

TRENDS IN FEMALE STERILISATION IN A TEACHING HOSPITAL*

by

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Next to conventional contraceptives, sterilisation is the most important method of family planning in India. During 1971-72, 2.2 million sterilisations were done but less than 0.5 million intra-uterine devices were inserted in our country, (Ministry of Health, 1972), Female sterilisation forms 22.5% of the sterilisations performed in our country

TABLE I

Number of Sterilization in India Since Inception of Family Planning Programme to 1972

Total No. of sterilizations since inception	11.1 mil.
No. of Vasectomies	8.6 mil.
No. of Tubectomies	2.5 mil.

(Table I). During a period of 17 years (1956-1972) 10,451 tubal sterilisations were done in the Government Erskine Hospital, Madurai. Of these 68% were soon after delivery—puerperal (or sometimes with caesarean section), 25% were non-puerperal and 7% concurrently with termination of early pregnancy (Table II). It is interesting to study the changing trends re-

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TABLE II
Total Sterilization in the Female in Erskine Madurai (1956-1972)

Type of Sterilization	No.	%
Puerperal	7101	67.95
Non-puerperal	2624	25.11
Concurrent with pregnancy terminations	726	6.94
Total	10451	100.00

garding the type and time (in relation to pregnancy or delivery) of sterilisations during the past nearly two decades. For several reasons, this 17 year period is divided into 3 phases (i) 1956-1963 (8 years), (ii) 1964-1970 (7 years) and (iii) 1971-1972 (2 years).

During the first period, the national family planning programme was in its initial stages and the number of sterilisations were on an average less than 100 per year. Over 92% of them were puerperal (Table III). Hardly 7% were non-puerperal—almost all of them done during repair of genital prolapse, complete perineal tear, genital fistulae etc. There were only 3 hysterotomies with sterilisation for purely therapeutic reasons during this entire 8 years period. The emphasis, it appears, was on puerperal sterilisations alone.

In the second phase (1964-1970) the programme had gained momentum and the average number of sterilisations increased to 1000 per year. The number of

TABLE III
Type of Sterilization During the 3 Different Periods
 (All figures in per cent)

Type of Sterilisation	1956-1963 (8 years)	1964-1970 (7 years)	1971-1972 (2 years)
Puerperal	92.15	82.54	44.15
Non-puerperal	7.42	16.93	39.50
Therapeutic abortion with sterilization	0.43	0.53	16.35
Total:	100.00	100.00	100.00

puerperal sterilisations showed a rise from 1.4% to 13.4% of all deliveries in this period. The non-puerperal or 'interval' sterilisations gradually increased to 17% of the total. Primary vaginal sterilisations were done sporadically from 1964. But it was only since 1968 that the number of such operations had increased appreciably. The following year, our staff ventured out to perform tubectomies in 'Mobile camps' in the district hospitals or even in smaller institutions as in Gandhigram to attract more women for the interval sterilisations. From the motivational aspect, it was an attractive offer to perform tubectomies without their having to wait for another (perhaps an unwanted) pregnancy and delivery. In preference to abdominal, the vaginal method was appealing to the 'eligible' women in our part of the country as it was generally felt that vaginal procedures were minor and less risky. Besides, the hospital-stay was shorter and there was no visible scar. The acceptability rate was quite high and over 95% of the primary interval sterilisations were done by the vaginal route. Twenty per cent of all sterilisations in 1969 and 1970 were primary vaginal sterilisations in non-puerperal women. The vaginal sterilisations are still popular though the response during mass campaigns is now less

than in 1970 and 1971. Maharashtra is perhaps the only other state in India which does vaginal sterilisations in mass family planning camps. Six surgeons and 2 anaesthetists using 3 operation tables can easily do as many as 50 cases in a day operating for 6 to 7 hours. If the sterilisation is done in the luteal phase of the menstrual cycle, an endometrial curettage is indicated at the end of the procedure. During this phase of 7 years only 0.5% of sterilisations were associated with therapeutic abortions as in the earlier phase.

