



Original Article

Pattern of Gynaecological Total Abdominal Hysterectomy (TAH) in Abeokuta, Southwest Nigeria; a Five-Year Review

Authors

Olaide R. Adenaya^{1*}, Oluwole O. Ojo², Adedoyin O. Ade-Onojobi³

^{1,3}Department of Obstetrics and Gynaecology, Federal Medical Centre, Abeokuta, Ogun State, Nigeria

²Department of Obstetrics and Gynaecology, Gbagada General Hospital, Gbagada, Lagos, Nigeria

*Corresponding Author

Olaide R. Adenaya

Department of Obstetrics and Gynaecology, Federal Medical Centre, Abeokuta, Ogun State, Nigeria

Abstract

Background: Total abdominal hysterectomy (TAH) is a common gynaecological operation and rarely obstetric. Indications for TAH may be benign or malignant and it is one of the most commonly performed surgical operations worldwide.

Aim: To describe the frequency, indications and complications of total abdominal hysterectomy (TAH) at a tertiary health institution in Abeokuta, Southwest Nigeria over a five-year period.

Methods: It was a 5-year descriptive retrospective study of all the total abdominal hysterectomies performed at our centre; a tertiary health institution in Abeokuta, Southwest Nigeria between January 2013 and December 2017. Case notes of 87 TAHs performed during the period were retrieved and analysed.

Results: There were 94 cases of TAHs out of a total of 515 major gynaecological surgeries during the period giving a TAH rate of 18.3% of major gynaecological surgeries. Eighty-seven (92.6%) of the case notes were retrieved for analysis. Average parity of the patients was 2.9. Uterine fibroid was the most common indication constituting 81.6% of all the cases. Intra-operative blood loss ranged from 300mls to 1600mls with an average of 553.44mls. Forty-four (50.6%) patients lost less than 500mls of blood. Post-operative anaemia in 35 (40.2%), and pyrexia in 11 (12.6%) patients were the most common complications.

Conclusion: Total abdominal hysterectomy is a common gynaecological procedure. It is indicated in both benign and malignant gynaecological conditions. Uterine fibroid was the most common indication. Post-operative anaemia and pyrexia were the most common complications. It is apparent that proper optimization of patients prior to surgery is necessary to prevent post-operative anaemia.

Keywords: Pattern, Gynaecological, Total abdominal Hysterectomy, Indications, Complications.

Introduction

Hysterectomy is a surgical procedure which involves the removal of the uterus with or without the cervix. In some conditions, the fallopian tubes and the ovaries are removed in addition. It is the

most commonly performed gynaecologic surgery worldwide.^{1,2} As at 1999, approximately 600,000 hysterectomies were performed annually in the United States, and approximately 20 million U.S. women had had a hysterectomy.³ The overall rate of

hysterectomy in Germany was 362 per 100 000 person-years.⁴ The number of hysterectomies performed in many developed countries has fallen markedly as a result of more conservative measures for the management of dysfunctional uterine bleeding.¹ The falling prevalence seen in the developed countries may reflect a variation in the practice of limiting hysterectomy and a shift to conservative treatments like increased use of ablative methods, hysteroscopic procedures, and the levonorgestrel releasing intrauterine device for gynaecological conditions.^{1,2,5} The prevalence of hysterectomy in developing countries however remained lower than that of developed countries. The lower prevalence of hysterectomy is due to fear of surgery, loss of femininity and sexual rejection by their spouses or because of their strong cultural belief or religious attachment to preservation of menstruation and childbearing.⁶ Total abdominal hysterectomy rates of 3.3% to 18.2% of major gynaecological surgeries were reported in some tertiary health institutions in Nigeria.^{7,8,9,10}

There are many indications for hysterectomy and the uterus can be removed using any of a variety of techniques and approaches, including abdominal, vaginal, laparoscopic or robotic.¹¹ Abdominal hysterectomy is the most common approach accounting for 84.8%-92.1% of all hysterectomies performed in Nigeria, while vaginal hysterectomy accounts for the rest 7.9-15.2%.^{12,13} Laparoscopic approach is still very rare in Nigeria and only very few laparoscopic hysterectomies have been reported^{14,15,16}.

