ORIGINAL ARTICLE

A Ten Year Review of Female Sterilization at the University of Maiduguri Teaching Hospital, Maiduguri, Nigeria.

Buba AA[1], Kullima A[2], Isa B[3], Ibrahim SM[4], Bukar M[5], Audu BM[6]

ABSTRACT

Background: In most developing countries like Nigeria, female sterilization is not a popular method of contraception.
Objective: The objective of this study was to determine the prevalence of female sterilization and socio-demographic characteristics of women who had sterilization in our setting.
Methodology: This was a retrospective study carried out between 1st January 1997 and 31st December 2006.A total of two hundred and one female sterilisation operations were performed but ten case notes were incomplete and therefore, one hundred and ninety one 191 were analyzed. Information retrieved from the case notes included the age, parity, religion, literacy, and type of bilateral tubal ligation. The data collected were analyzed using SPSS Version 16.0 statistical package and the results represented in simple tables and percentages.
Results: There were 16,319 deliveries during the study period and 201women had bilateral tubal ligation (BTL), giving a prevalence of 1.2%. The mean age at BTL was 30.18, while the mean parity was 4±0.6. Women between the ages of 30-39 constituted majority of the patients. In most of the women 138 (72.3%) bilateral tubal ligation was performed during caesarean section, while few women 16 (8.4%) had the procedure at laparotomy. The rest, 37(19.4%) women opted for interval BTL. Significantly more literate women (73%) sought for interval tubal ligation compared to non literate (23%) ones. A large number of the Muslims (87.5%) had BTL at laparotomy compared to the Christians (12.5%). P=0.002.
Conclusion: The prevalence of bilateral tubal ligation in this study is low. There is need to encourage the uptake of female sterilization in our environment.

KEYWORDS: Female sterilization, bilateral tubal ligation.

Introduction

The first recommendation for incision and removal of a portion of the fallopian tube for sterilization purposes was made in 1834 by Blundell. It was not until 1881, that the first tubal sterilization by simple ligation was made by Lundgren and then followed the various surgical techniques that are characteristic of our current methods of female sterilization.[1]
Female sterilization is one of the commonest methods of contraception in many developedcountries. Nigeria however, records low utilization of female sterilization due to several factors. These include religion, ignorance, polygamy and superstitious beliefs.[2] Other studies have shown spousal support and accessibility of contraceptive services to be key determinants of contraceptive use by women[3,4].

Female sterilization also referred to as bilateral tubal ligation is indicated in women who want permanent method of contraception and are free of any gynecologic pathology that would otherwise indicate an alternate procedure. The patient should make the request herself, be of sound mind and not act under duress[5,6].

It is also indicated in women in whom a pregnancy could represent a significant

Department of Obstetrics and Gynaecology University of Miaduguri Teaching Hospital

Correspondence to:
DR. BUBA AA
eMail: aishadahiru@yahoo.com

clinical or medical risk such as chronic renal disease or severe heart condition. Special legal and ethical criteria must be met in cases where the patient undergoing sterilization has a physical, psychological or intellectual disability. Preoperative evaluation is very important for patients undergoing female sterilization and should include counseling, a review of operative approaches, anaesthesia, and complications. It also helps to screen risk factors of regret. Ideally counseling should be given well before the procedure and at all times the intended permanence of bilateral tubal ligation should be emphasized. Alternate forms of contraception including vasectomy and all the non permanent contraception should be discussed in the counseling sessions. [7,8,9]

Counseling about the option of female sterilization during caesarean section or soon after delivery should ideally be undertaken at the early phase of pregnancy preferably by the doctor who would be in attendance of the delivery.[10] In developing countries, where poverty and ignorance are common, not all women are privileged to have antenatal care, let alone benefit from sound counseling sessions that would enable an informed choice. It is not surprising therefore to see high rates of sterilization during caesarean section or laparotomy[11,12.] And although, sterilization during such period might save the lives of many women; by preventing future unintended risky pregnancies, belated counseling (counseling done not long before caesarean section or while still admitted after vaginal delivery) under such circumstance may have legal consequences [9]. A sound counseling delivered appropriately, may therefore be an essential tool for obtaining informed consent and preventing regrets in patient undergoing female sterilization.

