



CLINICAL STUDY OF FEMALE STERILIZATION AND ITS COMPLICATIONS

Obstetrics & Gynaecology

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ABSTRACT

Objective: To study sociodemographic parameters, method, timing and complications of female sterilization. **Method:** A Prospective observational study was conducted in department of Obstetrics and Gynecology in Government medical college, Aurangabad. **Result:** The mean age of the woman was 27.76 ± 4.19 . Couples accepting sterilization after Parity 3 or more were 73%. Around 82% cases underwent abdominal method of sterilization & 18% cases underwent laparoscopic method of sterilization. In abdominal method, intracasearean tubectomy was done in 59.25%. Around 83% cases were operated under spinal anaesthesia. Complication rate in this study was 5.50%. No mortality was seen during this study. **Conclusion:** Female sterilization was more acceptable in conjunction with Cesarean section. Complications are more common in abdominal method & laparoscopic tubectomy is more advantageous over abdominal tubectomy.

KEYWORDS

Female Sterilization, Abdominal Tubectomy, Laparoscopic Tubectomy

INTRODUCTION:

India launched the world's first national Programme of family planning in 1952 for achieving population stabilization and to reduce maternal, infant, and child mortality and morbidity. In India according to National Family Health Survey (2019- 2021), 37.9% of currently married women in the age group 15-49 years were sterilized which accounted for 67% of all the contraception use, making it a leading method of contraception⁽¹⁾. A report published by the National Health Mission states that the burden of family planning rests on the shoulders of women in India. The report stated that between 2017-2018, 93.1% of the sterilizations performed in India were on women⁽²⁾. It is one of the most frequently performed elective, intra-abdominal surgical procedure in reproductive age women.⁽³⁾ Reason for tubectomy being the most popular method could be the preconceived myths and fears of temporary methods and the economic compensation given as a part of National Family Planning Programme.⁽⁴⁾

Our center is a tertiary care institute catering nearby 17 districts and subdistricts with around 20,000 deliveries and 50,000 OPD cases attending annually. As our center is a referral center, various complicated cases are being referred to this institute from various government and private hospitals. Our center is equipped with a separate family planning OPD where every attending woman is counselled about family planning and guided for a method after cafeteria approach. Overall, it provides a unique opportunity to study different methods of sterilization, complications and their management. Keeping this in mind, we have conducted this study to analyze the method and timing of sterilization and its complications.

MATERIAL & METHODS:

This was a Prospective observational study conducted in GMCH, Aurangabad during the study period June 2021 to January 2023 in 400 cases.

Inclusion criteria:

Women willing for tubal ligation & willing to participate in the study

Exclusion criteria:

Sterilization done outside our center with or without complications. After applying inclusion & exclusion criteria & after approval by Institution Ethics Committee, Government Medical College & hospital, Aurangabad women were enrolled in the study. Written, valid, and informed consent was taken from each participant. Clinical observation and other case relevant data was entered into a proforma immediately after tubal ligation surgery.

Data including women's socioeconomic parameters like age, parity,

religion, education details, examination findings, laboratory investigations and type of anaesthesia given was noted. Detailed clinical history including obstetric, menstrual, past and personal history was taken. Thorough general, systemic and obstetric examination was noted. The intraoperative complications were noted. The wound site was inspected & stitches were removed on day 7. Postoperative complications and the day of discharge was noted. Complications were notified to the Head of Department, District Health Officer, Civil Surgeon as tubectomy is included under national Programme. All women will be followed either by clinic visit or telephonic call on day 7, after one month or after first menstrual period whichever is earlier. The data was compiled in master chart i.e. in MS Excel sheet and for analysis of this data; SPSS Version 20th was used. Frequencies and percentages were calculated to show the distribution.

RESULTS:

Table 1: Baseline characteristics of Study Participants

Parameter	Frequency [n=400]	Percentage [%]
Age	22-25	162
	26-30	193
	≥31	45
Residence	Urban	246
	Rural	154
Religion	Hindu	236
	Muslim	134
	Buddhist	30
Education	Illiterate	23
	Primary	88
	Secondary	179
	Higher secondary	50
	Graduate	60
Socioeconomic status	Upper middle	34
	Lower middle	118
	Upper lower	158
	Lower	90
Parity	P2	107
	P3—P5	292
	≥P6	1

Table 1: shows the sociodemographic data of the 400 women enrolled in the study.

Table 2 -Distribution of cases according to method & time of female sterilization

Method	Time	Frequency (n=400)	Percentage [%]
Abdominal Method [n=328]	Intracesearean	237	59.25
	Postabortal		
	Concurrent with MVA	42	10.50
	Concurrent with Hysterotomy	18	4.50
	Interval	26	6.50
	Postpartum	5	1.25
Laparoscopic	Interval	42	10.50
Method [n=72]	Post abortal [Concurrent with MVA]	30	7.50

Around 82% cases underwent abdominal method of sterilization & 18% cases underwent laparoscopic method of sterilization. In abdominal method, intracesearean tubectomy was done in 59.25% cases. In laparoscopic sterilization method, 10.50% cases were of interval sterilization, while 7.50% cases had post abortal sterilization concurrent with MVA.