Abdominal hysterectomy could be total or subtotal (also known as "supracervical") depending on whether the cervix is removed with the uterus or preserved. Total abdominal hysterectomy account for higher percentage of abdominal hysterectomies with reported rates as high as 93-94.5% of abdominal hysterectomy in some centres in Nigeria.^{7,9} Total abdominal hysterectomy may be performed alone or with unilateral or bilateral salpingo-oophorectomy depending on the indication for the surgery and the age of the patient.⁴

Nationwide analyses of hysterectomies in Portugal and the US reported uterine fibroid as the most common indication for hysterectomy,^{17,11} while excessive menstrual bleeding/pain was the most common self-reported indication in India.¹⁸ Several studies in Nigeria also reported uterine fibroid as the leading indications for abdominal hysterectomy.^{7,8,9,10} Other indications for total abdominal hysterectomy include dysfunctional uterine bleeding, endometriosis/adenomyosis, endometrial polyps, pelvic inflammatory disease, chronic pelvic pain, cervical intraepithelial neoplasia, endometrial hyperplasia, and some malignant lesions.^{7,8,9,10}

Majority of women have relief from their symptoms after hysterectomy with associated high level of satisfaction with the procedure.¹⁹ The procedure is not without possible complications, though mortality and morbidity following total abdominal hysterectomy have reduced significantly over the years due to improvement in anaesthesia and operative techniques. Postoperative fever and infections account for the majority of complications.^{7,8,10} Other complications include intra-operative haemorrhage requiring transfusion, post-operative anaemia, urinary tract injuries, bowel injuries/intestinal obstruction, pelvic haematoma/abscess.^{7,8}

Though there have been reviews of hysterectomy in centres in Nigeria, there is none from our centre. This study becomes imperative as it offers the opportunity to establish a baseline for the pattern of total abdominal hysterectomy in our centre and also compare the findings with those found in other centres.

Materials and Methods

Ethical Consideration

Ethical permission to carry out the study was sought and approval obtained from the Hospital's Health Research Ethics Committee (HREC).

Study Design

This was a retrospective descriptive study among all women who had total abdominal hysterectomy in

our centre within the study period of Jan 2013 and December 2017.

Study Population

The study population was made up of all gynaecological patients who had total abdominal hysterectomy performed on them for gynaecological conditions either as elective or emergency, during the study period.

Inclusion Criteria

All patients who had total abdominal hysterectomy performed on them for gynaecological conditions.

Exclusion Criteria

All gynaecological patients who had had hysterectomy performed on them prior to the study period.

Data Collection

This study was a 5-year retrospective review of all cases of total abdominal hysterectomy for both benign and malignant gynaecological conditions managed at our centre which is a tertiary health institution in Abeokuta, Southwest Nigeria from 1st January 2013 through 31st December 2017. The sources of information were the hospital's medical record unit, gynaecological ward records and theatre records. Information was retrieved from the patients' case notes using the proforma data. A total of 94 total abdominal hysterectomies were performed during the period. Information regarding the socio-demographic characteristics, parity, indications for surgery, extent of surgery (that is TAH+/-unilateral/bilateral salpingo-oophorectomy), intraoperative and postoperative complications, length of hospital stay, associated morbidity and mortality pattern were collected.

Data Analysis

Information retrieved from the case files was coded and filled into a spread sheet. The data obtained were analysed using simple percentages and frequency tables. Quantitative variables were described using measures of central tendency ((mean, median) and measures of dispersion (range, standard deviation) as appropriate.

Results

There were 94 cases of gynaecological total abdominal hysterectomy out of a total of 515 major gynaecological surgeries during the period with total abdominal hysterectomy prevalence of 18.3% of major gynaecological surgeries. Out of the 94 of the abdominal hysterectomy cases, 87 (92.6%) case notes were retrieved for analysis. All the total abdominal hysterectomy performed for gynaecological reasons were performed as elective operations.

Table 1 shows the socio-demographic status of the women who underwent TAH.

The age range of the women was 35 to 80 years; with a mean age of 47.32 years. Only one of them was 35 years. Majority of the women were between 41 and 50 years constituting 65.55%. All the women had at least a primary level of education. Majority (94.3%) of the women were married. Majority (94.3%) of them were employed. Seventy-one (81.6%) were multipara, fourteen (16.1%) were primipara, 9 (10.3%) were grandmultipara while two (2.3%) were nullipara. The average parity was 2.9.

Ten (11.5%) were post-menopausal while the remaining 77(88.5%) were perimenopausal or premenopausal

Twenty (23%) had total abdominal hysterectomy (TAH) alone. Most of the women who had TAH alone were 50 years and below. Fifty (57.5%) patients had bilateral salpingo-oophorectomy in addition to the TAH and majority of them 39 (78%) were at least 46 years. Seventeen (19.5%) had unilateral salpingo-oophorectomy in addition to the TAH thereby conserving one of the ovaries, and majority of them were also at most 50 years.

