnancy occurred in the distal segment and this may be due to sperm transport through tuboperitoneal fistule or recanalised tube with narrow lumen. Our figure correlates well with

Kamala Jayaram's figure of 86.7%. The same was observed by Chakravarthi et al.

Ectopic was unruptured in one case, tubal abortion in 31% of cases and tubal rupture in 65.6% of cases. Pelvic infection with adhesions with tubes and ovary were seen in 5 out of 29 cases.

To conclude, the incidence of ectopic pregnancy following sterilisation is on an increase, and occurs more commonly in the distal segment, and the incidence is very high following puerperal sterilization. Hence the diagnosis of ectopic pregnancy should be kept in mind, in women presenting with clinical features of ectopic pregnancy following tubal sterilization.

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