

# Hysterectomies pattern at a tertiary healthcare center, northern Nigeria

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## ABSTRACT

**Background:** The uterus is an important female genital organ for menstrual and reproductive functions. However, there are various gynecologic and obstetric indications for carrying out hysterectomy.

**Objectives:** To determine the indications and the patterns of hysterectomies done at Ahmadu Bello University Teaching Hospital, Zaria Nigeria.

**Materials and Methods:** 5-year retrospective descriptive study on patients who had hysterectomy done from 2011 to 2015.

**Results:** The age range of the patients was 2–70 years with a mean of  $48.6 \pm 8.8$  years. Hysterectomies constituted 19.3% of total gynecology surgeries done during the same period. Of these total abdominal hysterectomy 144 (87.8%) was the most common, next was vaginal hysterectomy with pelvic floor repair 13 (7.9%), and then subtotal hysterectomy was 7 (4.3%). The most common indication for total abdominal hysterectomy was multiple uterine fibroids, a benign uterine tumor.

**Conclusion:** Hysterectomy is a common gynecological surgery which may be used to treat benign uterine pathologies, especially when there is no more desire for conception. It could also be lifesaving in uncontrollable postpartum hemorrhage as well as malignant pelvic organ pathologies, especially in early stages.

**Key words:** Gynecological surgery; hysterectomy, pattern; uterine fibroids.

## Introduction

The uterus is an important female genital organ for menstrual and reproductive functions. However, there are indications for carrying out hysterectomy on a patient which must be clear and communicated to the patient preoperatively for appropriate consent. Commonly factors considered include cervical, uterine, and ovarian pathologies which may be benign or malignant. Also of important consideration is the age of the patient, parity, and completion of family size. Hysterectomy could also be deployed as a life-saving procedure in the treatment of postpartum hemorrhage, ruptured uterus, and complications of unsafe abortion, thereby playing a role in the reduction of maternal mortality especially in the developing countries.<sup>[1,2]</sup> Hysterectomy may involve removal of the tubes

and ovaries, or be more extensive and radical especially in malignant indications or may be supracervical also known as subtotal. In the cases of subtotal hysterectomies, patients would be followed up with periodic cervical cancer screening because unlike those who undergo total hysterectomies, they are still susceptible to cervical cancer.

The approach to hysterectomy may be abdominal, vaginal, or laparoscopic and this is mostly determined by the patient's clinical presentation and surgical skills. In Nigeria, the ratio

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of vaginal hysterectomy to abdominal hysterectomy varies from 1:4 to 1:9 which like in most developing countries is lower than that observed in developed nations.<sup>[3-5]</sup>

This study sought to assess the clinicopathological indications and pattern of hysterectomies done at Ahmadu Bello University Teaching hospital Zaria.

## Materials and Methods

Theatre and histopathology records of patients who had hysterectomy from 2011 to 2015 were reviewed and the data generated were subjected to analysis using SPSS version 20 (IBM, Armonk, NY, United States of America). Hysterectomies done without histology report were excluded.

## Results

The total gynecological surgeries done within the study period were 850 with hysterectomies constituting 19.3%. Total abdominal hysterectomy 144 (87.7%) was the most common hysterectomy variant, next was vaginal hysterectomy with pelvic floor repair 13 (7.9%) and then subtotal hysterectomy was 7 (4.3%) [Table 1].

A total of 6 (3.7%) were done on emergency basis. Three cases each for obstetrics and gynecology emergencies, respectively. The age range of the patients was 26–70 years with a mean of 48.6 ± 8.8 years.

Benign indications were the most 114 (79.7%) while malignant was 29 (20.3%). From neoplasia point of view neoplastic indications for hysterectomy was 143 (87.2%), while nonneoplastic was 21 (12.8%).

The commonest indication for total abdominal hysterectomy was symptomatic multiple uterine fibroids 71 (43.3%),

a benign uterine tumor. These include cervical fibroids [Table 2a].

Indication for vaginal hysterectomies and pelvic floor repair was uterovaginal prolapse 12 (92.3%) except for one (7.7%) with chronic uterine inversion [Table 2b].

The vast majority of the hysterectomies 159 (96.9%) had a Consultant as the lead surgeon, while the rest 5 (3.1%) had a Senior registrar as the lead surgeon. All the vaginal hysterectomies and pelvic floor repair were done by Consultants with the exception of one (7.7%) done by a Senior registrar.