Table 2 shows the indications for TAH. Uterine fibroid was the most common indication constituting 81.6% of all the cases. This was followed by benign ovarian masses with a prevalence of 8%.

The blood loss during the surgeries ranged from 300mls to 1600mls with an average of 553.44mls. Most patients (50.6%) lost less than 500mls of

blood. Five (5.7%) of the patients lost 1000mls or more, all were patients with uterine fibroids.

Table 3 shows the post-operative complications recorded. Anaemia was the most common post-operative complication, occurring in 35 (40.2%) patients. Fifteen of the patients with anaemia were transfused, 2(13.33%) were transfused one pint of blood each, 12 (80%) had 2 pints each and the remaining 1 (6.67%) had 3 pints. Pyrexia was another common complication seen in 11 (12.6%) patients. Wound infection was seen in three (3.4%) of the patients while one patient had bladder injury which was detected and repaired intraoperatively. In

all, 53 (60.8%) women had complications while 34 (39.2%) had no complications at all.

The total number of days on admission ranged between 5 and 21 days with an average of 9.7 days. Most (64.37%) of the patients stayed 5-9 days in hospital while only 5.75% stayed at least 20 days. Table 4 shows the duration of stay in hospital after surgery. After surgery, the number of days patients remained on admission ranged from 3 to 10 days with average of 4.8 days. Sixty-two (71.26%) patients spent less than five days on admission after operation, fourteen (16.09%) spent between 5 and 6 days while only 11 (12.65%) spent 7 days or more.

Table 1: Socio-demographic status of the women

Age (Years)	Frequency	Percentages (%)
31-35	1	1.15
36-40	10	11.5
41-45	25	28.75
46-50	32	36.8
51-55	11	12.6
56-60	4	4.6
>60	4	4.6
Total	87	100
Level of Education	Frequency	Percentage (%)
Primary	15	17.24
Secondary	37	42.53
Tertiary	35	40.23
Total	87	100
Marital Status	Frequency	Percentages (%)
Married	82	94.25
Widow	2	2.3
Divorced	2	2.3
Separated	1	1.15
Total	87	100
Parity	Frequency	Percentages (%)
0	2	2.3
1	14	16.1
2	18	20.7
3	24	27.6
4	20	23
≥5	9	10.3
Total	87	100

Table 2: Indications for Surgery

Indication for Surgery	Frequency	Percentages (%)
Fibroids	71	81.6
Endometrial Carcinoma	4	4.6
Endometrial Hyperplasia	1	1.15
Benign Ovarian Mass	7	8.05
Ovarian Malignancy	2	2.3
HGSIL	2	2.3
Total	87	100

Key: HGSIL- High Grade Squamous Intraepithelial Lesion.

Table 3: Post –operative Complications

Post-operative Complication	Frequency	Percentages (%)
Anaemia	35	40.2
Pyrexia	11	12.6
Anaemia + Pyrexia	3	3.4
Wound Infection	3	3.4
Bladder injury	1	1.2
Total	53	60.8

Table 4: Length of hospital Stay after Operation.

Days	Frequency	Percentage (%)
<5	62	71.26
5-6	14	16.09
7-10	11	12.65
Total	87	100

Discussion

Hysterectomy is the most commonly performed gynaecological surgery throughout the world.^{1,2} Majority of the hysterectomies are performed through the abdominal route.¹⁷ In this study, the total abdominal hysterectomy (TAH) rate was 18.3% of all gynaecological surgeries performed. This was higher than the abdominal hysterectomy prevalence reported in Kano Northwest Nigeria and TAH rate in Benin-City South-South Nigeria and even higher than the rate reported for all hysterectomies generally in Port-Harcourt South-South Nigeria and Lagos Southwest Nigeria (same region where this study was carried out).^{7,8,19,20} It was close to the prevalence of total abdominal hysterectomy in Jos, North central Nigeria,¹⁰ This may be attributable to the fact that some of the studies in these centres focused on hysterectomies done for benign conditions only. The prevalence in this study is however far lower than the 20.1% prevalence of hysterectomy in the total population of women aged 20 and older in the United State.²¹

The low prevalence rate in Nigeria compared to US and some other developed nations may be as a result of the desire of Nigerian women to preserve fertility, their aversion for surgery and cultural/religious beliefs.

