



Original Article

Hysterectomy For Gynaecological Conditions At Nguru, North Eastern Nigeria: A Retrospective Study

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Abstract

Objective: To determine the incidence, indications and outcome of hysterectomy in Nguru, a reference center in Northeast Nigeria.

Design: Retrospective cohort study

Setting: Federal medical center Nguru, Northeast Nigeria.

Population: All cases of hysterectomy for gynaecological indications

Methods: This study is a descriptive analysis of cases of gynaecological hysterectomies performed over a 5 year period (1st January, 2010-31st December 2014). Information on socio-demographic characteristics, indication for and type of hysterectomy, intra and post-operative morbidities including the need for blood transfusion, cadre of surgeon and duration of hospital stay were retrieved and analyzed.

Main outcome measured: The commonest indications, route of hysterectomy, and complications in relation to the experience of the gynaecologist.

Results: Elective hysterectomy for gynaecological conditions accounted for 25% of all major gynaecological operations during the period of study. Abdominal to vaginal hysterectomy ratio is 5.6: 1 with 56 (84.8%) abdominal and 10 (15.2%) vaginal hysterectomies. Hysterectomy on account of uterine fibroid was the commonest indication seen in 40 (60.6%) of the abdominal hysterectomies while all the 10 vaginal hysterectomies were on account of utero-vaginal prolapse. Majority 41(62.1%) had bilateral salpingo-oophorectomy. The age range was between 20 and 76 years while the parity was between 0 and 14. There was no statistically significant difference between the age of the subjects and the indications for the hysterectomy ($P=0.66$). However, there was statistically significant difference between the type of hysterectomy (abdominal or vaginal) and the morbidity rate ($P=0.009$). The overall morbidity rate in this review was 17(25.8%) with haemorrhage accounting for most ($n=10$; 59%) of the total morbidities. Fifty per cent (50%) of the morbidity in the vaginal route were urinary tract injuries. There was no mortality directly related to hysterectomy during the period of the study.

Conclusion: Hysterectomy is a common major Gynaecological surgery in this center and the common indications are uterine fibroid and utero-vaginal prolapse. It is a relatively safe procedure. However, it is apparent from this study that there is need to train resident doctors on vaginal hysterectomy to minimize complications of bladder and ureteric injuries seen with vaginal hysterectomy in this study.

Keywords: Hysterectomy, Gynaecological condition, indication, Morbidities.

Introduction

The removal of the uterus with or without the adnexal structures is the second most frequently performed surgical procedure after cesarean section in most part of the world.¹⁻³ In Nigeria, hysterectomy is relatively unacceptable to our women, making hysterectomy rates variable from one region to another due to cultural and religious misconception such as loss of sex drive, menstruation and reincarnating without the uterus.⁴ However, it is a frequent and necessary gynaecological surgery with various indications in Nigeria as it is in other parts of the world.^{5, 6, 7}

Indications for hysterectomy varies from benign conditions to malignancies of the genital tract.^{6, 7}

The various routes of hysterectomy are abdominal, vaginal or through laparoscope-laparoscopic assisted vaginal hysterectomy or total laparoscopic hysterectomy depending on surgeon's experience, indication for the surgery, nature of disease and other co-morbidities.²

Hysterectomy is the only definitive cure for abnormal uterine bleeding and has been shown to clearly improve quality of life in many women.⁸

However, this procedure is on the decline because of availability of less invasive alternatives such as endometrial resection and ablative procedures.⁹

Like any operation, it is associated with morbidity most common of which is febrile morbidity; mortality is rare.^{10, 11} It is relatively safe, but has been misused and abused because of the misconceptions of the uterus as a vestigial structure after its main function of reproduction.¹²

This is the first audit on hysterectomy in this relatively new referral center documenting the prevalence and outcome in relation to the experience of the Gynaecologist whom mostly are newly qualified fellows.

Materials and Methods

This is a retrospective descriptive analysis of cases of hysterectomy done at the Federal Medical Center Nguru, Yobe state, Nigeria. Most of the patients are from rural communities in Yobe state and neighboring Kano and Jigawa states. It also

attends to large number of cases from neighboring Niger republic.

Records of cases of hysterectomy done from 1ST January 2010 to 31ST December 2014 were retrieved from the main operating theater records, the Gynaecology ward and medical records registers. Further information on socio-demographic variables, indications, operative procedures, complications and duration of hospital stay including the cadre of the surgeon were obtained from the case files.