## Discussion

Hysterectomy is one of the common gynecological surgeries at ABUTH Zaria. A total of 164 hysterectomies were done within the 5-year study period (2011–2015) comparable with 317 found by Samaila *et al.* done over 10 years (1995–2005) in the same center.<sup>[6]</sup> It constitutes 19.3% of total gynecology surgery done during the study period. This is higher than 16.4% found in a similar study in NAUTH Nnewi but much lower than 5.1% found at AKTH Kano.<sup>[3,7]</sup>

The commonest indication for total abdominal hysterectomy was symptomatic multiple uterine fibroids 71 (43.3%) similar to 45.4% found in Ile-Ife southwest Nigeria, slightly higher than 39.1% found in Gombe northeast Nigeria and lower than 66.4% in Kano, and 53.3% found in a study at a private specialist hospital in southeast Nigeria. This may be due to delayed fertility as a result of increasing uptake of higher education among women in northern Nigeria cities notably Zaria which has a number of tertiary institutions. Malignant indications were 29 (20.3%) greater than 12.9% found in Ile-Ife.<sup>[7-10]</sup>

The age range of the patients was 2–70 years with a mean of 48.6 ± 8.8 years which is slightly higher than 44.6 years found in earlier study at the same centre and 45.7 years found in Gombe but much lower than 56.6 years found in Ibadan, southwest Nigeria and 65.2 years in Nnewi, southeast Nigeria. The mean age found in a study at a private specialist hospital in Nnewi Anambra state southeast Nigeria was 45.5 years.<sup>[3,6,9-11]</sup>

Age and completion of family size are strong determinants for consenting to hysterectomy; however, these considerations may not hold in those that had emergency hysterectomy (mean age 33.3 ± 5.5 years) and those who had malignant indications for hysterectomy. It is worthy to note that most of the indications for emergency hysterectomy in obstetrics

**Table 1: Pattern of hysterectomies done**

Hysterectomies	Frequency
Total abdominal hysterectomy (TAH)	144 (87.7%)
TAH	23
TAH + BSO	100
TAH + LSO	6
TAH + RSO	11
TAH + BSO + Omentectomy	4
Subtotal abdominal hysterectomy	7 (4.3%)
SUB-TAH	3
SUB-TAH + BSO	2
SUB-TAH + LSO	2
Vaginal hysterectomy + PFR	13 (7.9%)
Total	164 (100%)

125 (76.2%) were associated with salpingoophorectomy. BSO, Bilateral salpingoophorectomy; RSO, Right SO; LSO, Left SO; PFR, Pelvic floor repair

**Table 2a: Indications for hysterectomy**

Benign		Malignant		Total
Uterine	74	Uterine	14	88 (53.7%)
Fibroids	67 (76.1%)	Endometrial ca	13 (14.8%)	
Endometrial hyperplasia	4 (4.6%)	Leiomyosarcoma	1 (1.1%)	
Adenomyosis	3 (3.4%)			
Cervical	21	Cervical	4	25 (15.2%)
Fibroids	4 (16%)	Squamous cell CA LCNK	2 (8%)	
Dysplasia	17 (68%)	Carcinosarcome	1 (4%)	
		Adenocarcinoma	1 (4%)	
Ovarian	17	Ovarian	11	28 (17.1%)
Serous cystadenoma	6 (21.4%)	Papillary serous cystadenocarcinoma	7 (25.0%)	
Mucinous cystadenoma	1 (3.6%)	Granulosa cell tumor	3 (10.7%)	
Mature cystic teratoma	7 (25.0%)	Adenocarcinoma	1 (3.6%)	
Thecoma fibrosis	1 (3.6%)			
Hemorrhagic cyst	1 (3.6%)			
Granulosa cyst	1 (3.6%)			
Other indications	23 (14%)			23 (14%)
Total	135 (82.3%)		29 (17.7%)	164 (100%)

**Table 2b: Other indications for hysterectomy**

Gynecological	Obstetrics	Total
GTD	Uterine rupture	1 (4.4%)
Septic abortion + Perforation	Abruption placentae + Couverlaire	1 (4.4%)
Septic abortion + Gangrene	Placenta precreta	1 (4.4%)
Chronic pelvic pain		
Chronic uterine inversion		
Uterine prolapse		
Total		3 (1.8%)
		23 (14%)

\*All Septic abortions, Uterine rupture, Abruptio placentae and Placenta precreta were done on emergency basis constituting 3.7% of all Hysterectomies. \*Uterine prolapse and Chronic uterine inversion were the only indication for Vaginal hysterectomy and pelvic floor repair. \*The Septic abortion + Perforation as well as Chronic uterine inversion had devitalized uterine tissue

have advanced maternal age as risk factors, viz ruptured uterus.

