ECTOPIC PREGNANCY FOLLOWING TUBAL LIGATION

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SUMMARY

While overall incidence of ectopic pregnancy following tubal ligation is low because female sterilisation is highly effective, a substantial percentage of pregnancies in sterilized women is ectopic. Twenty one patients amongst a total of 143 ectopic pregancies (14.7%) admitted during a 6 year period at JIPMER, Pondicherry were found to have undergone tubectomy as a sterilisation method. It was interesting to note that there was not a single case of tubectomy in 160 patients of ectopic pregnancy during a 15 year period from 1959 to 1973 in the same institution. In 16 (76%) patients the method of tubal occlusion was Pomeroy's by Minilap and 5 had laparoscopic sterilisation.

A higher incidence of ectopic pregnancy was found after postpartum sterilisation and in the ampullary portion distal to the tubectomy site.

The need to encourage internal sterilisation and to adopt Parkland method of tubal occlusion in postpartum sterilisations is stressed.

INTRODUCTION

Ectopic pregnancy represents a major gynaecological emergency and one of the major causes of maternal deaths. Of late, previous tubal sterilisation has been found to be a considerably important risk factor in the etiology of ectopic pregnancy. This often causes delay in diagnosis of this unmitigated disaster. A high number of ectopic pregnancies following tubal sterilisation in our Institute stimulated an indepth analysis of such cases.

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Accepted for Publication in 14.12.94

MATERIALS AND METHODS

The study was carried out in the department of obstetrics and gynaecology of Jawaharlal Institute of Postgraduate Medical Education and Reserach, Pondicherry. The case records of all women admitted during the period of 6 years (1988-1993) with the diagnosis of ectopic pregnancy confirmed on Laparotomy in patients with a previous tubectomy were analysed. The total births during the study period were 22,892 and number of patients admitted with ectopic pregnancy was 143.

RESULTS

The incidence of ectopic pregnancy during 6 years from 1988 to 1993 was 1 in 160 births and 21 out of 143 women admitted with ectopic pregnancy had previously undergone tubectomy. 93% of patients were between 20 and 40 years of age and 88% were multiporous. Table I shows that maximum cases were following postpartum tubal sterilisation.

Table No. I
Timing of Sterilisation

Time	No	%
Postpartum	14	66
Concurrent with MTP	5	24
Interval	2	10

The time interval between tubectomy and ectopic pregnancy was 6-10 years in 10 women (47.6%), 2-5 years in 6 (28.5%) and more than 10 years in only 5 (23.8%).

Table II shows that most of the patients had undergone tubectomy by Pomeroy's method.

Table II
Method of Tubectomy

Method	No. of cases	%
Modified Pomeroy's	16	76
Laparoscopic	5	24

On laparotomy tubal rupture was the commonest finding and seen in 18 (85.7%). The implantation was in the ampullary portion distal to the previous tubectomy site in 12 (57%) and in the isthmic part proximal to the tubectomy site in 4 (19%). The site of previous tubectomy scar could not be ascertained in 2 patients. Adhesions were found in 3 cases (14%) & Salpingo oophorectomy with opposite side tubal ligation or salpengectomy was done in most of the cases.

DISCUSSION

In recent large studies, the evidence of ectopic pregnancy within 2 years of sterilisation ranged from 0.02 to 0.31 per 100 sterilised women whereas overall percentage of ectopic pregnancies in sterilised women has been reported to be between 4 and 64% compared with 0.8% among women not sterilised (Population Reports 1985). The incidence of 14.7% in the present study is slightly higher than that reported by Prabhu et al (1990) (12.1%) which has increased 4 fold in comparison to the past and feel that this may be

due to implementation of postpartum sterilisation programme. The previous tubectomy as a predisposing etiological factor in our study is also very high as compared to nil during 15 years period from 1959 to 1973 Oomachighi et al (1976). The 12.7% incidence reported by Jayaram (1987) is also comparable to present study but much higher than 5.2% reported by Harelson et al (1973) and only 0.6% reported by Breen (1970).

The incidence of ectopic pregnancy was the highest (66%) after postpartum sterilisation. Prabhu et al (1990) and Jayaram (1987) have also reported maximum cases (58.3% and 76.7% respectively) after puerperal sterilisation. Taby et al (1985) also reported puerperal sterilisation in 10 out of 12 cases (83%) and 2 of these had undergone interval sterilisation. Congested and edematous tubes soon after delivery may be the cause of more tubal damage followed by reanastomosis or fistula formation.

Laparoscopic sterilisation was the method in only 24% as compared to Pomeroy's method of tubal occlusion in 76% of present series. Taby et al (1985) and Jayaram (1987) have not reported any ectopic pregnancy whereas Prabhu et al (1990) have also reported a much lower number of ectopic pregnancy cases (6 out of 29) after laparoscopic sterilisation. On the other hand, McCausland (1980) has reported a very high rate of ectopic pregnancy (51%) after laparoscopic tubal coagulation in his study of 23.238 cases. He felt that more damage to the isthmic portion led to the formation of utero-peritoneal fistula.

Maximum cases in the present study had implantation in the ampullary portion distal to the previous tubectomy site. Prabhu et al (1990) and Jayaram (1987) also found 82.8% and 86.7% cases respectively of implantation in ampullary portion distal to the tubectomy site. Chakravarty and Shardlaw also found a high incidence of implantation in the ampullary portion (58%) in their cases.

CONCLUSION

As most of the cases of ectopic pregnancy after tubectomy were after Pomeroy's method by minilap, we feel that Parkland method may be adopted as an alternative routine method of tubal occlusion.

We should also encourage interval sterilisation in addition to our efforts in motivating more than more of women for postpartum sterilisation.

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