

## Original Article

## Vaginal hysterectomy at federal teaching hospital, Katsina: A five-year review

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### Abstract

**Background:** Even though the vaginal route is said to be the gynaecologist route of surgery, abdominal hysterectomy remains the predominant method of uterine removal in most parts of the world, despite the evidence of the safety of vaginal hysterectomy. The study aims to determine the prevalence, socio-demographic variables, indications as well as outcome of vaginal hysterectomy at Federal Teaching Hospital (FTH) Katsina, during the 5-year study period.

**Methodology:** A five-year retrospective study on vaginal hysterectomy was conducted in Federal Teaching Hospital, Katsina from 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2019.

**Results:** The rate of hysterectomies (Abdominal & Vaginal) was 21.6% of the total major gynaecological surgeries performed during the study period. Vaginal hysterectomy accounted for 6.7%. The mean age and parity of the patients were 56.06+/- 9.55 years and 10.17+/- 4.57 respectively. The commonest indication was Utero-vaginal Prolapse (88.9%) and 80.5% (29) of the patients had no complications. Most of the patients (94.4%) were discharged within 7 days of surgery and there was no fatality.

**Conclusion:** The rate of vaginal hysterectomy in our centre is low. Most of the patients were grand multiparous with the main indication being Uterovaginal prolapse. It is associated with favourable outcomes and very low complication rates.

**Keywords:** Vaginal Hysterectomy, FTH Katsina, 5-Year Review

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## Introduction

Hysterectomy is one of the most performed major gynaecological operations in the world<sup>[1]</sup>. It is the most frequently performed non-obstetric surgical operation in the United States and worldwide.<sup>[2]</sup> The route could be abdominal, vaginal, laparoscopic or a combination of the vaginal route and laparoscopy.<sup>[2,3]</sup>

Vaginal hysterectomy accounts for approximately 25% of hysterectomies in the United States of America, 40-50% in France, and Australia, 28% in Saudi Arabia and 10-23% from various reports in Nigeria<sup>[4]</sup>. Vaginal hysterectomy is more commonly performed in Black people than in whites.<sup>[5]</sup>

Vaginal hysterectomy is the removal of the uterus through the vaginal route and subsequently approximating the space previously occupied by the uterus with a shelf of tissue derived from the lateral attachments of the uterus.<sup>[5,6]</sup> The vaginal route is said to be the gynecologist route of surgery.<sup>[4,5]</sup> The route chosen for hysterectomy depends on the patient's clinical status and the surgeon's technical expertise.<sup>[3]</sup>

Abdominal hysterectomy remains the predominant method of uterine removal in most parts of the world despite the evidence-based advantages of Vaginal hysterectomy.<sup>[4,6]</sup> The vaginal component is almost entirely extraperitoneal with minimal manipulation of the bowel, hence less postoperative ileus.<sup>[7]</sup> Patients are able to ambulate earlier, recover faster and are associated with less incidence of thromboembolism.<sup>[7]</sup> Literature widely supports vaginal hysterectomy due to its shorter duration, reduced post-operative morbidity (including the absence of a painful abdominal scar), shorter hospital stay and invariably earlier return to work and normal activity with obvious cost savings.<sup>[2,7-10]</sup>

There is a vast difference between precept and practice. The ratio of abdominal to vaginal hysterectomy is approximately 4:1 in the United States and ranges from 4:1 to 9:1 in Nigeria.<sup>[4,8,10,11]</sup> It is recommended that this ratio should be reversed.<sup>[8]</sup>

The main indication for vaginal hysterectomy is for the treatment of vaginal prolapse.<sup>[8]</sup> It is the preferred approach when pelvic floor repair is to be performed concurrently, hence most procedures are vaginal hysterectomies and pelvic floor repair.<sup>[9,10]</sup> A study has suggested that the vaginal route may not be technically easy for indications other than prolapse in Nigeria and Sub-Saharan Africa due to pelvic adhesions resulting from sexually transmitted, post-abortal and puerperal infections.<sup>[8,11]</sup> Some of the contraindications to vaginal hysterectomy include uterine size greater than twelve weeks, lack of uterine mobility and presence of adnexal pathology.<sup>[3,8]</sup> Others are contracted pelvis, post vesicovaginal fistula repair, invasive cancer of the cervix, when there is a need to explore the upper abdomen and lack of surgical expertise.<sup>[3,8,12]</sup>

Since 1989 when Harry Reich reported the first laparoscopic-assisted vaginal hysterectomy (LAVH), many centres worldwide have described their experience.<sup>[7,8]</sup> Even though it is associated with less morbidity compared to abdominal hysterectomy, vaginal hysterectomy has been shown to be superior to LAVH with fewer short and long-term complications and is less costly.<sup>[13]</sup> A need for a hysterectomy and the absence of any contraindication to the vaginal route is a sufficient indication to perform a vaginal hysterectomy.<sup>[8]</sup> It is estimated that 84% of all hysterectomies could be performed vaginally.<sup>[3]</sup>

Complications such as injuries to the ureter and bladder can occur but are less compared to the abdominal route.<sup>[13,14]</sup> There is less risk of adhesions, intestinal obstruction, and hernia with vaginal hysterectomy.<sup>[5]</sup> Pelvic surgeries in general increase the risk of deep vein thrombosis.<sup>[13,15]</sup>

Grand multiparity is highly prevalent in our setting and is associated with pelvic organ prolapse, which is the leading indication for vaginal hysterectomy. This study therefore became justifiable to know the prevalence of Vaginal hysterectomy, its indications as well as complications associated with it in our setting.