Hysterectomy was considered as any surgical removal of the uterus together with the cervix (total hysterectomy) or without the cervix (subtotal hysterectomy) through the abdominal (abdominal hysterectomy) or vaginal (vaginal hysterectomy) routes. Cases of hysterectomy due to obstetric indications were excluded.

Information retrieved was entered into a preformed pro forma. Data generated was entered into statistical software-statistical package for social sciences-SPSS version 16.0, Chicago Illinois, SPSS Inc. for analysis. Data were presented as simple percentages and means with Chi-square analysis of some variables and a P value of <0.05 as significant. Ethical clearance was obtained from the ethical committee of the Hospital.

Results

There were 357 gynaecological operations during the period under review of which 265 were major gynaecological operations. Sixty six of this was for elective hysterectomy giving a rate of 25% of the major gynaecological operations. There were 56 (84.8%) abdominal and 10(15.2%) vaginal hysterectomies, giving a ratio of 5.6: 1. See Fig.1.

The age range was 20-76 years and mean was 45 ± 11.45. Most of the cases were in the age range 40-59 years (68.2%) with 3(4.5 %) in their peak reproductive age of 20-29 years. All the women who had vaginal hysterectomy were 40 years and above. There was no statistically significant difference between the age of the subjects and the indication for hysterectomy (P=0.66). Parity

ranges from 0 -14 with mean parity of 3.4 ± 3.43 . Majority were multiparous, however, 8 (12.1%) of the cases were nulliparous. Three of this subjects were spinsters while majority 45(68.2) were married. Table 1 illustrates some of the socio-demographic variables.

Table 2 depicts the indications for hysterectomy. The leading indication for abdominal hysterectomy was symptomatic uterine fibroid seen in 40 (60.6%) cases while utero-vaginal prolapse was the sole indication in all the 10 (15.2%) vaginal hysterectomy cases. Ovarian tumours (both benign and malignant) constituted 11 (16.7%) of the cases. Other indications were complicated induced abortion, dysfunctional uterine bleeding (DUB), early stage cervical and endometrial cancers.

Table 3 illustrates the relationship between parity and indications for hysterectomy while Table 4 shows the morbidities related to these

hysterectomies. Majority of those who had abdominal hysterectomy on account of uterine fibroid were of parity range 1-5 Eight (12.1%) of the cases were nulliparous. Almost all the hysterectomies were done by consultants with only 8(12%) done by senior medical officers and registrars. The morbidity rate in this review was 17(25.8%). There was statistically significant difference between the route of hysterectomy (abdominal or vaginal) and the morbidity from the surgery ($P=0.009$). Haemorrhage requiring more than 1 pint of blood transfusion was the commonest complication seen in 10 (15.2%) of the cases of which 80% (8 cases) occurred in the abdominal routes. However, there were 4 (40%) morbidity with the vaginal route with a bladder and ureteric injury. There was no mortality directly related with hysterectomy in the 66 subjects.

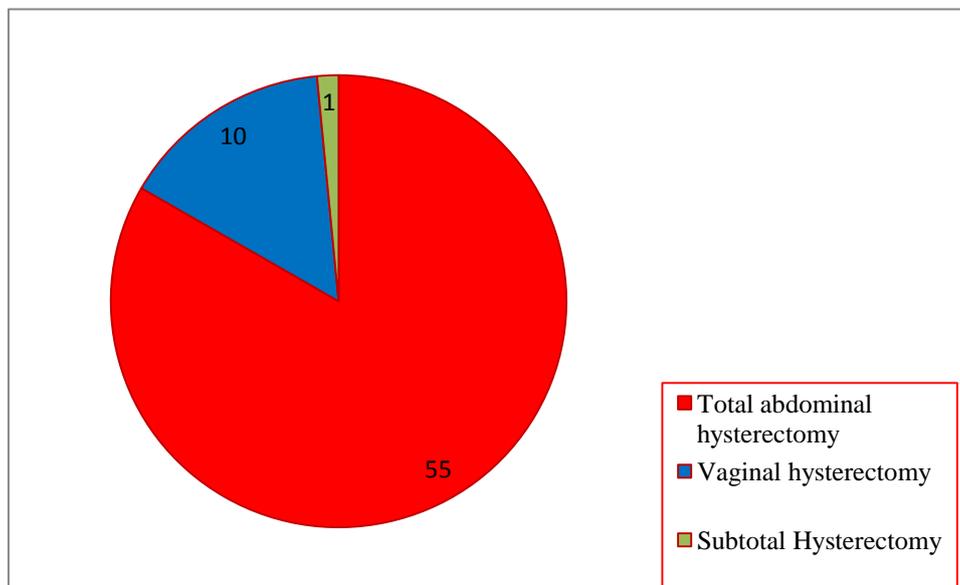


Fig.1.Types of hysterectomy at FMC Nguru

Table 1: Socio-demographic characteristics of subjects (n=66)

