

A Review of Gynaecological Hysterectomies at the Ebonyi State University Teaching Hospital (EBSUTH), Abakaliki: Indications and Outcome

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Abstract

Context: Hysterectomy is one of the commonly performed major gynaecological operations in the world. There is no baseline information in our hospital regarding this surgery.

Objective: To determine the rate, indications and outcome of gynaecological hysterectomy at EBSUTH Abakaliki.

Method: Descriptive analysis of retrospective records of all cases of gynaecological hysterectomy over a five year period (January 1, 2005-December 31, 2009).

Results: The hysterectomy rate was 10.6% of gynaecological operations. The mean age of patients was 47.0±12.00 years (2S.D). Hysterectomies were commonest in the 4th and 5th decades of life (58.0%) with highest occurrence in the 5th decade (32.1%). Grandmultipara accounted for 63% of all cases. The major indications for hysterectomy were uterovaginal prolapse (45.7%), uterine fibroids (21.0%) and cervical carcinoma (12.3%). Total abdominal hysterectomy(TAH), was the commonest type of hysterectomy (54.3%) while vaginal hysterectomy accounted for 45.7%. Uterine fibroid was the commonest indication for TAH (38.6%). Vaginal hysterectomy was employed exclusively uterovaginal prolapse. Wound infection was the commonest complication (41.2%). Majority of the patients were hospitalized for more than 10 days (92.6%).

Conclusion: The commonest indication for hysterectomy in this study differs from other reports. Hysterectomy is safe in our centre. There is the need to allow senior residents actively participate in hysterectomy to enable them acquire enough skill.

Keywords: Hysterectomy, Indications, Benign, Management, Outcome

Introduction

Hysterectomy is one of the major gynaecological surgeries performed on women all over the world¹. It was first described in the third century AD writings of Soranus and before the turn of the 19th century was associated with horrendous morbidity and mortality². However, the first successful hysterectomy (subtotal) was performed by Charles Clay in Manchester England in 1843³ while G. Kimball of Massachusetts, USA in 1853 was the first surgeon to successfully and deliberately perform totalabdominal hysterectomy⁴.

Approximately 600,000 hysterectomies are performed in the United States of America (USA) annually and about 20 million American women have had hysterectomy, making it one of the highest in the world. Three out of every 1000 women and two out of every 1000 women in England and Norway respectively have had

hysterectomy⁵. Accurate data on the hysterectomy rate in Nigeria is lacking. However, hysterectomy rate of 10/100 major gynaecological operations have been reported in Enugu and Ibadan for various indications^{1,6-8}. Hysterectomy rate of 17% among major gynaecological surgeries has been reported⁹

Though better recognition and treatment of complicating medical diseases, proper use of blood transfusion and antibiotics as well as improvement in anaesthetic techniques have significantly reduced the morbidity and mortality associated with hysterectomy², gynaecologist performing hysterectomy must be

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Table 1: Socio-demographic Characteristics of Women who had Hysterectomy.

Parameter	Number (N = 81)	%
Age (years)		
21-30	5	6.2
31-40	21	25.9
41-50	26	32.1
51-60	17	21.0
61-70	10	12.3
71-80	2	2.5
Mean Age: 47 + 11.95 years (2sd).		
Parity		
0	1	1.2
1-4	29	35.8
>5	51	63.0
Occupation		
Housewife	14	17.3
Artisan	22	27.2
Farmers	34	42.0
Civil/Public Servant	11	13.5

guided by the severity and the type of pathological disorder in deciding the type of hysterectomy in order to minimize complications and achieve better outcome¹⁰.

There has not been any hysterectomy study in Ebonyi State University Teaching Hospital and although the surgery appears to be less commonly performed in this environment than in developed countries because of cultural and religious reasons¹¹, it is still necessary to appraise the indications and outcome of this major gynaecological surgery in Abakaliki. This study aims at determining the contribution of hysterectomy to gynaecological operations in Ebonyi State University Teaching Hospital (EBSUTH), evaluating its indications and the outcomes thereupon.

Methodology

Study Background

Ebonyi State created in 1996 from the old Abakaliki division of former Enugu State and Afikpo division of former Abia State, has 13 local government areas (LGAs), one urban and one semi-urban and the rest rural. It has an estimated population of 4.3 million and occupies a land mass of 5935km¹⁴, sharing boundaries in the West with Enugu State, Cross-River State in the East, Abia State in the Southeast and Benue State in the North. About 75% of the population dwells

in the rural area with farming as their major occupation.