In the last 2 years, over 2000 sterilisations were done annually with 44% puerperal, 40% non-puerperal and 16% concurrently with medical termination of pregnancy. Owing to the high incidence of septic induced abortions seeking admission into our institution, we began offering therapeutic abortion facilities with simultaneous sterilisations from early 1971 and did 206 "pre-legal" abortions before the Medical Termination of Pregnancy Act came into force on 1st April 1972. Motivation for sterilisation seems to be highest when there is an unwanted pregnancy in a multipara. Towards the end of 1972 we were surprised to find that the number of concurrent sterilisations were exceeding the puerperal and non-puerperal ones. This is not

a good trend and we hope that with good family planning education, we will be having more of puerperal and non-puerperal sterilisations. The puerperal sterilisations in our studies have shown the least morbidity rate compared to other 2 groups (Rao and Najma 1973).

Medical Termination of Pregnancy and Sterilisations

When pregnancy is less than 12 weeks, posterior colpotomy and sterilisation is first performed and after closing the vaginal opening the uterus is emptied by suction curettage. This we feel gives us a cleaner field for sterilisation and carries less postoperative complications than the initial uterine evacuation. In a few cases, culdoscopic sterilisations followed by suction of the uterine contents were done. With pregnancy exceeding 12 weeks, hysterotomy and sterilisation is needed. In our experience, this carries a higher morbidity than with the first trimester abortions. The complication rate was 27.8% with hysterotomy and sterilisation compared to 17.1% with vaginal sterilisation and vacuum aspiration. Hysterotomy by itself carries some inherent complications like haemorrhage and sepsis. We prefer now intra-amniotic injection of saline or prostaglandins to empty the uterus in mid-trimester abortions and do the sterilisation, per abdomen 24 to 48 hours later (Mallika and Rao, 1973).

With our staff trained in both laparo-

scopic and culdoscopic procedures it is hoped that in future there will be more endoscopic non-puerperal sterilisations with minimal morbidity and hospitalisation. Unfortunately, endoscopic methods are not useful for mass tubectomy campaigns in our country.

The ratio of puerperal sterilisations to the number of deliveries has remained fairly constant during the past 10 years. Table IV) and Pomeroy's type of sterilisation may be offered in early puerperium to all women with 3 or more children. Several women are now volunteering for puerperal sterilisation with the second delivery but with infant mortality rate still as high as 140 per 1000 (Registrar General of India 1972) we believe it is preferable to insert an intrauterine device postpartum and perform an interval sterilisation later on in these patients. There are many who deliver in the villages and are not able to avail of the postpartum sterilisation facilities and these should be motivated for non-puerperal tubectomies in an effort to reduce the birth rate in our country.

Summary

(i) During a period of 17 years (1956-1972) 10,451 female sterilisations were performed in the Erskine Hospital, Madurai.

(ii) Only 6.7% of these operations were done during the first 8 years (1956-1963) and most of them were puerperal.

TABLE IV
Distribution of 10451 Sterilization During 17 Years
(1956-1972)
(All figures in per cent)

	I Phase	II Phase	III Phase	Total
Per cent of total sterilizations	6.70	53.9	39.4	100
Proportion of Puerperal sterilization to total deliveries in Hospital	1.40	13.40	13.8	...

(iii) The primary non-puerperal or interval tubectomies became popular during the second phase (1964-1970) and over 95% of them were done vaginally.

(iv) Sterilisations concurrently with therapeutic abortion formed only 0.5% of all sterilisations from 1956-1970. But in 1971-1972 they increased to 16.4% and lately are exceeding the number of puerperal and non-puerperal tubectomies.

(v) The puerperal sterilisations formed only 1.4% of all deliveries in 1956 to 1963. Subsequently, one out of 7 deliveries have accepted puerperal sterilisation. As puerperal operations are safest, it is

hoped to increase their acceptability by intensive postpartum programme.

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TABLE IV
Comparison of 1971 Sterilisation Data 11 Years

Year	I Year	II Year	III Year
1961	278	284	284
1962	281	281	281