

# Indications and Outcome of Gynaecological Hysterectomy at Aminu Kano Teaching Hospital, Kano: A 5-Year Review

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## Abstract

**Background:** Hysterectomy, is a common operation worldwide. It is a major surgery, which leads to significant morbidity and mortality, hence, there must be a justifiable indication before the procedure is undertaken. Symptomatic uterine fibroid and utero-vaginal prolapse are common indications in this environment. **Objectives:** To determine the prevalence, indications and outcome of hysterectomy at Aminu Kano Teaching Hospital, Kano. **Study Design:** A retrospective study of all the hysterectomies that were done in Aminu Kano Teaching Hospital, Kano between 1st of Jan 2009 and 31st of Dec 2013. **Result:** During the period of study, there were 3843 major gynaecological operations. Out of which hysterectomy was 196, giving hysterectomy rate of 5.1% of all major gynaecological operations. Hysterectomy was highest among patient aged 40 - 49 years accounting for 54.6% of cases and the commonest indication was uterine fibroid, constituting 66.4% of all hysterectomies. Total abdominal hysterectomy was the most frequently performed, accounting for 78.1% while, vaginal hysterectomy accounts for 20.9% of cases and sub-total hysterectomy was 1%. Hysterectomy was mostly complicated with post-operative pyrexia constituting 24% of all the complications while ureteric injury was the least, constituting 1%. There was no mortality recorded. Most of the patients who had hysterectomy were discharge in less than 10th post-operative day accounting for 91.3% of cases. However, 80.5% of patients who had vagina hysterectomy were discharge in less than 5th post-operative day. **Conclusion:** The prevalence of hysterectomy was 5.1%. Uterine fibroid was the commonest indication while post-operative pyrexia was the commonest complication found.

## Keywords

Prevalence, Indication, Hysterectomy, Outcome, AKTH

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## 1. Introduction

Hysterectomy is a major gynaecological operation for the removal of uterus with or without the adnexal structures. It is a common procedure in the United Kingdom, and United State of America [1].

In the United Kingdom, 20% of women undergo hysterectomy before the age of 60 years [2]. In the United State, about 600,000 hysterectomies are performed annually and about a third and a quarter of women will have hysterectomy during their life time and before menopause respectively [1] [3].

In developed countries, hysterectomy is accepted readily, the case is however very different in developing countries where there is strong aversion to hysterectomy for reason of fear of surgery, loss of femininity, fear of reincarnation without uterus, sexual rejection by spouses or because of their strong cultural beliefs or religious attachment to preservation of menstruation and childbearing [4].

Hysterectomy may be done through the vaginal or abdominal route. The abdominal hysterectomy may be total or subtotal. Total abdominal Hysterectomy involves removal of uterus and cervix through an abdominal incision but subtotal hysterectomy is the removal of uterus through abdominal incision while sparing the cervix [5]-[9]. Vaginal hysterectomy is the removal of the uterus and cervix through the vagina, while performing a vaginal hysterectomy with the aid of laparoscopy is called laparoscopically assisted vaginal hysterectomy (LAVH) [5]. Radical hysterectomy is extensive surgery that in addition to removal of uterus and cervix, might include removal of lymph nodes, loose areolar tissue near major blood vessels, upper vagina and omentum [5]-[9]. This is mainly done for malignant cases [5]-[9].

In the 1940, 95% of hysterectomies done in the United State of America were subtotal, but with more training, improved skill and desire to prevent cervical cancer, the removal of cervix at hysterectomy became a routine [10]. The incidence of cancer of the residual stump following subtotal hysterectomy is 0.3% [5] [8] [9]. Also the absence of uterine body fail to contain the growth of cervical stump cancer within the uterus and favors a more rapid and direct spread to bladder and at times the rectum [10]-[12]. The retained stump also serves as a plunger to form the apex of vaginal intussusception resulting in vault prolapse. In all cases where there is retained cervix, follow up exfoliative cytology is recommended [13].

However, some still emphasize the advantage of subtotal hysterectomy which include less mortality, reduced vaginal shortening and vault prolapse and increased sexual satisfaction [13]. But the pre-operative cervical smear cytology must be normal and subsequent follow up cervical smear should be guaranteed before subtotal hysterectomy will be advocated. In this part of the world where there is no organized cervical screening programs, total hysterectomy should be the aim except when it is technically difficult.

The vaginal procedure has been shown to be associated with less post-operative pain, less operative blood loss, less risk of trauma to the adjoining viscus, early ambulation, less hospital stay, less cost, and earlier return to normal activities [13]-[15]. Also there is less post-operative morbidity [13]-[15].

LAVH started in 1988, when the uterus was removed through the vaginal Vault using a Laparoscope. This has resulted in many hysterectomies that would otherwise have been done abdominal being done vaginally. Its advantage over total abdominal hysterectomy include less operative blood loss, less operative morbidity, shorter hospital stay and quicker return to normal activities [12]. LAVH have the same advantage as vaginal hysterectomy except there is longer operating time [13] [14]. However, the drawback in Nigeria include high cost of surgery, relative unavailability of equipment and very few gynecological surgeons have the skill, as well as greater incidence of pelvic adhesion and much bigger uterine fibroid. In view of the overwhelming argument in favor of vagina hysterectomy, the gynaecologist should consider it first, only resorting to abdominal approach when the former is contraindicated.

