

## Total Abdominal Hysterectomy for Benign Gynaecological Conditions at a University Teaching Hospital in Nigeria

<sup>1</sup> ANZAKU AS, MBBS, FWACS, FMCOG (NIG), <sup>2</sup> MUSA J MBBS, FWACS, FMCOG (NIG), MS

<sup>1</sup>Department of Obstetrics and Gynaecology, College of Health Sciences, Bingham University, Jos campus, Jos, Nigeria

<sup>2</sup>Department of Obstetrics and Gynaecology, Jos University Teaching Hospital, Jos

### ABSTRACT

**BACKGROUND:** Hysterectomy is one of the most commonly performed major gynaecological procedures in women. Total abdominal hysterectomy (TAH) for benign disorders is commonly performed in Jos University Teaching Hospital and this study aimed at ascertaining its frequency in relation to other major gynaecological operations, demographic features of the patients, indications and safety of the procedure in this institution.

**MATERIALS AND METHODS:** A retrospective descriptive study of consecutive patients who had elective total abdominal hysterectomy performed for various benign indications during the study period from January 2001 to December 2008 was conducted. Data extracted from the case files included age, parity, presenting symptoms, indications for the surgery, intra-operative findings and post-operative complications. Data was analysed with 2008 EPI-info version 3.5.1.

**RESULTS:** Total abdominal hysterectomy accounted for 18.2% of all major gynaecological operations. Majority of the women were in their fifth decade of life (65.9%) and parity of five and above (46.4%). The most common indications were uterine fibroid with or without menorrhagia (60.6%) and cervical intraepithelial neoplasia (27.0%). Post-operative morbidity was recorded in 40 (17.7%) of cases. Post-operative wound infection (52.5%) and fever (30.0%) accounted for the majority of the complications. There was no mortality.

**CONCLUSION:** Total abdominal hysterectomy for benign conditions is relatively common and safe in this centre. The review of the antibiotic regimes for chemoprophylaxis may help in reducing the post-operative infection rate associated with the operation.

**KEY WORDS:** Total abdominal hysterectomy, benign conditions, morbidity rate and pattern, Jos, Nigeria.

laparoscopic procedures such as laparoscopic hysterectomy and laparoscopically assisted vaginal hysterectomy (LAVH) are the hysterectomy techniques for the management of benign gynaecological diseases.

Total abdominal hysterectomy tend to be a preferred procedure than subtotal hysterectomy because of the risk of development of carcinoma of the cervix, irritating vaginal discharge and infrequent cyclical vaginal bleeding from the cervical stump as well as cervical prolapse<sup>8</sup>. However, subtotal hysterectomy is faster to perform, less intra & post-operative complications and more rapid recovery<sup>9,10</sup>. There have been inconsistent reports that subtotal hysterectomy offers improved post-operative sexual experience and or better pelvic floor function, improvement in the quality of life and psychological symptoms<sup>9,12</sup>.

Although alternatives to total abdominal hysterectomy in the management of benign gynaecological conditions such as laparoscopically assisted vaginal hysterectomy (LAVH), endometrial resection and ablative techniques, uterine artery embolization (UAE) as well as the use of Levonorgestrel releasing intra-uterine system (LNG-IUS) are being utilized in developed countries, they are not widely used in the developing countries probably because of lack of facilities and expertise. Though LAVH was reported to be safe and effective in highly selected benign gynaecological conditions in some African countries<sup>13,14</sup>.

The incidence of hysterectomy is high and increasing in developed countries<sup>1,15</sup> but the reverse is true in developing countries where most studies recorded low incidences<sup>16-18</sup>. TAH and vaginal hysterectomy tend to be the most commonly performed procedures in Nigeria<sup>4,16-19</sup>. Total abdominal hysterectomy is commonly carried out in the married, multiparous women in the 4<sup>th</sup> and 5<sup>th</sup> decades of life in Nigeria<sup>3,4,18-20</sup>. However, about 2.9% of hysterectomies in Calabar were in single nulliparous teenagers mainly as a result of post-abortal complications<sup>21</sup>.

