

A STUDY OF SURGICAL STERILIZATION IN WOMEN

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Till 1962, the majority of Goan population was not aware of Family Planning. Prior to liberation, the Portuguese Government never encouraged any ligation to be performed in Government Hospitals. Moreover, the State religion being Catholic, the propaganda for Family Planning was not allowed officially. In such circumstances the only alternative was private nursing homes which were also very few. In Goa Medical College Hospitals, the Family Planning Programme was started only from August 1964. Though it had been quite an effort to convince the patients for the operation, initially the response was poor. But, gradually more and more patients of both the communities are now coming forward; still the number of Catholics is very much less than Hindus.

Material and Methods

This study consists of 646 ligation operations done in Goa Medical

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College Hospitals, (Panjim and Ribandar), from August 1964 to July 1967, i.e., for a period of three years. During this period there were 4347 deliveries. Thirteen patients came for ligations who delivered outside. Out of 646, 635 were puerperal ligations and 11 were gynaecological. The approach was abdominal. The patients were called for postnatal and Gynaecological check up after one month, three months, six months and after one year. Almost all the patients turned up for the check up. The whole data was documented.

Incidence

Table I shows the incidence of ligations.

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Shows the incidence of ligations

Year	Number of deliveries.	Number of ligations.	Percentage
1964 from August	821	58	7.06%
1965	1370	212	15.47%
1966	1373	205	14.93%
1967 till July	783	171	21.7 %

The average incidence of tubal ligations was 15.4%. From table I, one can say that more and more patients are getting themselves ligated every year.

This number can be compared to the series of other hospitals or institutions. ratio of catholics is rising year by year. Comparatively, the number of Muslims is falling even though the

TABLE II

Serial No.	Name of Hospital	Year	Number of years	Number of ligations	Incidence
1.	K. V. Wagh, Jabalpur, Medical College	1961 to 1965	5	2100	5.2%
2.	S. R. Parikh, M. P. Shah Medical College, Jabalpur	1961 to 1965	5	1022	10.45%
3.	M. D. Adata Private clinic	1955 to 1964	10	1156	16.0%
4.	K. N. Ghatikar, J. J. Group of Hospitals	1954 to 1961	8	7.65%
5.	Goa Medical College Hospitals	August 1964 to July '67.	3	646	15.4%

Age and parity

The youngest patients in our series were 22 years old (all repeat cesarean) 3 cases, the eldest was 48, the average age being 31.3. Three cases had two children when sterilised and one patient in this series was a 14th para having 11 living children.

TABLE III
Shows age and parity by different authors

Author	Average age.	Average parity.
Adams Theodore ..	30.9	4.3
August ..	30.3	3.7
Berthelsen ..	33.0	5.0
Guttmacher	6.6
Gobble, Petty & Donnelly	4.1
Mehta & Mehta ..	30.8	6.4
Pandit	5.76
Prystowsky + Eastman ..	31.5	5.4
Ghatikar's series ..	31.2	4.56
Therese Lu et al ..	33.0	6.0
Present series ..	31.3	6.1

Religion

Population wise, Goa contains 49.92% Hindus, 38.07% Christians and 1.95% Muslims, as per last Census (1960). Due to religious opposition Christians are found to be less in number as compared to the Hindu population. If we analyse the table we find slowly but certainly the

number of deliveries is not reduced of that community in these hospitals. This might be an incidental finding.

TABLE IV
Percentage of sterilisations according to communities

Year	Hindus	Catholics	Muslims
1964 from August	87.9	6.89	5.17
1965	81.14	13.21	5.6
1966 ..	84.86	12.69	2.4
1967 till July	84.1	14.6	1.3

Indications

Indications are divided into three groups.

TABLE V
Shows indications

Socio-economic	Obstetrics	Medical	
	Repeated caesarean section	Cardiac	Rh. Incompatibility
617	23	5	1

- (a) Socio-economic.
- (b) Obstetric.
- (c) Medical.

Majority of the patients, 617, requested sterilisation for socio-economic reasons. In 23 cases it was

done for repeat caesarean section. In 6 cases it was done for medical reasons, cardiac disease in 5 and Rh incompatibility in one case.