The commonest indication for hysterectomy in our environment remain uterine fibroid with or without menorrhagia which is similar to that in developed countries except that uterine fibroid is generally larger and patients usually present late [16]. Other indications include dysfunctional uterine bleeding, pelvic organ prolapse, adenomyosis, cervical polyp, premalignant lesion of uterus and cervix after completion of family size, endometrial cancer, cervical cancer and chronic pelvic pain [1].

Complication that may occur following hysterectomy include hemorrhage, infection and injury to adjoining structure such as ureters, bladder and bowel etc. [5] [7]-[9]. These complications could lead to severe morbidity and even mortality [5] [7]-[9].

Obstetrics hysterectomies done as emergency, mostly indicated by rupture of uterus and severe post-partum haemorrhage secondary to persistence uterine atony, are not part of this study.

A lot of studies have been done on hysterectomy but there has been none in this center. Therefore the purpose of this study is to determine the indication and outcome. It is hoped that the findings of this study will in future improve the management of patient that will require hysterectomy in our center.

## 2. Aims and Objectives

- To determine the prevalence and indications of hysterectomy in AKTH, Kano.
- To determine the outcome of hysterectomy in AKTH, Kano.

## 3. Materials and Method

It was a retrospective study of the hysterectomies done at Aminu Kano Teaching Hospital, Kano, Nigeria between 1st Jan 2009 and 31st Dec 2013. The patient's identification data were retrieved from gynaecological ward discharge record book and theater operation register. Their case notes were retrieved from medical Record department and analyzed for socio demographic characteristic, indications for surgery, type of hysterectomy, duration of hospital stay, post-operative morbidity and mortality. A post-operative temperature of 38°C or more on two consecutive days after the 1st day post-operative day was considered as pyrexia, a local erythema or suppuration was considered as wound Infection and a packed cell volume less than 30% was considered as anaemia.

The data was analyzed by simple percentage.

## 4. Result

During the period of study, there were 3843 major gynaecological operations. Out of which hysterectomy was 196, giving a hysterectomy rate of 5.1% of all major gynaecological operations.

One hundred and ninety six folders were retrieved and analyzed. The socio-demographic characteristics of the patients are shown in **Table 1**. The hysterectomy was highest among patients 40 - 49 years age group constituting 54.6%. It was commoner among higher parity than nulliparous. The commonest indication for hysterectomy was symptomatic uterine fibroid accounting for 62.3% of cases as in **Table 2** while the commonest type of hysterectomy was total abdominal hysterectomy constituting 78.2% of cases as in **Table 3**.

Furthermore, during the years under review, hysterectomy was mostly complicated with post-operative pyrexia constituting 24% of all complication while ureteric injury was the least, constituting 1% as shown in **Table 6**. There was no mortality recorded during the years under review.

Most of the patients who had hysterectomy were discharge less than 10th post-operative day accounting for 91.3%. However, 80.5% of patients who had vagina hysterectomy were discharge less than 5th post-operative day as shown in **Table 5**.

## 5. Discussion

The prevalence of hysterectomy in this study was 5.1%, this is by far lower than 40% reported by Joseph in Accra [17] and 8.5% in Ilorin [18]. This disparity may be due to the general aversion to hysterectomy in northern part of Nigeria where Kano is situated and possibly cost of surgery. Also most patient with cervical cancer also presents with advanced disease.

Hysterectomy is commonest among the age group 40 - 49 years which constituted 54.6% of the total hysterectomy performed during the years under review as in **Table 1**. This is similar to other studies [5] [18]-[21].

Hysterectomy was commonest among grandmultipara accounting for 61.2% and least among nullipara accounting for 5.1%. The indication for hysterectomy among nullipara were atypical endometrial hyperplasia, uncontrollable haemorrhage during attempt at myomectomy and uterine malignancy.

The commonest indication for hysterectomy in this study was uterine fibroid, accounting for 66.4% of the overall indications for hysterectomy as in **Table 2**. Similar findings were found in other studies [17] [18].

Total abdominal hysterectomy is the most frequently performed accounting for 78.2%. This also agree with findings of various studies. [18]-[21] This is because subtotal hysterectomy is not favored except at caesarean hysterectomy, for the fear of cancer of the cervical stump and vaginal hysterectomy are mainly done for utero vaginal prolapse in our center. The ratio of abdominal hysterectomy to vaginal hysterectomy is 4:1 as shown in **Table 3** which is similar to other studies. [20] [22] However lower than Ibadan with ratio of 9:1. [23] Subtotal

**Table 1.** Socio-demographic of study patients. (a) Age distribution of patients who had hysterectomy; (b) Parity of patients who had hysterectomy.