Ebonyi State University Teaching Hospital (EBSUTH), is one of the two tertiary health facilities in Ebonyi State located at Abakaliki, the state capital and receives referrals from all parts of the state and the neighbouring states of Benue, Enugu, Cross-River and Abia.

The Gynaecological unit of EBSUTH is staffed with 10 Specialist Obstetricians and Gynaecologists, 24 Trainee Residents, numerous House Officers and Nurses/Midwives. There are four teams, each with at least two consultants. The consultants with Resident Doctors run the gynaecological clinics every day of the week (Monday to Friday).

The gynaecological wards have 24 beds. Gynaecological cases are admitted into the gynaecological wards from gynaecological clinics and the Accident and Emergency unit of the hospital and decision to admit is taken from the cadre of registrar-1 and above. Decision to embark on all major gynaecological operations is taken with the consent of consultants. Blood loss during surgery is estimated visually by noting the number of abdominal mops soaked with blood and also by weighing the mops before and after the surgery and estimating the blood loss based

Table 2: Indications For Hysterectomy

Indications	Number (N = 81)	%
Uterine Prolapse	37	45.7
Uterine Fibroids	17	21.0
Cervical carcinoma	10	8.7
Ovarian Carcinoma	7	8.7
Endometrial carcinoma	5	6.2
Gestational Trophoblastic disease	4	4.9
Leiomyosarcoma	1	1.2
TOTAL	81	100

Table 3: Types and Routes of Hysterectomy

N = 81

TYPE	ROUTE	NUMBER	%
Subtotal	Abdominal	2	2.5
TAH alone	Abdominal	11	13.6
TAH + BSO	Abdominal	29	35.8
Vaginal Hystere			
Ctomy alone	Vaginal	32	39.5
Vaginal Hystere			
Ctomy + BSO	Vaginal	5	6.2
Radical Hysterectomy	Abdominal	2	2.4
LAVH	Vaginal	0	0
TOTAL		81	100

Note: TAH = Total Abdominal Hysterectomy

BSO = Bilateral Salpingo Oophorectomy

LAVH = Laparoscopically Assisted Vaginal Hysterectomy

on the new weight.

Study Design

This was a descriptive study that reviewed data on all cases of hysterectomies for gynaecological conditions performed in EBSUTH over the 5-year period (January 1, 2005-December 31, 2009). After obtaining permission from the Ethics and Research committee of the hospital, all cases of hysterectomies for gynaecological conditions were identified from the theatre and gynaecological ward registers. The names of the patients and their hospital numbers were obtained. With these, the case notes were retrieved from the Health Records department and relevant data were extracted. Information obtained related to socio-demographic characteristics, presenting symptoms,

indications for hysterectomy, type of hysterectomy, blood loss during surgery and intra-operative blood transfusion. Others include intra and post operative complications, cadre of surgeons, duration of hospital stay and histology results. The information from the case records were transcribed unto already designed proforma.

The Research and Ethics committee of the hospital approved the review.

Data was analysed using SPSS version 10.0. The mean, range and percentages were used to describe the quantitative data. Chi-Square test was used to test for significance and a P-value less than 0.05 is taken as significant.

Results

During the period of study, there were 837 gynaecological operations, of which 543 were major gynaecological operations. Of the major gynaecological operations, 89 were hysterectomies, but only 81 case notes with complete information were analysed. Hysterectomy constituted 10.6% of all gynaecological operations and 16.4% of all major gynaecological operations. The age of the patients ranged from 27 to 80 years with a mean age of 47.0±11.95 years (2SD). Hysterectomies were commonest in the 5th decade (32.1%) of life.

Hysterectomy was performed more on the grandmultipara, accounting for 63.0% (51) of all cases, followed by multipara (para1-4), 35.8% while only 1.2% of hysterectomies were performed on the nullipara. Majority of the patients (49.4%) had five or more living children. Eighteen (22.2%) had four living children and 15 (18.5%) had three. Two (2.5%) of the patients had no child.

Greater proportion of patients who had hysterectomy in the study were farmers, accounting for 34 (42.0%) of all cases, followed by artisans (27.2%). House wives accounted for 17.3% (14) of cases and the rest (13.5%) were civil/public servants (Table 1). Seventy-five (92.6%) patients were Ibo while the rest (7.4%) were from other Nigerian tribes.