## Methodology

This was a retrospective study of all the vaginal hysterectomies performed at Federal Teaching Hospital, Katsina between January 1<sup>st</sup>2015 and December 31<sup>st</sup>, 2019. Records of all gynaecological admissions and that for Vaginal hysterectomies were retrieved. Data on patients' socio-demographics and other variables such as Patients' age, parity, indication for surgeries, operative findings, nature of complications, length of post-operative admissions etcetera were extracted and analysed using SPSS Software version 16.0. The results were displayed using simple tables and charts. Frequency rates and percentages were calculated according to designated variables. Approval for the study was obtained from the Health Research Ethics Committee (HREC) of FTH, Katsina.

## Results

There were 132 hysterectomies out of a total of 611 major gynaecological surgeries performed during the study period. Ninety-one (68.9%) and 41(31.1%) of the cases were Abdominal and vaginal hysterectomies, respectively. Vaginal hysterectomy has a prevalence rate of 6.7% of all major gynaecological surgeries. The combined abdominal and vaginal hysterectomy rate was 21.6%. The ratio of abdominal to vaginal hysterectomy was approximately 2:1. Sufficient details for analysis were available for thirty-six out of the forty-one patients who had vaginal hysterectomy (87.8%).

**Table 1: Socio-demographic characteristics of the patients**

VARIABLE	NUMBER n = 36	PERCENTAGE (%)
<b>Age distribution (yrs.)</b>		
31 – 40	3	8.3
41 – 50	5	13.9
51 – 60	16	44.4
61 – 70	11	30.6
71 – 80	1	2.8
Total	36	100
<b>Parity distribution</b>		
1– 4	1	2.8
5 – 9	23	63.9
10 – 14	10	27.7
15 – 19	2	5.6
TOTAL	36	100

**Mean parity 10.17±4.57.**

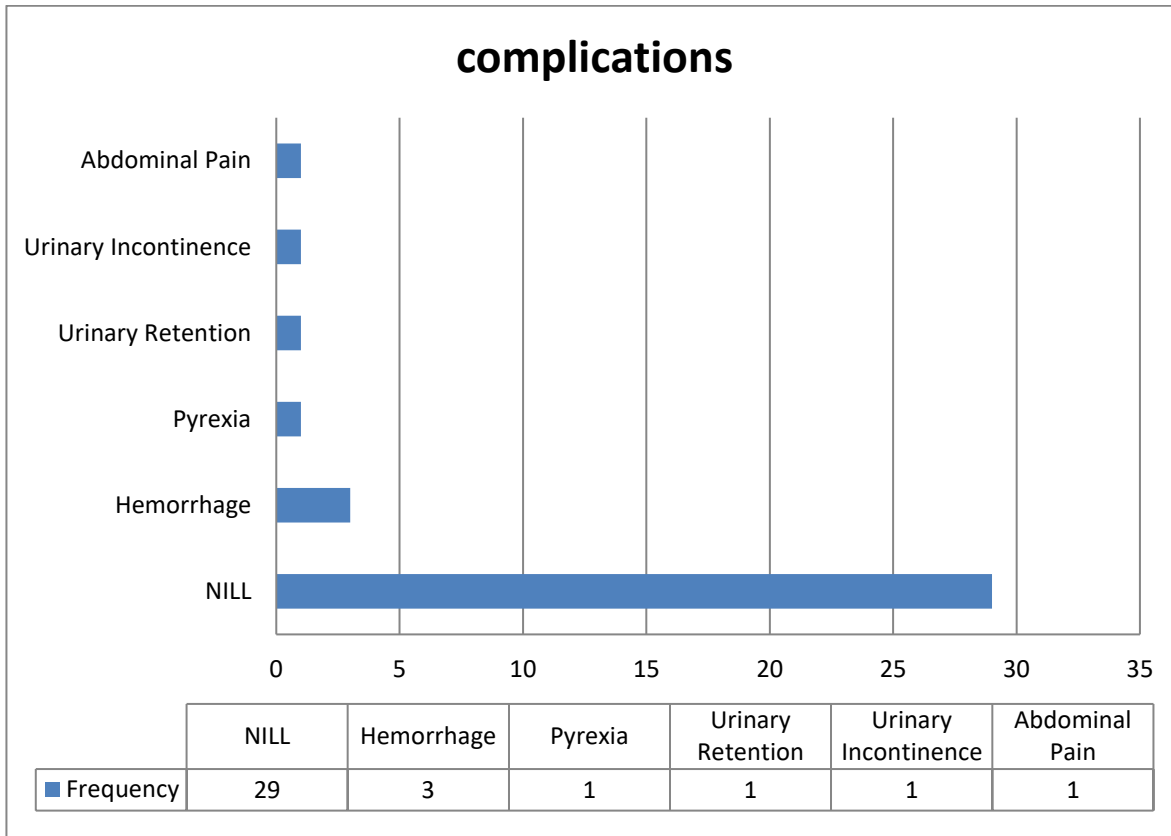
Most (16) of the patients (44.4%) were 51 – 60 years of age. There were only 3 (8.3%) patients within the 31 – 40years. The mean age for vaginal hysterectomy was  $56.06 \pm 9.55$  years. None of the patients was below 40years of age.