VARIABLES	NUMBER	PERCENTAGE
1.AGE		
20-29	3	4.5
30-39	12	18.2
40-49	26	39.4
>50	25	37.9
TOTAL	66	100.00
<i>Mean age 45 ± 11.45</i>		
2.PARITY		
0	8	12.1
1-4	32	48.5
5-9	21	31.8
≥10	5	7.6
Total	66	100
<i>Mean parity 3.39 ± 3.43</i>		
3. MARITAL STATUS		
Married	45	68.2
Divorced	11	16.7
Widowed	7	10.6
Single	3	4.5
Total	66	100

Table 2: Indications for elective hysterectomy at FMC Nguru (n=66)

INDICATIONS	NUMBER	PERCENTAGE
Uterine fibroids	40	60.6
†Ovarian Tumour	11	16.7
Utero-Vaginal prolapse	10	15.2
*DUB	2	3.0
Abortion complications	1	1.5
Early stage Cervical cancer	1	1.5
Endometrial cancer	1	1.5
Total	66	100

† 7 suspected malignant tumours and 4 benign tumours

*Dysfunctional uterine bleeding

Table 3. Parity and indication for Hysterectomy

Parity	Indications for hysterectomy			
	Uterine fibroids	Utero-vaginal prolapse	Ovarian Tumour	*Others
Abdominal Hysterectomy				
0	6	0	1	1
1-4	25	0	4	2
5-9	9	0	5	2
≥10	0	0	1	0
Total	40	00	11	5
Vaginal Hysterectomy				
0	0	0	0	0
1-4	0	1	0	0
5-9	0	5	0	0
≥ 10	0	4	0	0
Total	00	10	00	00

*Others: 2 DUB, 1 Abortion complication, 1 early stage cervical cancer, 1 endometrial cancer

Table 4: Type of Hysterectomy and development of complications

TYPES	COMPLICATIONS							Total
	None	Haemorrhage	Febrile morbidity	Wound sepsis	Ureteric injury	Bladder injury	DVT	
AH	43	8	2	2	0	0	1	56
VH	6	2	0	0	1	1	0	10
Total	49	10	2	2	1	1	1	66
Percent	74.2	15.2	3.0	3.0	1.5	1.5	1.5	100

AH-Abdominal hysterectomy
 VH-Vaginal hysterectomy
 DVT-Deep venous thrombosis

Discussion

Our finding is in agreement with previous studies that hysterectomy is the most common major gynaecological operation all over the world.^{1, 2, 3, 7} Although the hysterectomy rates have fallen over the years in the UK, yet there is widely and wildly varying rates between regions, hospitals and individual gynaecologists.¹³ The 25% prevalence rate for major gynaecological operations in this study is lower than the 60% of major gynaecological operations reported from India¹⁴; 5 times higher than 5.1 % reported from Kano, North western Nigeria⁶; 10.7% from Gombe and 13.8% from Maiduguri all in the same Northeastern region with the study center.^{7,10} This could be due to the fact that this is the only center in about 200km radius that has trained personnel for hysterectomy. Majority of our cases were in their 4th and 5th decade of life similar to findings in some series.^{6, 7} The psychological effect of hysterectomy on 3 of our cases who were spinsters and 4.5% that are between the ages of 20 and 29 years is enormous in a society where child bearing is a form of social security for women.¹⁵ The 20 year old had induced abortion with multiple uterine perforations and gangrenous uterus of which subtotal hysterectomy was done. Eight (12.1%) of our patients were nulliparous, however of advanced age and most of them have had previous myomectomy. This is higher than 8.7% reported by Bukar et al. but lower than

