

Influence of Socio-demographic Variables on the Acceptance Rate of Laparoscopic Tubal Ligation: A Retrospective Study

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ABSTRACT

Introduction: Female sterilisation accounts for 36% of the population using various methods of contraception in India. Laparoscopic tubal ligation is a commonly used method for female sterilisation. Acceptance of sterilisation is influenced by socio-demographic factors. Better appreciation of socio-demographic factors influences the acceptance rate of laparoscopic tubal ligation and therefore it is important to be assessed.

Aim: To assess the socio-demographic factors among the acceptor of laparoscopic tubal ligation.

Materials and Methods: It was a retrospective study from 1 July 2017 to 30 June 2018, carried out at Silchar Medical College, Silchar, Assam. The socio-demographic data of woman undergone laparoscopic tubal ligation during one year period was collected. The women included in the study were Post Medical Termination of Pregnancy (Post-MTP) ligation,

interval ligation and post-partum ligation. Women undergoing tubectomy during caesarean section were excluded from the study. Data were presented as percentage and proportion and subsequently, analysis was done.

Results: The mean age of the woman was 29.76±4.19. The number of woman with parity three was highest (45.45%). The interval from last childbirth to laparoscopic tubal ligation was more than 3 years in 34.55% women. Majority (70%) of the women had post-MTP ligation.

Conclusion: There is long interval from last childbirth to tubal ligation. This gap must be filled up so that couples adopt permanent method of contraception at the earliest occasion after completion of family. Most of the woman had undergone medical termination of pregnancy at the time of sterilisation. Family welfare programme must be strengthened to prevent these unwanted pregnancies and its consequences.

Keywords: Abortion, Family planning, Female sterilisation, Gender preference

INTRODUCTION

Female sterilisation is widely used throughout the world. It is a safe and effective procedure. Sterilisation requires one-time motivation and has low failure rate. It could be promoted as method of choice for couples who have completed their family. Female sterilisation can be done after delivery {Post-Polio Syndrome (PPS)}, after {Medical Termination of Pregnancy (MTP)} (post-abortion), during caesarean section or as interval sterilisation. Laparoscopic sterilisation can be offered as OPD procedure and also being performed in camp setting. Laparoscopic tubal ligation camp is organised by various government hospital and funded by Government of India. Female sterilisation forms 36% out of 47.8% of women using any modern methods of contraception in India (NFHS-4) [1]. Thus, it is well accepted among Indian women. The Total Fertility Rate (TFR) of India has declined from 2.7 in 2005-06 to 2.2 in 2015-16 as reported in National Family Health Survey-4 (NFHS-4) [1]. Female sterilisation plays a major role in reducing TFR. Laparoscopic tubal ligation has an important place in family welfare programme of Government of India [1].

NFHS-4 [1] shows that female sterilisation accounts for 36% of currently used family planning methods in India but the percentage of female sterilisation in Assam is far below national level and it accounts for 9.5% of currently used family planning methods according to NFHS-4 [1]. Therefore, it is very pertinent to study the factors responsible for this low level of acceptance of sterilisation in Assam. To increase the number of woman undergoing sterilisation; operation infrastructure and service of the health sector must be improved. In addition to these, socio-demographic factors such as age of marriage, number of children, socio-economic condition, education, religion, son preference influence the acceptance of

sterilisation [2-4]. So to popularise and increase the acceptance of a female sterilisation evaluation of socio-demographic variables is essential. There is no recent study on this important aspect of female sterilisation in Assam. In this perspective, the present study was undertaken to document and analyse the socio-demographic variables of laparoscopic tubal ligation.

MATERIALS AND METHODS

This was a retrospective study carried out in Silchar Medical College, Silchar, Assam. The study period was of one year from 1st of July 2017 to 30th of June 2018 in which a total of 110 cases undergoing laparoscopic tubal ligation were included. All cases of interval, post MTP and Postpartum Laparoscopic Tubal Ligation (PP-LTO) were included and tubectomies done along with caesarean section operation were excluded. It was a hospital record based study. Identities of the patients were not revealed. It was no drugs trial and all interventions were made as a part of routine care so ethical clearance was not taken. Data were collected from hospital records and relevant information about socio-demographic variables such as age, religion, parity, belonging to rural/urban areas was collected.

STATISTICAL ANALYSIS

The collected data were entered into MS Excel sheet. Data were presented as percentage and mean±standard deviation.