Thirty-five (97%) of the patients were grand-multiparous.

**Table 2: Indication and Type of Surgery Performed**

INDICATION	FREQUENCY (f)	PERCENTAGE (%)	TYPE OF SURGERY PERFORMED
Uterovaginal prolapse	32	88.9	VH + PFR
Uterine fibroid	1	2.8	LAVH
Endometrial Hyperplasia	1	2.8	VH
CIN III	2	5.5	VH
<b>TOTAL</b>	<b>36</b>	<b>100</b>	

Uterovaginal prolapse was the indication for vaginal hysterectomy with pelvic floor repair (VH+PFR) in 32 (88.9%) of patients. One (2.8%) had Laparoscopic-assisted vaginal hysterectomy (LAVH) on account of uterine fibroids. Pre-malignant lesions of the cervix and endometrial hyperplasia were indications for 5.5% and 2.8%, respectively.



**Figure 1: frequency chart showing complications among patients who had vaginal hysterectomy.**

The pattern of post-operative complications is shown in the frequency chart above. Complications were recorded among 7 of the 36 patients, with a complication rate of 22%. Three (8.3%) had a haemorrhage and a case (2.8%) each for urinary retention, urinary incontinence, abdominal pain, and post-operative pyrexia.

**Table 3: Duration of Hospitalization Post-Vaginal Hysterectomy**

Duration of Hospital stay	Frequency (f)	Percentage (%)
≤ 7 days (≤ 1 week)	34	94.4
8 – 14 days	2	5.6
<b>TOTAL</b>	<b>36</b>	<b>100</b>

Most (94.4%) of the patients were discharged within one week of the surgery. Only 2 (5.6%) stayed beyond a week.

## Discussion

The hysterectomy (vaginal and abdominal) rate of 21.6% is lower than the average of 33% obtained in many centres. Hysterectomies are performed in 1 in 5 women at some stage in their lives in the United States and some Western countries.<sup>[2,3,7]</sup> Lack of surgical skills, lack of knowledge on the problem as well as its surgical management, coupled with an aversion to the loss of womb as well as menstrual function (and child-bearing for younger patients) by some cultures may be responsible for this.<sup>[2,7]</sup>

The prevalence rate of 6.7% of vaginal hysterectomy is higher than 3% reported from Jos but lower than 8.4% in Niger Delta, 20.7% in Gombe, 19.6% in Urban Niger Delta and 14.7% in Istanbul and other industrialized countries.<sup>[3,16-20]</sup>

The mean age of 56.06±9.55 years for vaginal hysterectomy is in keeping with similar studies in Nigeria, the UK and Saudi Arabia (where most women (up to 25%) must have had a hysterectomy by the time they reach their mid-fifties).<sup>[2,3,17,18]</sup>

The mean parity of 10.17±4.57 agrees with findings from studies in other centres.<sup>[2,3,7,21-23]</sup> The high parity could be due to the high premium on childbearing in northern Nigeria.<sup>[2]</sup>

The main indication for vaginal hysterectomy was for Uterovaginal Prolapse and the commonest additional surgery was pelvic floor repair, in keeping with similar findings from other centres in Nigeria.<sup>[2,3,4,8,11,17,19,23,24]</sup>

The complication rate of 22% is similar to that reported from Jos, lower than findings from Delta state (31.6%) but higher than 17.9% reported from Enugu.<sup>[2,3,11]</sup> The absence of operative mortality, thus further confirming the relative safety of the vaginal route, is corroborated by similar studies both in developed and developing countries but is in variance with 4.3% mortality reported from Kano.<sup>[2-5,13,22,24]</sup>

Most (94.4%) of the patients were discharged within 7 days of operation. This is in keeping with studies from both developed and developing countries that associate Vaginal Hysterectomy with shorter hospital stays.<sup>[2-4,8,13,22,25]</sup>

## Conclusion

The rate of vaginal hysterectomy was low, and complications were few in our setting. Most of the patients were grand multiparous and uterovaginal prolapse was the commonest indication for the surgery.

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