Majority of the women were married and multiparous with para 2 - 4 constituting 71.3%. This is similar to the finding in Kano⁷ but different from findings in Jos, Benin and Gombe Northeast Nigeria where majority of the women were grandmultipara.^{9,8,10} Most of the women who underwent TAH in this study were aged 41 to 50 years and similar to report from Kano and Jos,^{7,10} while the mean age of 47.32years is close to that reported in Gombe, Port-Harcourt and Zaria.^{9,19,12} but higher than the mean age reported in Jos and Benin.^{10,8} Hysterectomy rate peaked at this age group because many of the women had completed their family sizes and were peri-menopausal or post-menopausal. The two nulliparous women who had hysterectomies in this study were postmenopausal while the majority of the primiparous women were

also either post-menopausal or perimenopausal. The few number of nulliparous and primiparous women in this study compared to the multiparous women further pointed to preference of conservative management by pauciparous women rather than hysterectomy for their conditions in anticipation of having children in future.

Symptomatic uterine fibroid was the major indication for total abdominal hysterectomy in our centre and this is similar to findings in other study series^{7,8,10,12,17}. This may be attributable to the high prevalence rate of uterine fibroid our environment. Many of these patients often present with huge uterine fibroids and heavy menstrual bleeding with complete family size or being peri- or post-menopausal and thereby making it easier for them to opt for hysterectomy which is the definitive management for such conditions.

Benign ovarian mass was second most common indication in this study. This is similar to the study by Obilahi-Abhulimen et al where ovarian mass was also second most common indication, though with a higher incidence than in this study.¹⁹

Additional procedure performed with the TAHs was salpingo-oophorectomy, either unilaterally or bilaterally. In this study, 57.5% of the women had bilateral salpingo-oophorectomy. This is similar to a study in Nguru where 62.1% of hysterectomised women also had bilateral saipingo-oophorectomy.¹¹

Bilateral ovariectomy was also commonly performed with hysterectomies generally in Germany, US and Portugal.^{4,1,7} The high rate of concomitant oophorectomy during hysterectomy could be explained by the peri-/post-menopausal status of most of our patients and the need to remove the ovaries prophylactically against malignancy in future.

Estimated blood loss was less than 500mls in 50.7% of the women while 5.7% lost more than 1100mls. Average estimated blood loss during surgery was 553.44mls which was close to the mean blood loss in Jos and Benin.^{10,8} Anaemia with a second day post-operative packed cell volume (PCV) of less than 30% was the most common complications seen in this study. This seems unexpected considering the

estimated average blood loss, however this is probably due to the fact that most of the patients were almost in anaemic state or frankly anaemic due to menorrhagia which they often presented with prior to surgery. Many of them were transfused before surgery to optimize their PCV to at least 30%. Most of the post-operative anaemia were mild or asymptomatic moderate anaemia and this reflected in the number of patients (44.7% of patient with post-operative anaemia) transfused in the post-operative period. Pyrexia was second most common complication. This is in contrast to many other studies where pyrexia or wound sepsis were reported as the most common complications.^{7,9,10,19} Pyrexia occurring 24 hours after operations were investigated and were mostly due to malaria infestation and wound sepsis. The overall crude morbidity rate was 60.8% which was far higher than the one reported by Anzaku in Jos.¹⁰ Majority of these morbidities were minor complications necessitating no intervention. There was no case of mortality.

The average number of days spent on admission was 9.7 days. The numbers of days ranged between 5 and 21days. Majority of the patients stayed for 5 to 9 days. This was comparable with the study in Kano and Jos.^{7,10} The average hospital stay of 9.7 days was higher than the average reported in Gombe North East Nigeria and Portugal.^{9,21} Patients who spent 10 days or more on admission were those who had bowel preparation prior to surgery or had blood transfusion due to anaemia from menorrhagia prior to surgery. Only very few of them were as a result of post-operative complications. The above was further supported by the average of 4.8 days which patients stayed on admission post-operatively. Most of the patients (71.26%) were discharged home by the fourth post-operative day. This was possible because most of our patients had skin closure with subcuticular absorbable suture which does not require removal. Those who spent seven days or more were those who had their skin repaired with non-absorbable sutures, operated on for malignancies or had post-operative complications

Conclusion

Total abdominal hysterectomy is a common gynaecological procedure and uterine fibroid is the most common indication. It offers total cure for many benign gynaecological disorders like uterine fibroids, premalignant cervical lesions, endometrial hyperplasia among others. Total abdominal hysterectomy is a safe gynaecological procedure and anaemia which was the most common complication in this study was sequel to the pre-morbid state of most of the patients rather than intra-operative blood loss. It is therefore important to health educate our women on need to present in the early stage of their disease in order to prevent complications before seeking treatment, during and following treatment. Proper optimization of the patients prior to surgery is also mandatory.

Acknowledgement: None.

Financial Support: None

Disclosure of Conflict of interest: None

Ethical consideration: Ethical approval was sought and obtained from the Hospital Research and Ethical Committee.

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