16.9% reported by Obilahi et al.^{7, 16} Most of those who had abdominal hysterectomy on account of uterine fibroids were of low parity while vaginal hysterectomy for utero-vaginal prolapse were observed more in women with higher parities as seen in all those having more than 10 deliveries. The abdominal approach is the preferred route of hysterectomy in this center with 84.8% abdominal hysterectomy to 15.2% vaginal hysterectomy given a ratio of 5.6: 1 abdominal to vaginal hysterectomies; the same trend was reported from the UK.¹³ It is equally comparable to 75% and 74.7 % abdominal hysterectomy reported from some series.^{7, 14} The vaginal hysterectomy rate of 15.2% is similar to 20.7% reported by Bukar et al but higher than 3% reported from Jos, North central Nigeria.^{7,17} Despite convincing evidence that vaginal route is the most appropriate in women with mobile uteri no larger than 12 weeks gestation age, the surgical indication, anatomical condition and the experience of the surgeons guides the choice of this route for hysterectomy.¹⁸ It has been observed from this study that our gynaecologists are not too proficient in carrying out vaginal hysterectomy in undescended uterus as all the 10 (100%) vaginal hysterectomies in this center were for utero-vaginal prolapse. Over 80% of vaginal hysterectomies are equally on account of utero-vaginal prolapse in some series reported from some parts of the world.^{14, 17, and 19} Some of our cases present with large uterine fibroids

ranging from 24 to 30 weeks gestational age making vaginal approach difficult. Pelvic adhesions equally limit the choice of vaginal route in our patients. However, lack of training in the art of vaginal hysterectomy could be contributing largely to this lower rate for vaginal hysterectomy in our center and Nigeria at large.²⁰

Symptomatic uterine fibroid is the indication in 60.6% of hysterectomy in our study followed by utero-vaginal prolapse in 15.2%. This is similar to 60% for uterine fibroid and 11% utero-vaginal prolapse obtained in a US study.²¹ Similar findings were observed in most series.^{14,22,19,23} and

²⁴ However, most of the uterine fibroids were quite large at presentation. There were no hysterectomies on account of uterine fibroid in those less than 30 years. Dysfunctional uterine bleeding is a less common indication for hysterectomy in this center with just 3.0% of cases. This could be due to recurs to medical treatment and other less radical methods such as curettage to correct the abnormal bleeding due to aversion for hysterectomy by our women.

The crude morbidity rate of 25.8% (17 cases) is lower than 45.5%, 45.1% and 31.5% reported earlier^{16,10,7} but higher than 17.7% and 8.5% reported in some series.^{23, 14} Unlike findings from other series were febrile morbidity is the commonest^{7, 10, 23, 24}, haemorrhage requiring more than 1 pint of blood was the commonest morbidity in our study. This is responsible for 10(58.8%) of the total morbidity of which 80% occurred with the abdominal route. Some of our cases of uterine fibroids have had previous myomectomies thereby making haemorrhage an unavoidable morbidity. The inclusion of malignant ovarian tumour in our review could equally contribute to this haemorrhage. Peri-operative antibiotics are a routine practice in this center. We equally observed the practice of cleaning/parking the vagina with chlohexidine solution during hysterectomies by some Gynaecologist in this center making infection morbidity less common. Morbidity has been shown to be less for vaginal

hysterectomy than abdominal hysterectomy^{7, 10}, however, the morbidity rate for vaginal hysterectomy in this review was 40% with urinary tract injury contributing 50% to this morbidity. There was statistically significant difference between the route of hysterectomy (abdominal or vaginal) and the morbidity from the surgery (P=0.009) in our review. All the 10 vaginal hysterectomies were performed by consultants; however, 4 were carried out by consultants who were 6-12 months post-fellowship. A bladder injury and ureteric injury occurred solely with the vaginal routes done by 2 different Gynaecologist who obtained their fellowship between 6 months to one year of these vaginal surgeries. This further exposed the deficiency in the art of vaginal hysterectomy by gynaecologists during training. The statement of a famous French surgeon-Doyen in 1939 that “no one could call himself a gynaecologist until he performs vaginal hysterectomy in the private”²⁵ is apt now as it was in the 1930’s.

Conclusion

Hysterectomy is a common major gynaecological surgery in this center with abdominal route most preferred. It is relatively safe with no morbidity in 74% of the cases. However, the rate for vaginal hysterectomy is low with high morbidity for urinary tract injuries. There is the need to train gynaecologists on the art of vaginal hysterectomy to bridge this gap.

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3. Contribution to authorship-
 - a) H. A Usman conceptualized , acquired the data, wrote the initial draft work
 - b) M. Sanusi, A. A. Kullima and M.B Kawuwa: analyzed the data and contributed to the literature
 - c) All Authors agreed on the final draft .The manuscript has been read and approved by all the authors.
4. Funding-none received.

5. Ethical approval was obtained from the institutional ethical committee of the hospital.

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