Generally, bilateral tubal ligation can be performed as; interval procedure (when it is not related to pregnancy), postpartum procedure (sterilization performed after delivery up to 72hours), or concurrently done during caesarean section. General, regional or local anaesthesia may be used for the procedure but regional or local anaesthesia are associated with quicker recovery, less sedation and fewer incidences of nausea and vomiting.[6] Several studies have been done on different aspects of female sterilization in this country [11, 12,13] but none has been done in our centre. This study is aimed at determining the rate of female sterilization and sociodemographic profile of women who had sterilization at the University of Maiduguri Teaching Hospital.

Patients And Methods

This was a retrospective analysis of records of patients who had bilateral tubal ligation, from 1st January 1997 to 31st December 2006. Two hundred and one BTL operations were performed during the study period but only 191 were analysed. The remaining ten were excludeddue to incomplete information. The case notes were retrieved from the medical record department, but additional information was also collected from the family planning unit, theatre, obstetrics and gynaecology wards.

The data extracted included age, parity, religion, tribe, marital status, literacy and indication for the operation. The data were entered into a proforma and the analysis was done using SPSS version 16 Statistical package. For the purpose of this study, bilateral tubal ligation is categorized into three; bilateral tubal ligation in conjunction with caeserean section, those performed in conjunction with uterine repair at laparotomy and tubal ligation alone (not in conjunction with any procedure). BTL alone here, comprise of postpartum and interval BTL. Although, this is not the standard classification for the performance of BTL, the classification in this study may give a broader view of the type of female sterlization offered to women in our setting. And such Information may be invaluable in counselling. Literacy refers to the ability to read and write English language. Ethical clearance was obtained from

the research and ethical committee of University of Maiduguri Teaching Hospital.

Results

Over the period of review, a total of 16,319 deliveries were conducted and two hundred and one (201) tubal ligations were performed given a prevalence of 1.2%. Majority 138(72.3%) of women had BTL during caesarean section, 16(8.4%) were done at laparotomy and 37(19.4%) were tubal ligation alone. As shown in figure 1.

Table 1 shows the sociodemographic characteristics of women. The age ranged from 20-42 years, with a mean of 30.18 ± 4.2. Majority (65.7%) were in age group 30-39.

The mean parity was 4 ± 0.6. Most 106 (55%) were grandmultiparous women and 85(45%) were of low parity.

Majority of the patients were Muslims, 113(56.2%) with the remaining being Christians. 78(38.8%).

Table 2 compares parity and various indications of tubal ligation. More grandmultiparous women sought the procedure of tubal ligation alone.

The comparison of parity and religion is shown on table 3.Majority of the Muslims 113(58%) had bilateral tubal ligation at caesarean section, and laparotomy 14(87.5%) compared to the Christians 2(12.5%).P=0.002.

Significantly more literate women (73%) had bilateral tubal ligation alone compared to non literate (23%).