Indications for TAH include menstrual disorders, uterine fibroids, cervical intraepithelial neoplasm, benign ovarian tumours, endometrial/cervical polyps and chronic pelvic inflammatory disease<sup>1-4,16-20</sup>. Improvement in blood transfusion services, use of potent antibiotics, and safe anaesthetic techniques have drastically reduced the morbidity and mortality associated with hysterectomies in the past. The operation disrupts the

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### INTRODUCTION

Throughout the world, hysterectomy remains one of the most frequently performed of all major gynaecological procedures for both malignant and benign conditions<sup>1-4</sup>. Hysterectomy is usually undertaken to manage benign conditions that pose no threat to the woman's life but usually aimed at improving the women's quality of life<sup>5</sup>. Total abdominal hysterectomy (TAH), subtotal hysterectomy, vaginal hysterectomy and recently

intimate anatomical relationship between the uterus, bladder, rectum & vagina and inevitably the local nerve supply and it is therefore conceivable that hysterectomy may alter the function of these organs but the reported effects are inconsistent<sup>9,11,12</sup>. However, the common complications of TAH include wound infection, pelvic haematoma or abscess, bowel/bladder injury, anaemia from hemorrhage, intestinal obstruction and ureteric injuries<sup>4,15-20,22</sup>.

Total abdominal hysterectomy is a commonly performed procedure in this centre and remains an effective intervention for many women with a variety of benign gynaecological disorders and symptoms. This study was embarked upon to determine its frequency in relation to other major gynaecological operations, patients' demographic features, indications, intra-operative findings, the morbidity rate and pattern of the procedure in this tertiary Hospital.

## MATERIALS AND METHODS

This is a retrospective descriptive study of all cases of total abdominal hysterectomy (TAH) for benign conditions in the maternity unit of Jos University Teaching Hospital (JUTH), Jos over an eight-year period between January 2001 and December 2008. JUTH is a 500 bed tertiary health institution serving as a referral centre for six (6) contiguous states of the federation and a residency training centre in various disciplines of medicine. It is located in Jos, the capital of Plateau state in the North Central geopolitical zone of Nigeria. The total number of all major gynaecological operations and the hospital numbers of women that had total abdominal hysterectomy were retrieved from the theatre operation registers. These numbers were used to trace the case files of the patients from the hospital's record department. Data relating to demographic characteristic, clinical presentation, indications, operative findings, and post-operative complications during admission and at follow-up of each patient were entered into a designed structured proforma.

Ethical clearance was obtained from the hospital ethical committee. Descriptive statistics was done with 2008 EPI-info statistical package, version 3.5.1.

## RESULTS

The total number of major gynaecological operations done during the 8-year period were 1498, out of which 273 were total abdominal hysterectomy (TAH) for benign conditions, which amounts to 18.2% of major gynaecological surgeries. Twenty nine (29) case records were unavailable and 18 had incomplete information while 226 had complete information and were analyzed. Table I shows the major gynaecological surgeries performed during the study period.

The average age of the patients was 41.7 years with a range 41 - 50 years (65.9%). A majority (91.6%) of patients were married, 5.8% widowed and 2.6% were divorced. Most of the patients (75.5%) had three deliveries or more while 46.4% were grand-multipara. Table II shows the age distribution and obstetric history of the patients.

About 43.2% of the patients presented with menorrhagia, 21.5% with abdominal mass, 19.3% with abdominal pain while 11.5% presented with abnormal vaginal discharge. Eighteen of the patients presented with results of abnormal papanicolaou smear (Table III). Over half (57.5%) of the patients had uterine size between 12-22 weeks, 10.6% had greater than 22 weeks size uteri, while 31.9% had normal uterine size. The commonest indication for total abdominal hysterectomy was uterine fibroids with or without menorrhagia (60.6%). Other indications were cervical intraepithelial neoplasia (27.0%), dysfunctional uterine bleeding (11.1%), cervical polyp (0.9%) and chronic cervicitis (0.4%).