Table 3: Distribution according intraoperative & postoperative complications:

Complication		Abdominal method [n=328]			Laparoscopic Method [n=72]
		Abdominal interval TL	Intra cesarean	Hyste rotomy	
Intraoperative [n=10]	Tubal avulsion	2	1	1	0
	Wound hematoma	2	1	1	0
	Mesosalpingeal injury	0	0	0	1
	Bladder injury	0	1	0	0
Postoperative [n=12]	Wound discharge & Infection	1	3	2	0
	Wound gape	0	2	0	0
	Fever	1	1	1	0
	Intestinal obstruction	0	0	1	0
		6 [1.50%]	9 [2.25 %]	6 [1.50 %]	1 [0.25%]

Table 3: Around 5.50% cases had complications. Intraoperative complications seen in 2.50% cases, while post operative complications were seen in 3% cases.

In present study complication rate with abdominal method of sterilization was 5.25% while in laparoscopy it was 0.25%. Hysterotomy was associated with major complication while laparoscopy was associated with least complications. Complication rate in intracesearean sterilization was [2.25%] while in abdominal/interval sterilization it was [1.50%].

Table 4: Distribution according to management:

Management	Frequency	Percentage [%]
Conservative	19	4.75
surgical intervention	Minor	2
	Major	1
		0.50
		0.25

Table 4: Around 81.25% were managed with conservative management like antibiotics and symptomatic treatment, while rest 3 cases needed surgical management. There was one case of intestinal obstruction. On post hysterotomy day 15, patient came for emergency follow up & was diagnosed as small bowel obstruction and underwent exploratory laparotomy followed by adhesiolysis. Two cases were having wound gape in which resuturing was done.

DISCUSSION:

In present study, 48.25 % cases belonged to the age group of 26-30 years which is consistent to the age group in comparison to studies^(3,5).

Around 61.50% cases were residing in urban localities and 59.00% cases were Hindu. this finding is consistent with other studies⁽⁶⁾. Around 44.75% cases were educated till secondary school, which is consistent with consistent with study⁽⁷⁾. Around 39.50% cases were

from upper lower class and 29.50% cases were from lower middle class. Results of our study are comparable to study⁽⁸⁾.

In 82% of cases abdominal sterilization was done and 18% cases have chosen the laparoscopic sterilization. This result of our study is consistent with study⁽⁹⁾.

Intracesearean tubectomy was done in 59.25% cases. In 1.25% cases postpartum sterilization was done. This result of our study is consistent with study^(7,9) except the low incidence of postpartum sterilization in present series. This may be due to less efforts of promotion of the eligible couple for acceptance of sterilization by health providers and secondly because of tendency of the women to use more and more temporary contraceptive methods like IUCD, COC pills, Antara and Chaya which are added in contraceptive basket by GOI free of cost.

Intraoperative and postoperative complications seen in around 2.50% and 3.00% of cases respectively. This result our study is consistent with study⁽⁵⁾.

In present study complication rate with abdominal method of sterilization was 5.25% while in laparoscopy was 0.25%. Complication rate in laparoscopic method was very low as compared to other methods because we had a well-trained staff, an excellent video laparoscope and majority of cases were done by senior obstetrician and gynecologists under adequate analgesia.

Tubal avulsion was seen in 1% cases which is consistent with study⁽¹⁰⁾. Wound hematoma seen in 1% of cases, Mesosalpingeal injury followed by bleeding was seen in one case of laparoscopic sterilization, while Bladder injury was noted in one case of intracesearean tubectomy. According to study⁽¹¹⁾, Mesosalpingeal injury seen in 2% of cases and bladder injury seen in 4.50% of cases. As per study⁽²⁾, bladder injury found in 1.92% of cases. All these intraoperative complications can be prevented by proper training and sticking to standards of female sterilization procedure.

In postoperative period most common complication is wound discharge and wound infection, 1.50% of cases, followed by wound gape in 0.50% of cases followed by fever in 0.75% of cases. As per study⁽¹¹⁾, incidence of wound infection was 8.02%. Wound complications can be reduced by proper tissue handling and complete hemostasis during operation. In this study fever was seen in 0.75% of cases; which can be reduced by taking proper aseptic precautions during operative procedures. In 1 case, intestinal obstruction was noted on Day 15. On post hysterotomy day 15 case for emergency follow up & was diagnosed as small bowel obstruction and underwent exploratory laparotomy with adhesiolysis. In this study, there was no death from sterilization procedure.

In present study 86.36% cases were managed with conservative management like antibiotics, IV fluids and symptomatic treatment etc., while rest 3 cases needed surgical management which is consistent with consistent with study^(10,11).

CONCLUSION:

Female sterilization is more acceptable in conjunction with cesarean section. The present study shows Laparoscopic method of sterilization is more beneficial over abdominal sterilization as recovery is fast with least complications and less bed occupancy rate. Better evaluation and selection of cases, proper training in sterilization and strict adherence to standards of sterilization procedure can reduce complications.

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