

EVALUATION OF 3028 TUBECTOMIES

by

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In India female sterilization holds an important place in the family planning drive aimed at population control. This particular mode of sterilization is an easy procedure and can be carried out by physicians trained in maternity hospital for six months or more. Moreover, Indian women who have completed their families are more amenable to accept this mode of family planning. The experience at Dr. R. N. Cooper Municipal General Hospital, Bombay, extending over the period of 1971 to 1975 has been reviewed in the present paper. During this period there were 18,895 deliveries of which 2,453 underwent a puerperal sterilization. During the same period 565 patients were undertaken for vaginal tubectomies, mostly following termination of pregnancy.

Selection of cases

No patient willing for operation was refused. Even parity and number of living children was no merit or demerit for the operation. Family planning be-

ing the burning problem in India the only aim was to increase the total number of tubectomies in our National statistics. In fact sterilization was done as an absolute must in cases of pulmonary tuberculosis, heart disease, essential hypertension, diabetes, chronic nephritis, classical caesarean scar, rupture of uterus, abdominal hysterotomy and severe anaemia and hypoproteinemia. Such bad risk cases were operated under local anaesthesia. Tubectomy was done on the next day of delivery to minimize the hospital stay. Spinal anaesthesia was used as a rule; general or local only when spinal was contraindicated.

Technique

A one stitch transverse incision, about 3 cm below the level of the fundus along the transverse crease was made in all puerperal ligation. The method of sterilization was either Pomeroy's or Madlener's. Vaginal tubectomies were mostly managed by approach through posterior fornix. Only for demonstration purposes or as an accompanied procedure in Fothergill's repair it was done through the anterior fornix.

Distribution of Cases

Ours is a peripheral Municipal General Hospital in the city of Bombay. It began

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TABLE I

Year	Puerperal	LSCS	D & C	Termination of pregnancy	Hysterotomy	Gynaec. operations	Total
1971	340	31	74	—	—	14	459
1972	384	36	53	—	—	17	489
1973	436	34	72	—	—	—	542
1974	549	35	57	97	—	16	754
1975	597	11	13	152	11+7=18	3	777
Total	2306	147	269	249	11+7=18	40	3028

in 1970 and today offers services to the lower and the lower middle-class suburban population. In spite of the institution being started in 1970 it is clear from the above table that the sterilization rate is very high. In fact our institution bagged the first prize for performing the maximum number of sterilizations in 1973 and 1974 in the whole of Bombay city. The zeal of motivation and the enthusiasm of the health visitors, the nursing staff and the resident doctors enabled us to achieve a target which is impressive among the other premier institutions in the country. This table also clearly shows that after August 1974 i.e. after the enforcement of legalization of abortion we started indulging in termination of pregnancy with vaginal ligation and it is only thereafter the simple vaginal tubal ligation has dropped.

TABLE II
Percentage Incidence Given by Other Indian Authors

Authors	Incidence (%)
Rebello et al	15.4
Parikh	10.45
Shama Sikand et al	3.5
Malkani and M'rchandani	2.15
Adatia and Adatia	16.0
Shah and Kasbekar	9.9
Present series	13.0

Our incidence of puerperal ligation is comparable to other authors from India.

Age and Parity

The ages of the patients undergoing tubal ligation varied from 21 to 41 years. Majority of the patients were poor and illiterate and did not know their correct ages.

More than 80% of the patients were below the age of 30 years which is a heartening change in the patient's acceptance for tubal ligation as compared to the last two decades.

A large majority of the grand-multiparas were successfully prevailed upon to terminate their obstetric career and accept sterilization, though their number was very small among others (8.5%). There was maximum acceptance in the group of Paras III and IV.

The number of women delivering at this place on a community basis is analysed in Table III. It is seen that Hindu women accept tubal ligation most willingly. About 10% of Christian

TABLE III

Caste	% undergoing tubectomy
Hindu	81.7
Muslim	6.7
Christian	10.76

women accepted tubal ligation but the Muslim community accepts this to a much lesser extent; only 6.7% of Muslim women were sterilized.

TABLE IV
Indications for Sterilization

Indications	% of cases
1. Socio-economic	96.2
2. Obstetrical (along with LSCS)	2.6
3. Medical	1.2
— Heart disease	6 cases
— Tuberculosis	3 cases
— Nephritis	2 cases
Hypotension	2 cases
Rh negative	—

As it will be seen from Table IV that vast majority of the tubal ligation were performed for socio-economic reasons. Only 1.2% of sterilizations were carried out for medical reasons and 2.6% for obstetrical indications. Bisney *et al* (1967) quote incidence of 96% for socio-economic reasons and Adatia and Adatia (1966) in 95%.

Complications

No major complications were noted up till now. Immediate postoperative complications were abdominal pain mild pyrexia and headache.

The wound complications encountered in the present series are shown in Table V.

TABLE V

Induration and wound infection	5%
Hematuria	1%
Wound gaping	2%

Of the patients that came for follow up only 44 had complaints which were not present prior to this surgery. These are detailed in Table VI.

TABLE VI

Symptoms	No. of cases
Pain in abdomen	25
Menorrhagia	10
Decreased libido	2
Psychological changes	5
Dyspareunia	2

It has been successfully demonstrated by other authors by a random sampling method and cytological survey method that tube ligation does not lead to menstrual irregularities. In 2 cases if dyspareunia, painful tubo-ovarian masses were the underlying causes. Of the 25 cases complaining of abdominal pain, suitable reassurance and administration of enzyme preparation helped in alleviating this symptom in 18 cases. The patients having psychiatric complaints were referred to psychiatrists for suitable advice.

Failures

Five patients had restoration of tubal patency following surgery; all of them came back with a pregnancy. Four of them were submitted to a second exploration and total excision of the tube was carried out. Our incidence of 0.28% is comparable with Bisney *et al* (1967) of 1.2% and Adatia and Adatia (1966) of 0.4%.

Difficulties Encountered in Vaginal Tube Ligation

Of the 558 vaginal ligation, 50% were following termination of pregnancy under 12 weeks of gestation. Approach through posterior fornix was resorted to in 99% of cases. In 45% of cases the spurting blood vessels in the cut vaginal edges had to be ligated with a mattress stitch before proceeding further. This kept the operative field clear of collecting blood pool and visualization of tubes was made easy.

In 33% of cases ovaries were held in Babcock's forceps and pulled downward to locate the tubes. This did leave an oozing area on the surface of the ovary, rarely requiring a catgut stitch. This trauma to the ovary probably lead to the development of oophoritis and pelvic infection in 16 out of 18 patients who were readmitted with pain in lower abdomen, fever and tenderness over the hypogastric region within 10 days of discharge from the hospital.

Summary

1. The incidence of tubal ligation at this hospital was 13%.

2. Women around 30 and over para III are most amenable to sterilisation.

3. Hindus consented more frequently than Muslim and Christians women.

4. Commonest indication for sterilization was socio-economic to limit the family.

5. It is comparatively a safe procedure and post-operative complications are rare. Most of them can be relieved by symptomatic treatment.

6. In vaginal tubectomies ligating the

sputters from the vaginal edges helps the further operation steps.

7. High incidence of pelvic infection in vaginal tubectomy follow application of Babcock on the ovary to visualize the fallopain tubes.

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