Over half (52.6%) of the patients had general anaesthesia while 47.4% had spinal anaesthesia. The vertical sub-umbilical skin incision was done in 59.5% of cases, 39.2% and 1.3% had Pfannenstiel and Joel Cohen incisions respectively. The intra-operative findings included uterine fibroids (60.3%), pelvic adhesions (33.4%), ovarian cysts (5.1%) and endometriosis in 1.2% of the patients. All the patients had peri-operative antibiotic prophylaxis, majority of the patients (59.5%) had peri-operative statim dose of Amoxicillin/Clavulanic acid while 40.5% had post-operative Ampicillin/Cloxacillin and metronidazole.

Majority of the patients (84.0%) had normal packed cell volume (PCV) at presentation while 16.0% had PCV of 30% or less. Estimated intra-operative blood loss was between 201-400ml in majority of the patients (74.0%) while 12.3% lost greater than 500ml of blood at surgery. Large proportion of the patients stayed in the hospital for 5-7 days (80.6%) while 19.4% stayed for 8 or more days mainly as a result of post-operative complications depicted in Fig 1.

There were 40 patients with recorded post-operative complications giving a post-operative morbidity rate of 17.7%. Wound infection and post-operative fever were the commonest complications accounting for 52.5% and 30.0% respectively. There was no recorded death associated with the procedure during the study period. Fig 1 shows the post-operative complications.

**Table I: Major gynaecological surgeries performed during the study period**

Type of Surgery	Frequency	%
Abdominal myomectomy	571	38.1
Laparotomy + total/partial salpingectomy for ectopic pregnancy	324	21.6
Total abdominal hysterectomy for benign conditions	273	18.2
Laparotomy +ovarian cystectomy/oophorectomy	73	4.9
Pelvic adhesiolysis ± cuffed salpingostomy	67	4.5
Vaginal hysterectomy + pelvic floor repair	61	4.1
Laparotomy + pelvic abscess drainage	57	3.8
Total abdominal hysterectomy + bilateral salpingo-oophorectomy for malignant conditions	54	3.6
Others	18	1.2
<b>Total</b>	<b>1498</b>	<b>100</b>

Others include genital tract fistula repair, vulvectomy, Manchester repair

**Table II: Age distribution and obstetric history of the patients**

Age (years)	Frequency	%
30-35	18	8.0
36-40	46	20.4
41-45	85	37.6
46-50	64	28.3
51-60	10	4.4
>60	3	1.3
<b>Total</b>	<b>226</b>	<b>100.0</b>

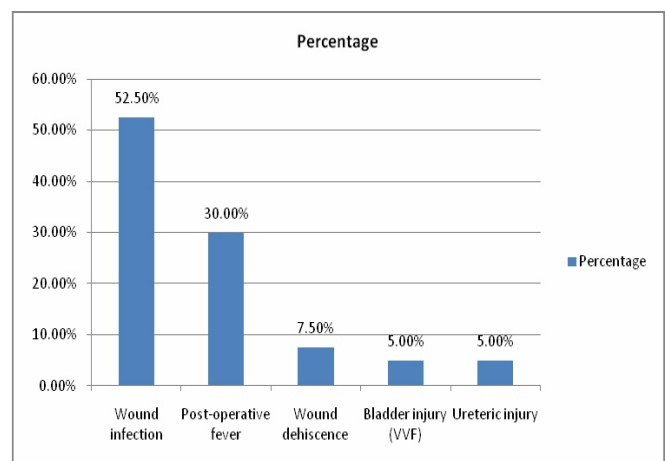
Parity	Frequency	%	Number of children alive	Frequency	%
0	16	7.1	0	19	8.4
1	19	8.4	1	21	9.3
2	18	8.0	2	23	10.2
3	35	15.5	3	30	13.3
4	33	14.6	4	33	14.6
≥5	105	46.4	≥5	100	44.2
<b>Total</b>	<b>226</b>	<b>100.0</b>	<b>Total</b>	<b>226</b>	<b>100.0</b>

**Table III: Presenting Complaints**

Symptoms	Frequency	%
Excessive menstrual flow	143	43.2
Abdominal mass	71	21.5
Abdominal pain	64	19.3
Abnormal vaginal discharge	38	11.5
Post-coital bleeding	12	3.6
Difficulty in urination	3	0.9
<b>Total</b>	<b>331</b>	<b>100.0</b>

\* 18 patients presented with only results of abnormal papanicolaou smear  
 \* Some patients had ≥ 2 symptoms.