The commonest indications for hysterectomy in the study was utero-vaginal prolapse, accounting for 45.7% (37) of all cases, followed by uterine fibroid (21.0%). Cervical carcinoma ranked 3rd among the indications (12.3%), Table 2.

The vaginal route was employed in 37 (45.7%) of cases and was exclusively used for utero-vaginal prolapse. The vaginal route was not used when hysterectomy was indicated for other gynaecological conditions. Abdominal route accounted for 54.3% of all cases and include subtotal hysterectomy (2.5%), total abdominal hysterectomy with or without bilateral salpingo-oophorectomy (51.8%). All the total abdominal hysterectomy were simple hysterectomies but for two cases (2.4%) in which radical hysterectomies were performed. Laparoscopically assisted vaginal hysterectomy

(LAVH) was not undertaken in our centre during the study period (Table 3).

Estimated blood loss less than 500ml was made in 40 (49.4%) cases while blood loss equal or more than 500ml was estimated in 41 (50.6%) of cases. Of all the patients who had vaginal hysterectomy, 29 (78.4%) had blood loss less than 500ml while eight (21.6%) had blood loss estimated to be equal or greater than 500ml. Only 11 (25.0%) patients who abdominal hysterectomy has lost less than 500ml of blood, the rest, (75.0%) lost blood that was estimated be equal or greater than 500ml. Twenty-six patients (32.1%) received blood transfusion. Of all those who were transfused, 19 (73.1%) had abdominal hysterectomy while only 7 (26.9%) had vaginal hysterectomy. The influence of route of surgery on blood loss and blood transfusion rate was statistically respectively (P < 0.05) (How is blood loss estimated at surgery in your centre? study background!!!)

Seventeen patients (21%) had either intra or post-operative complications. Post operation wound infection was the commonest complication noted (41.2%) followed by wound breakdown (23.5%). There were no injuries to the adjacent structures/organs. No mortality was recorded. Most of the complications occurred in abdominal hysterectomy, 14 (82.3%). Wound infections and breakdown were recorded exclusively in abdominal hysterectomy (64.7%) while vulvo-vaginal pain occurred only in vaginal hysterectomy while 5.8% of cases of urinary tract infections occurred in abdominal hysterectomy. The influence of the route of surgery on occurrence of complications was statistically significant (P < 0.5) (Table 4).

Majority of the patient (56.8%) were hospitalized post-operatively for 10-20 days six patients (7.4%) spent less than 10 days in the ward post-operatively, while 29 patient (35.8%) spent more than 20 days before discharged. The commonest reasons for prolonged hospital stay were inability to pay hospital bills and post-operative wound infections/breakdown. Of the six patients who were hospitalized for less than 10 days, four (66.7%) had vaginal hysterectomy. Majority of the patients (79.4%) who were hospitalized beyond 20 days had abdominal hysterectomy.

Table 4: Complications and Routes of Surgery

Complications	Vaginal		Route		Total	
	N	%	N	%	N	%
Wound Infections	0	0	7	41.2	7	41.2
Wound breakdown	0	0	4	23.5	4	23.5
Vulvo-vaginal pain	1	5.9	0	0	1	5.9
Haemorrhage	0	0	2	11.8	2	11.8
Urinary Tract Infection	2	11.8	1	5.8	3	17.6
Total	3	17.7	14	82.3	17	100

Statistically significant, $\chi^2 = 12.2$, $df = 4$; $P < 0.05$.

Table 5: Route of Surgery and Duration of Hospital Stay

DURATION (Days)	Vaginal		Route		Total	
	N	%	N	%	N	%
Less than 10	4	4.9	2	2.5	6	7.4
10-20	27	33.4	19	23.4	46	56.8
Greater than 10	6	7.4	23	28.4	29	35.8
Total	37	45.7	44	54.3	81	100

Statistically significant, $\chi^2 = 11.4$, $df = 3$; $p < 0.05$.

The influence of route of surgery on the duration of hospital stay was statistically significant ($P < 0.05$) (Table 5). Majority of the surgeries (97.5%) were performed by the consultant cadre. Only two (2.5%) of cases were performed by the senior registrars and none by the registrars.