RESULTS

The total number of cases undergoing laparoscopic tubal ligation was 110. The majority (50.91%) of the woman were from age group 26-30 years. The religion of the majority of the woman was Hindu 88 (80%) and the majority 107 (97.27%) were from rural area. The mean age of the woman was 29.76±4.19. The highest number

of woman 50 (45.45%) had parity three. The mean parity was 2.82 ± 0.96 [Table/Fig-1]. The proportion of woman with two male children was 28.89% whereas woman with two female children was 6.67% among the woman with parity two. The percentage of women with at least one male child was 93.3% and woman with at least one female child was 71.11% among the woman with parity two. The interval from the last childbirth to tubal ligation was more than 3 years in 38 (34.55%) cases [Table/Fig-2].

Variables	Number (n)	Percentage (%)
Residence		
Rural	107	97.27%
Urban	3	2.73%
Religion		
Hindu	88	80%
Muslim	22	20%
Age group		
16-20	1	0.90%
21-25	16	14.55%
26-30	56	50.91%
>30	37	33.64%
Parity		
2	45	40.91%
3	50	45.45%
≥4	15	13.64%
Type of ligation		
Interval	26	23.64%
MTP	77	70%
PP-LTO*	7	6.36%

[Table/Fig-1]: Socio-demographic characteristics of study population.

*PP-LTO: Postpartum LTO

LCB	Number	Percentage
1 year	26	23.64%
2 years	35	31.82%
3 years	11	10.0%
>3 years	38	34.55%

[Table/Fig-2]: Distribution of the participants according to last childbirth.

DISCUSSION

In the present study, most of the patients (97.27%) were from rural area because the hospital is providing service mostly to rural population and Religion of the majority (80%) of woman in present study was Hindu. These results are in concordance with various other studies where higher acceptance of sterilisation is by Hindu woman [5-7]. The TFR of India is 2.2. The TFR of Assam is 2.2 as a whole for the state. In the present study, most of the woman had sterilisation at higher order of parity. The parity of 59.9% of woman was three or more at the time of sterilisation. These findings are in concordance with the findings of Fahim MA et al., and Chaurasia A et al., who reported that 53.37% and 67.6% of woman had 3 or more children at the time of sterilisation [5,7]. The study of Pandit NB and Patel TA, found 45.8% had 3 or more children [8]. Bharadwaj MK et al., reported 80.63% of women had sterilisation after 2 children [6]. The TFR in rural area of Assam is 2.3 as per NFHS-4 [1]. The mean parity is 2.82 in the present study. Thus the mean parity is higher in comparison to state level figure for rural area. Fahim MA et al., and Athavale AV and Athavale SA, reported mean parity as 3.17 and 2.36 respectively in their studies [5,9].

The desire for sons has a significant impact on fertility and contraceptive choices [10]. A strong preference for son prevents woman to stop childbearing in India (NFHS-3 pp 98) [11]. In the present study also, the proportion of woman with two male children

was 28.89% and the percentage of women with at least one male child was 93.3% and woman with at least one female child was 71.11% among the woman with parity two. Thus, the present results also indicate that most of the women have not adopted the sterilisation until they have at least a single male child. Similar condition prevails in other countries also where couple usually waits for son and thereby increasing the parity and having pregnancy at short interval [12]. However, clinician must take note 6.67% women with two female children among women with parity two have accepted sterilisation operation in the present study. This positive sign should inspire health worker as well as social activist to motivate couple to accept sterilisation operation after birth of second child irrespective of sex of the children.

The Last Child Birth (LCB) of 44.55% woman was three or more than three years at the time of sterilisation. The results of the present study are in agreement of the study done by Epari V et al., who reported that the average duration between the LCB to the date of sterilisation was 18.55 months [13]. Family planning activities must be strengthened to reduce this gap. The total unmet need for family planning is 12.9 in India and 14.2 in Assam as per NFHS-4 [1]. The present study has shown that 70% of woman had undergone MTP at the time of laparoscopic tubal ligation. This finding reflects the huge unmet need for contraceptive practice.

Limitation(s)

The limitation of the study was retrospective nature, small sample size; a short period of study and hospital-based, not community-based study.

CONCLUSION(S)

The present study has shown that majority of the woman had laparoscopic tubal ligation after termination of unwanted pregnancy. Family planning programme should address this issue. Woman desirous of sterilisation needs to be identified before she has unwanted pregnancy and motivated to undergo sterilisation operation. Another observation of this study was long interval from last childbirth to sterilisation. Family planning strategies must reduce this time interval. Woman with completed family may be motivated to undergo sterilisation operation at the time of childbirth or adopt some Long Acting Reversible Contraceptive (LARC).

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