This is depicted in table 4

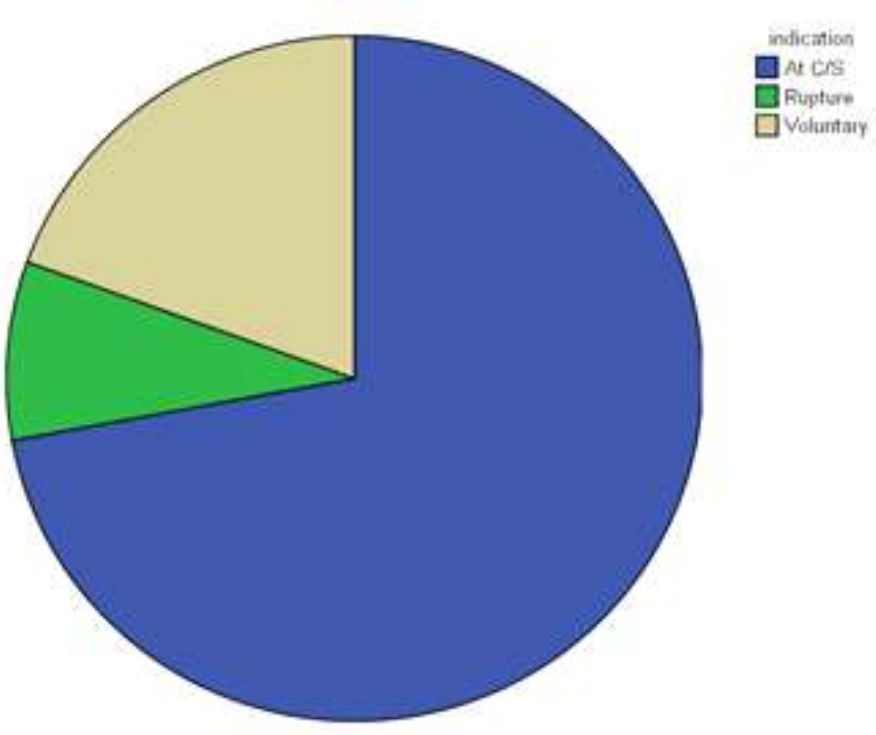

Fig 1: Distribution of BTL in UMTH

TABLE 1: Socio Demographic Characteristics

Characteristics	frequency	percentage
Age (years)		
20-29	33	17.3
30-39	132	69.1
40-49	26	13.6
Total	**191**	**100**
Parity		
1-4	85	44.5
≥5	106	55.5
Total	**191**	**100**
Religion		
Islam	113	59.2
Christianity	78	40.8
Total	**191**	**100**
Literacy level		
Literate	73	38.2
Nonliterate	118	61.8
Total	**191**	**100**

Table 2: Comparison of parity and BTL indication

Parity	C/S+BTL	Lap.+BTL	BTL only	TOTAL
1-4	66	6	13	85
≥5	72	10	24	106
TOTAL	**138**	**16**	**37**	**191**

Table 3: Comparison between religion and indication for BTL

Religion	C/S+BTL	lap. +BTL	BTL only	Total
Islam	85	14	14	113
Christianity	53	2	23	78
Total	**138**	**16**	**37**	**191**

Discussion

In this study, the sterilization rate is higher than 0.8% in Ilorin[13] but lower than a rate of 103 per 2356 reported from Delta state [11]. The proportion of deliveries within a hospital and certain sociocultural practice like polygamy in the north may account for the differences observed. Across Nigeria and Africa, studies [14, 15]have also reported low sterilization rates among family planning users. Providing information and counseling could improve access and uptake of more effective family planning methods like the female sterilization.[16]

The rate of bilateral tubal ligation at Caesarean section/laparotomy in our centre was high (80.6%), but uptake of tubal ligation alone was low. This agrees with the findings from Kano[14]; a place with similar sociocultural values. Although, there may be economical, logistic and medical advantages of BTL at C/S or laparotomy for these women, the peripartum period may be a poor time to make important decision such as a permanent procedure like female sterilization [10]. Since women are more vulnerable, distressed or easily pressured during peripartum period, informed choice (which is the principle of delivery of family planning) at such time may be compromised. Besides, sterilization performed during caeserean section or laparotomy is less likely to be amenable to reversal in the future[17] .Therefore, providing early and effective family planning services may prevent unintended high risk pregnancies including having to undertake an operation for tubal occlusion at the end of such pregnancy [10] .

The mean age at sterilization is similar to the findings from Markurdi [12] and Kano [14] . And like the findings from Jos[18], the family planning services in our centre is characterized by low sterilization prevalence and high age at sterilization this contrasts the matured family planning program found in developed countries, where the sterilization prevalence is high and inversely related to age at sterilization. Several factors could be responsible; the knowledge of contraceptive choices among women, geographical access to family planning service may be contributry [7].
Majority of the women in this study, were grandmultiparous who had BTL at caesarean section and laparotomy compared with the women with low parity. This is similar to the findings from Delta State[12]. In part this may be explained by completed family size or increased pregnancy complications (hypertension, malpresentation) common in grandmultipara.

Most of the literate women had fewer children and sought voluntary tubal ligation alone compared with the non literate ones although this was not statistically significant. This is comparable to the study from Kaduna [2]. Although the actual educational status could not be ascertained in this study, the literate women in this study group had fewer incidences of uterine rupture and higher acceptance for tubal ligation. This may be because they are more likely to be better informed and enlightened than the non literate women. And although education per se is not a predictor of sterilization use, it is a useful descriptive characteristic that illustrates by proxy, the socioeconomic status of a woman[7] and her understanding of reproductive health issues; leading to a greater likelihood of acceptance and use of modern contraceptive [17].

