MORBIDITY FOLLOWING TUBAL STERILISATIONS IN RURAL AREAS

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SUMMARY

Six hundred and fifty women who underwent tubectomy at rural primary health centers were followed for a period of one year in order to note the extent of morbidity following the operation in them. The incidence of major operative complications was 0.77%. Complications in first post-operative week occurred in 1.77% and late morbidity occurred in 1% women. The incidence of pelvic inflammatory disease however, showed a significant increase. On the whole the complications were more after vaginal tubectomies and interval abdominal tubectomies than in puerperal tubectomies.

Introduction

Female sterilisation by conventional technique has gained wide popularity over the last decade and has become an important integral part of rural based National Famiy Planning Programme. The operations carried out in the rural setting face some limitations as compared to those carried out in institutions. Medical Officers of the Primary Health Centres perform most of the operations in the field after a limited technical training, whereas supervision of the specialists is always available in the institutions. The facilities and knowledge for managing an unexpected emergency situation available in the institutions is unparallal.

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Follow-up information regarding these operated cases is also very meagre, hence there is little information available about the extent of morbidity following these operations when performed in rural setting. It was, therefore, decided to study the nature and extent of immediate as well as long term complications following female sterilisations performed in rural health centres and also to correlate them with the route of operation and type of operation.

Material and Methods

The study was conducted in Sirur Block in Pune District and Khandala Primary Health Centre in Satara District. Six hundred and fifty women residing in this area who underwent tubectomy operation on socio-economic grounds were included in the sample.

Tubectomies were done by abdominal route in 509 women and by vaginal route in 141 women. Abdominal tubectomies were performed by the medical officer himself and the vaginal tubectomies were performed by the medical college team in mini camps.

The modified Pomeroy's technique involving crushing, cutting and ligation of the tube with non-absorbable suture material was used in all cases. Three hundred and eighteen women were operated in the puerperium, the remaining 332 being interval tubectomies. The incidence of immediate surgical complications and those within first 7 days following surgery was noted. Follow-up visits were made 6 weeks and one year following operation in order to evaluate the longterm morbidity, and alterations in menstrual pattern if any. The immediate and early postoperative complications and late sequlae noted in these women are presented and discussed in this paper.

Observation and Results

Characteristics of the acceptors: Eighty five percent of these women were under the age of 35 years at the time of tubectomy and the mean age at operation was 31.04 years. Majority of women (74.4%) were illiterate and 60.9% were agricultural workers. Average number of living children they had was 3.8 and 75% had 4 or less living children. Eighty one per cent had 2 or more living sons and only 0.5% got operated when they had no living son.

Table I shows the complications observed in these patients. Major operative complications occurred in 0.77% of total cases (5 cases). Two cases had injury to urinary bladder during abdo-

TABLE I

Tubectomy Complications—Operative and Post Operative

Time	Complications	Abdominal		Vaginal	Total
		Puerperal	Interval		
During operation	Injury to rectum	—	—	2	2
	Injury to urinary bladder	1	1	—	2
	Mesosalpingeal haematoma	—	1	—	1
	Total	1 (0.3%)	2 (1.0%)	2 (1.4%)	5 (0.77%)
Within 7 days after surgery	Pelvic infection	0	6	3	9
	Urinary infection	1	1	—	2
	Total	1 (0.3%)	7 (3.7%)	3 (2.1%)	11 (1.77%)
Upto one year after surgery	Pelvic infection	—	—	1	1
	Urinary infection	3	—	1	4
	Incisional Hernia	2	—	—	2
	Total	5 (1.5%)	—	2 (1.4%)	7 (1.0%)

minal tubectomy. Two cases operated by vaginal route had injury to rectum. One patient developed mesosalpingeal haematoma. Four of these were interval and only one was puerperal. Thus the major surgical complications were 2½ times more common during vaginal tubectomy as compared to abdominal and eight times more common in interval operations than in puerperal cases.