Type of operation and anaesthesia

All these operations were by the abdominal route, and were done as early as twelve hours after delivery and as late as after twenty-one days. As a rule 24 hours should elapse after delivery before the patient is taken for ligation. This gives time for the patient to recuperate from the stress of labour. Sometimes it just happens that the patient delivers on the pre-operative day and if we do not perform the ligation on the next day, she must stay another four days, increasing the hospital stay. Moreover, she may change her mind. Out of these, twenty-three were done during caesarean section. In 102 ligations, the abdominal incision was transverse, while in 54 cases it was vertical. The commonest anaesthesia was general, while only in fourteen cases local was used. Local anaesthesia was mainly used for cardiac cases and sometimes for demonstration to the students. The method used was modified Pomeroy's in 543 cases wherein linen was used to tie the tubal ends, and in 97 cases was Pomeroy's type. In six cases Irwing's method was tried.

Complications

Thirty-two cases had mild infection of the wound. One patient developed broad-ligament haematoma. In 6 patients the infection was muscle-deep, out of which one developed an abscess and one excessive granulation tissue. Three patients with vertical

incisions developed incisional hernia. Two patients complained of menstrual irregularity to ligation. They attribute this irregularity to ligation. Hence the total morbidity of this operation amounts to 6.6%.

Difficulties encountered

1. Poor motivation as a result of inadequate propaganda. This is the case everywhere in India.

2. Difficulty in transport. Many patients who come for antenatal check-up and give consent, could not get transport to come to the hospitals for delivery. They delivered at home and never came for ligation.

3. Difficulty in getting consent of the husband. This was mainly due to their work and difficult transport problem. In some Christian families when the husbands are sea-men, they may not be available during delivery to give consent.

4. Availability of the loop. Some patients opt for the loop.

5. Non-availability of domestic help. When the woman has no one to help with the domestic work, she hesitates to undergo the operation.

6. Religious bigotry and fear of persecution. This is mainly seen in Christians and Muslims, although Hindus are no exception.

7. Fear of increase in the convalescent time. There is unjustified fear that after the operation they would not be able to do domestic and other manual work atleast for three months.

8. Refusal by husbands. Some husbands simply refuse to give consent for the operation. This is seen in all communities.

Discussion

This is the first published report on tubal ligation from Goa Medical College Hospitals. In Goa, the importance of Family Planning was realised only after liberation. Initially the response was poor but steadily it is gaining ground. Low socio-economic status was the commonest indication which is also observed by White, Ghatikar and Bhoopatkar, Adatia and Adatia, Bisney *et al*, and Therese Lu and Daphne Chun. In Wagh's series, multiparity is the commonest indication.

Even though tubal ligation is done on a mass scale and thought of as a minor operation, all care and attention must be given due to a laparotomy in order to obviate the possible sequelae and complications. Any avoidable complication may affect badly the Family Planning propaganda. A tendency to leave it in the hands of juniors is strongly deprecated by Chakravarty and Rakshit.

In an eighteen and half year survey by Meclin *et al* of Evaston Hospital of 902 cases, he found 13.3% morbidity. Barglow of Switzerland and White of Iowa Hospital evaluated 1045 and 1146 patients respectively and observed almost negligible morbidity, while Therese Lu and Daphne Chun of Tsanyuk Hospital noted 3.4% morbidity with one death due to mesenteric vein thrombosis ten days after ligation.

Among the Indian authors, Ghatikar and Bhoopatkar found 20.4% morbidity, while Parikh, Adatia and Adatia noted almost negligible morbidity.

This survey is too short a period to evaluate the failure rate and long range effects after tubal ligation. White found 20% of the women had menstrual irregularities, while Ghatikar and Bhoopatkar, Adatia and Adatia, Bisneyetal Wagh and Dawn noted 25%, 7%, 45.5%, 45% and 55% respectively. Adatia and Adatia observed 3% psychological disturbances, while Wagh and Dawn noted poor working capacity in 21% and 69% respectively. Therese Lu mentions that 98.7% of the patients in her series were glad because they had the operation. Dawn noted anxiety neurosis more in younger group of woman, and the literate class blaming their ill-health to the operation.

We hope to follow up these cases further.

Summary and Conclusion

1. The incidence of tubal ligation is 15.4% per hundred deliveries with year by year increase in number.
2. The average age and parity is 31.3 and 6.1 respectively.
3. Population wise Hindus comprises 84.6%, Christians 11.6%, and Muslims 3.9%.
4. The commonest indication is socio-economic.
5. The commonest anaesthesia used is general.
6. The total morbidity is 6.6%.
7. Difficulties encountered are enumerated.

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