Discussion

The hysterectomy rate of 16.4% of all major gynaecological surgeries is higher than the reported rate of 11.8% at Ibadan⁷ and comparable though slightly lower than the rate reported at Federal Medical Centre Abakaliki⁹. The disparity between the hysterectomy rates in Ibadan study and this study may be explained by the differences in the study population. While in Ibadan study only abdominal hysterectomies for benign gynaecological conditions were considered, all types of hysterectomies and for all gynaecological conditions were included in

this study.

Most of the hysterectomies in this study were performed in the 4th and 5th decades of life (58.0%) which is similar to those in other published series^{7,13}. This is not surprising because most of the gynaecological conditions for which hysterectomies are indicated are prevalent at this age group. Moreover, women at this age bracket have either completed their family size or have gone far in doing so, hence, are more likely to accept hysterectomy than younger women who are at the early stage of their reproductive careers or are yet to resume. Life expectancy in Nigeria is low (48.07 years for females)¹⁴, hence, only few women would live beyond the 5th decade of life and present with gynaecological problems requiring hysterectomy.

More hysterectomies were performed in

grandmultiparas in this study (63.0%). This may be explained by the fact that the commonest indication for hysterectomy in this study, utero-vaginal prolapse, is influenced by parity, with women of higher parity (grandmultiparas) more likely to develop genital prolapse. More so, grandmultiparas are more likely to give consent for hysterectomy 49.4% of patients who had hysterectomies in this study had five or more living children and only 2.5% had no living child which is similar to other published series in Nigeria⁷. In this environment like most other parts of Nigeria, procreation is the main driving force for marriage. It is therefore a difficult task for a nullipara to accept hysterectomy. The compelling indication in the nulliparas who had hysterectomy in this study was their health

Greater proportion of hysterectomized patients in this study was farmers. Farming is a major occupation in Ebonyi State and involves carrying heavy farm produce on the head and trekking long distances. This type of farming predisposes to genital prolapse which accounted for 45.7% of the indications for hysterectomy in this study.

Utero-vaginal prolapse was the commonest indication for hysterectomy in this study (45.7%) which differs from those of other published series where uterine fibroids were the commonest indication^{7,9,15}. This is not surprising because most of the patients were farmers and of high parity, both of which predispose to genital prolapse. Most people in our environment that have uterine fibroids that require surgery would prefer myomectomy to hysterectomy because of strong sentimental attachment to menstrual and reproductive functions¹⁶.

In this study, vaginal hysterectomy was employed exclusively for utero-vaginal prolapse. This compares with study at Enugu¹². This is expected because in addition to hysterectomy, other procedures (corporrhaphy and pelvic floor repair) which require vaginal route are also necessary for the proper treatment of utero-vaginal prolapse. The surgeons preferred abdominal route when dealing with other gynaecological conditions (apart from utero-vaginal prolapse) in 100% of cases in this study. This is similar to report from other series^{9,12}. This

preference for abdominal hysterectomy may not be unconnected with the nature of the pathological conditions necessitating hysterectomy and the fear of pelvic adhesions. The use of abdominal route is expedient in these gynaecological conditions for proper staging and or adequate treatment which may not be feasible with vaginal route.

Laparoscopically assisted vaginal hysterectomy (LAVH) though that is where the gynaecological world is heading to, was not employed in our centre during the study period. Operating laparoscope was just made available in our centre towards the end of the study. In centres where LAVH is available, it has been shown to be associated with shorter hospital stay and at a times decreased blood loss^{17,18}. However, there is increased operation time and it is contraindicated in up to 20% of cases¹⁹. Midline incision was employed in 100% of cases of abdominal hysterectomy. This can be explained by the advantages of such an incision in high proportion of cases with advanced pathology.

Only 32% of patients received blood transfusion in this study. This compares with other reports^{7,9}. These patients who had vaginal hysterectomy were the least transfused (26.9%). Vaginal hysterectomy has been shown to be associated with reduced blood loss compared with abdominal hysterectomy¹⁸.

Wound infection was the commonest post-operative complication in this study, accounting for 41.2% of cases. This may not be unconnected with the finding in this study where abdominal hysterectomy which is associated with greater chance of wound breakdown/infection, accounted for greater proportion of the route of surgery. There were no injuries to adjacent structures and no mortality. The low incidence of operative and post operative complications and absence of mortality may be attributed to the status and competence of the surgeons, most of whom were consultants. This compares with the study from the northern Nigeria, where wound infections were the commonest postoperative complication with no mortality and no injuries to the adjacent structures⁹. It however, differs from the study carried out at Ibadan where though there was no mortality; injuries to adjacent