Majority of patients (74.8%) were operated under local anaesthesia, 28.7% cases were given spinal and only one patient received general anaesthesia. Ten out of 650 patients (1.5%) had complications like hypotension, and vomiting which were probably related to anaesthesia. Overall incidence of complications was very low. (0.6% with local and 3.6% with spinal anaesthesia).

Only 11 out of 650 women had some complications during the first 7 days period giving a very low rate of 1.77%. Only 0.3% of puerperal sterilisations developed early complications as against 3.01% of interval sterilisations.

Overall rate of late complications was only 1%. Four patients developed urinary tract infection which was mainly due to catheterisation of urinary bladder. Two cases operated by abdominal route developed incisional hernia. But they were asymtomatic and had not undergone repair procedure till one year. Only one case of vaginal tubectomy required treatment after discharge for acute pelvic infection.

Pelvic Inflammatory Disease: Pelvic examination was done prior to surgery and one year later at the time of follow-up visit. The findings are shown in Table II. Significantly increased incidence of pelvic tenderness, pelvic masses and restricted mobility of uterus was found at the time of follow-up visit. Incidence of retroversion also showed an increase.

Menstrual pattern: About thirty per cent women (197/650) were still amenorrhoeic at the end of one year. Of the remaining, 79.4% had no alteration in the cycle length, 7.0% had shorter cycles and 13.4% observed longer cycles.

Of the 453 women who had established their menstrual periods, 88.7% had no alteration in menstrual flow and only 2.4% had menorrhagia.

Failures: Two cases who had undergone vaginal tubectomy had become pregnant giving a failure rate of 0.3% at the end of one year.

Mortality: There was no mortality related to tubectomy operation.

Discussion

Surgical complications like bowel and bladder injury are definitely related to experience and skill of the surgeons. The overall incidence of 0.77% observed in present series compared well with the reported figures. The rate seemed to be

TABLE II
Pelvic Findings Before and After Surgery

Findings	Before	After 1 year
Cervicitis	75 (11.5%)	103 (15.8%)
Retroversion	302 (46.5%)	415 (63.8%)
Restricted mobility of uterus	21 (3.2%)	216 (33.2%)
Pelvic tenderness	00 (0.0%)	32 (4.9%)
Pelvic masses	00 (0.0%)	5 (0.8%)

slightly higher for operations carried out by vaginal route. Complications due to anaesthesia also were very few (1.5%), were not major and use of local anaesthesia seemed to be the safest.

Pelvic infection and urinary infection were the two main complications noted during the immediate post operative hospital stay. Only 0.3% of puerperal group experienced these complications as against 3.0% from the interval group.

The incidence of these complications has been reported to be ranging between 3 and 5% (Akhtar, 1973).

Delayed complications included pelvic infection, urinary infection and incisional hernia which occurred in 1.7% of cases.

Menstrual pattern at the end of one year was unaltered in a large number of cases. However, nearly 30% of women were still amenorhoeic at the end of one year. A long term follow-up alongwith a control group of non-sterilised women in the same age and party group is necessary to substantiate this observation.

Purandare (1967) has reported the incidence of pelvic masses following tubectomy as 1.7% which compares well with the rate of 0.8% observed in the present series.

Restricted uterine mobility noted in 33.2% of cases is considerably higher as compared to the observation of 6.3% by Purandare (1967). This higher incidence observed in present series could be because of technique used for tubectomy which involved excision of a loop of fallopian tube exposing raw surface in the peritoneal cavity which can lead to adhesions with abdominal organs.

Failure rate at the end of one year is 0.3% in present series. Ghatikar and and Bhopatkar have reported a figure of 0.2% following to a similar technique used for tubectomy.

Thus, the incidence of immediate, early and late complications noted here are comparable to those reported from institutional studies and hence with existing facilities and availability of trained medical officers rural centres can undertake tubectomy operations without undue risk to the health of women.

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