Conclusion

The prevalence of bilateral tubal ligation in this study is low. Literacy and Christianity favoured BTL alone (interval and postpartum BTL), while Islam and high parity favoured BTL at laparotomy and Caesarean section. There is need to encourage the uptake of female sterilization in our environment.

Limitations

Certain information including detailed sociodemographic profile could not be ascertained because of the retrospective nature of the study.

References

1. Manju N, Arun N, Manjula S. Surgical contraception: part -1. In: progress in obstetrics and gynaecology-1. New Delhi: Jaypee; 2003.p.372-98.
2. Adebiyi G, Adesiyun. Female sterilization by tubal ligation; a re-appraisal of factors influencing decision making in a tropical setting. Archives of Gynaecology and Obstetrics 2007; 275(4):241-244.
3. Kabir M, Z Iliyasu, Abubakar IS, Maje BS. The role of Men in contraceptive decision making in Fanshekara village, Northerrn Nigeria. Trop J Obstet Gynecol. 2003; 20:24-27.
4. Kana MA, Tagurum YO, Hassan ZI, Afolanranmi TO, Ogbeyi GO, Difa JA et al. Prevalence and determinants of contraceptive use in rural North-eastern Nigeria: Results of a mixed qualitative and quantitative assessment. Ann Nigerian Med 2016; 10:3-10.
5. Sterilization and termination of pregnancy. In: Tindall VR, Norman Jeffcotts. Jeffcott's Principles of Gynaecology. Butterworth world student Reprints.5th ed.1987; pp 617-28.
6. Konar H. Contraception. In: D C Dutta's textbook of Gynaecology. 7th ed. New Delhi: Jaypee brother's medical publications; 2016. p. 491-97.
7. Engender Health. Contraceptive sterilization. Global issues and trends. USA. Automated graphic systems Inc; 2002:1-204.
8. World Health Organization. Female Sterilization: Medical eligibility criteria for contraceptive use.5th edition. Geneva :WHO; 2015
9. Nancy WH, Sunneet PC, and John CM. Sterilization and its consequences. Obstetrical and Gynaecological Survey.1999; 54:766-71.
10. Verkuyl D.A. FIGO's ethical recommendations on female sterilization will do more harm than good: A commentary. Med J Ethics Published on line. [16th June 2016] doi: 10.1136/medethics-2013-101827.
11. Igberase GO, Ebeigbe PN, Umeora OUJ, Abedi HO. Bilateral tubal ligation in a rural hospital in the Niger Delta, Nigeria. Niger J Clin Pract. 2011; 14:137-9.
12. Swende TZ, Hwande TS. Female sterilization at caesarean section in Markurdi, Nigeria. Ann Afr Med.2010; 9: 246-50.
13. Omokanye OL, Salawudeen GA, Jimoh AG, Panti AA, Saidu R, Balogun RO. Female sterilization at university of Ilorin teaching hospital Ilorin:10-year review. Orient Journal of Medicine 2012; 24:1-2.
14. Omole OA, Attah RA, Umoru UJ. Bilateral tubal ligation at Aminu Kano Teaching Hospital: A five year review. Pioneer Medical Journal.2014; 4:1-17.
15. Rauteng N, Loundry E. A comparison of sterilization use and demand from demographic and health survey international family planning perspectives. 1993; 19:4-13.
16. United Nations, Department of Econimic and Social Affairs, Population Division. Trends in contraceptive use worldwide; 2015(ST/ESA/SER.A/349).
17. Royal college of obstetrics and gynaecology. Female sterilization consent advice No. 3. London. RCOG: 2016
18. Mutinir JT, Aisien AO, Ujah IAO.A review of bilateral tubal ligation at Caesarean section in Jos, Nigeria. Niger Postgrad Med J.2007; 14:252-5.

Cite this article as: Buba AA , Kullima A, Isa B, Ibrahim SM, Bukar M, Audu BM. A Ten Year Review of Female Sterilization At The University of Maiduguri Teaching Hospital, Maiduguri, Nigeria. Bo Med J 2017; 14(1): 41-46 **Source of Support:** Nil, **Conflict of Interest:** None declared.