**Fig 1: Posp-operative Complications**



•186 (82.3%) of the patients had no complication

**DISCUSSION**

Total abdominal hysterectomy accounted for 18.2% of major gynaecological surgeries. This is comparable to the findings in other parts of the country<sup>4,21</sup> but higher than the figures from Enugu, Ibadan, Gombe and Uyo<sup>18,20,23,24</sup>. This high figure may be attributable to the fact that this is a referral centre and majority of the patients were married, multiparous and in their fifth decade of life which is similar to other published series<sup>4,16,19,21</sup> and so consented easily for the procedure. The importance attached to child bearing in our environment may be the reason why hysterectomy rate was low in women with low parity in this study. The fact that over 70% of the patients had 3 or more children alive suggest that uterine fibroids tend to occur in multiparous women in our environment as noted also in other studies<sup>3,4,16,19,23</sup>.

The common modes of presentation were Menorrhagia, abdominal Mass and pain. This is in line with the high pre-operative diagnosis and intra-operative finding of uterine fibroids noted in other series<sup>3,19,20,23,24</sup>. Uterine fibroid with or without menorrhagia was the commonest indication for total abdominal hysterectomy in this centre and is similar to findings elsewhere<sup>3,19-27</sup>. This

stresses the fact that uterine fibroids are the commonest female genital tract tumours. Cervical intraepithelial neoplasia (CIN) was the second commonest indication and accounted for 27.0% of the patients. This was also noted in the studies from Kano and Ibadan<sup>4,20</sup>. This is a pointer to increasing availability of cervical screening in these centres and this emphasizes the need for regular Papanicolaou smear among our women so as to reduce the incidence of carcinoma of the cervix. Conservative ablative or excisional procedures are suitable alternative procedures to total abdominal hysterectomy in women with CIN and are more desirable in younger women who are yet to complete their family size.

Majority of the patients had uterine size between 12–22 weeks which is similar to the findings in Enugu<sup>18</sup> while one-third of them had normal uterine size as opposed to the findings in Ibadan where only 10.9% of the patients had normal uterine size<sup>20</sup>. Minimally invasive techniques such as endometrial ablation would have been more acceptable procedure in women with normal size uterus presenting with dysfunctional uterine bleeding as women tend to avoid hysterectomy in our environment<sup>16</sup>.

Uterine fibroids and pelvic adhesions were the commonly intra-operative findings as also noted in other studies<sup>3,18-20</sup>. These findings may not be unconnected to the fact that pelvic adhesions are frequent companion of uterine fibroids<sup>16</sup>. However, in a study by Sobande et al<sup>25</sup>, adenomyosis co-existed with uterine fibroid in 14.8% of their patients which is in contrast with the finding in this study, though pathologic assessment of the hysterectomy specimens were not reviewed.

The commonest form of antibiotic prophylaxis was peri-operative Amoxicillin/Clavulanic acid and post-operative Ampicillin/Cloxacillin and metronidazole. The advantage of chemoprophylaxis was demonstrated by several authors<sup>28,29</sup>. The crude morbidity rate was 17.7% which is lower than figures in other studies<sup>4,19,20,23,24</sup>. The commonest morbidities were wound infection and post-operative fever as seen also in Ile-Ife, Gombe, Karachi, Riyadh and Missouri<sup>19,23,30-32</sup>. There was no mortality in this study as also noted in other studies<sup>20,23</sup>. This may be a reflection of the standard of the surgery and optimum use of nursing services.

#### LIMITATIONS OF THE STUDY

The major drawbacks of the study are its retrospective nature and some of the patients were excluded from the final analysis as a result of incomplete information in their records and non-availability of some case files.

#### CONCLUSION

Total abdominal hysterectomy for benign gynaecological conditions is relatively common and safe in this health centre but there is the need to re-appraise the

antibiotic regimes use for chemoprophylaxis in order to further reduce the morbidity rate and post-operative wound infection.

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