(a)		
Age	Number	%
<30	0	0
30 - 39	33	16.8
40 - 49	107	54.6
50 - 59	29	14.8
60 - 69	18	9.2
≥70	9	4.6
Total	196	100

  

(b)		
Parity	Number	%
0	10	5.1
1 - 4	66	33.7
≥5	120	61.2
Total	196	100

**Table 2.** Indications for hysterectomy.

Indication	Number	%
Symptomatic Uterine fibroid	112	62.3
Utero vaginal prolapse	32	16.3
CIN	10	5.1
Endometrial hyperplasia	12	6.1
Ovarian tumour	8	4.1
Uterine malignancy	8	4.1
Cervical malignancy	4	2.0
Total	196	100

**Table 3.** Type of hysterectomy.

Type	Number	%
TAH	153	78.1
VH	41	20.9
STAH	2	1.0
Total	196	100

hysterectomy was done for two patients (5.1%) as the need for hysterectomy became necessary intra-operatively as a result of uncontrollable haemorrhage during attempt at myomectomy. This may be due to the fact that, it was the fastest and easiest at that moment.

Forty two hysterectomies accounting for 21.4% of cases were done by Senior Registrars under consultant supervision while 78.6% were performed by consultants.

The patients who had hysterectomy in the study were discharge from hospital less than 10th post-operative day accounting for 91.3% of cases The figure is lower than figure reported in United State, [1] but comparable with that reported by Olumuyiwa *et al.* [19] and Bukar *et al.* [20].

Variation in the causes of post-operative pyrexia may be responsible for this disparity. Kano like many other parts of Nigeria and Africa as a whole is a malaria endemic zone, so very frequently malaria complicates post-operatives period and could prolong post-operative hospital stay. Abdominal sutures are routinely removed by the 7th post-operative day for mid line sub-umbilical incision in our unit. This also could had resulted in an undue prolonged hospital day.

However 80.5% of patients who had vaginal hysterectomy were discharge less than 5th post-operative day as in **Table 4**, **Table 5**. Similar findings have been reported [20].

Post-operative pyrexia (24%) and wound infection (11.2%) were the commonest post-operative complication in this study as shown in **Table 6**, **Table 7**. This agrees with the findings of many other studies carried out in different centre [19]-[22]. Malaria and the surgical technique could have been responsible for the high post-operative pyrexia and wound infection respectively. There were two cases of ureteric injury which was managed successfully. This ureteric injury had also been documented in several studies [24]-[26]. There was no mortality associated with hysterectomy during the years under review.

**Table 4.** Cadre of surgeons that performed hysterectomy.

Cadre	Number	%
Senior Registrar	42	21.4
Consultant	152	78.6
Total	196	100

**Table 5.** Length of hospital stay of patients who had hysterectomy.

No. of days	Number	%
<5	33	16.8
5 - 9	146	74.5
10 - 14	13	6.7
>14	4	2.0
Total	196	100

**Table 6.** Comparison between length of hospital stay and type of hysterectomy.

No. of days	VH	TAH	STAH
<5	33	0	0
5 - 9	8	132	2
10 - 14	0	13	0
>14	0	8	0
Total	41	153	2

**Table 7.** Post-operative complication among patient who had hysterectomy.

Complication	Number	%
Pyrexia	47	24.0
Wound infection	22	11.2
Haemorrhage	6	3.0
Bladder injury	5	2.6
Bowel injury	0	0
Ureteric injury	2	1.0
Total	82	41.8

## 6. Conclusions

Hysterectomy is a commonly performed procedure worldwide. However, it is not a procedure that is readily accepted by our patients as a result of the premium attached to large family size and women who had hysterectomy are generally stigmatized. Also, the high prevalence of polygamy and high divorce rate are other factors that affect acceptance rate of hysterectomy. This explains the low hysterectomy rate of 5.1% obtained in our centre.

Post-operative morbidity as well as duration of hospital stay was less and convalescence was smoother among patients who had vaginal hysterectomy. Hence vaginal hysterectomy should be preferred over abdominal hysterectomy where it is not contraindicated due to its advantages

Furthermore, LAVH is a form of minimal access surgery that have the same advantages as vaginal hysterectomy and in addition faster recovery. However this procedure is not done in our centre because of non-availability of the expertise and the necessary equipment. More so, most of the procedures were done for large uterine fibroid of more than 12 weeks size.

In view of the high rate of post-operative pyrexia and wound infection recorded in this study, prophylactic peri-operative antibiotics is recommended over post-operative antibiotic use which will in turn reduce length of hospital stay including overall cost.

It is hoped that other post-operative morbidities will be reduced by providing LAVH and this can be achieved through training of more gynaecologist in minimal in minimal access gynaecological surgeries as well as provision of necessary equipment. This is a treatment modality that yet unexplored in our centre.

Other studies in the future should focus on impact of educational status of patient on choice of hysterectomy, prevalence of vault prolapsed and impact of hysterectomy on sexual life.

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