Emergency hysterectomies were 6 (3.7%) lower than what Onwuhafua *et al.* found in five (10.6%) in and audit of hysterectomies in a group private clinics in Kaduna [Table 2b].<sup>[1]</sup>

Vaginal hysterectomy was 7.9% of all hysterectomies done which is much lower than 20.9% in Kano and 20.7% found in northeast Nigeria compared to 10% at JUTH Jos and 21% at NAUTH Nnewi.<sup>[3,12]</sup> High fertility rate found in this regions is a risk factor for genital prolapse a foremost indication for vaginal hysterectomy in developing countries.<sup>[5,7,9]</sup>

Indication for vaginal hysterectomy was essentially genital prolapse (92.3%) in this study compared with a study in Ibadan where genital prolapse constituted 81.8%. There may be a need to expand the indication for vaginal hysterectomy in our hospitals beyond genital prolapse in view of its advantages like absence of abdominal scar, less postoperative morbidity, short hospital stay, and therefore reduced cost.<sup>[3,11]</sup>

Unilateral or bilateral salpingoophorectomy either as treatment or prophylaxis for ovarian cancer was done in up to 125 (76.2%) comparable to 79% found in the Gombe study. This is so because though ovarian function in most women ends on the average of 50 years of age and the significant drop in estrogen has impact on the their wellbeing with respect to the cardiovascular system, central nervous system, bone mass index, there is no organized screening program for cancers including ovarian cancer; hence, low-resource settings like ours most cancer cases present in advanced stages. Ignorance may also be a contributory factor to such late presentation.<sup>[9,13,14]</sup>

Considerations for some of the premenopausal patients who had unilateral salpingoophorectomy either right or left was to keep an ovary to provide estrogen thereby preventing surgical menopause and the menace of its symptoms and signs but such considerations are for benign indications.

Majority of the hysterectomies were performed by the consultant cadre with only five (3.1%) done by Senior

**Table 3: Anesthesia by hysterectomy approach**

Anesthesia	Hysterectomy		Total
	Abdominal	Vaginal + PFR	
GA	105	9	114 (69.5%)
Spinal	25	3	28 (17.1%)
Epidural	1	-	1 (0.6%)
Combined spiral + GA*	12	1	13 (7.9%)
Combined spiral + Epidural	7	-	7 (4.3%)
Combined spiral + Epidural + GA*	1	-	1 (0.6%)
Total	151 (92.1%)	13 (7.9%)	164 (100%)

GA, general anesthesia. \*Addition of GA was as a result of failed regional anesthesia or surgeries that got prolonged than anticipated

registrars. In as much as this pattern contributes to quality assurance of the surgeries, there is the need for more residents to be exposed under supervision to the surgeries in order to build better capacity before being certified Consultants.

Less patients benefited from regional anesthesia 50 (30.5%) despite its benefits of relatively less complications, earlier return of bowel functions, shorter hospital stay, and so on [Table 3].

Worthy of note is that of the 13 patients who had vaginal hysterectomy nine (69.2%) had general anesthesia (GA), three (23.1%) spinal, and one (7.7%) had combined GA and spinal compared to a vaginal hysterectomy study in Jos study which revealed spinal anesthesia administered to 30 (66%); GA to 13 (30%), while 2 (4%) had their spinal anesthesia converted to GA.<sup>[4]</sup>

The 13 (7.9%) patients who had combined spinal and general anesthesia as well as 1 (0.6%) who had combined spinal, epidural, and GA were as a result of failed regional anesthesia or surgeries that got prolonged than anticipated. Ordinarily combined spinal and epidural anesthesia have complimentary advantages like early onset of action of spinal anesthesia, lower doses of anesthetic agents as well as postoperatively pain management from epidural top-ups.<sup>[15]</sup>

### Conclusion

Hysterectomy is a common gynecological surgery which may be used to treat benign upper female genital organ pathologies especially when there is no more desire for conception. It is also useful in malignant pelvic organ pathologies especially in early stages or following neoadjuvant chemotherapy. It could

also be lifesaving in uncontrollable postpartum hemorrhage. Residents and Specialists should be trained and retrained respectively on the benefits of vaginal hysterectomy as an option for nonprolapse indications.

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### Conflicts of interest

There are no conflicts of interest.

### References

1. Onwuhafua PI, Oguntayo AO, Adesiyun AG, Obineche I, Akuse JT. Audit of hysterectomies in a group of private hospitals in Kaduna City, northern Nigeria. *Trop J Obstet Gynaecol* 2005;22:16-20.
2. Adesiyun AG, Zayyan MS, Ameh CA. Ruptured Uterus in a Tropical Teaching Hospital: Choice of Surgical Treatment versus Maternal Outcome. *J Turkish-German Gynecol Assoc* 2008;9:144-8.
3. Obiechina NJ, Ugboaja JO, Onyegbule OA, Eleje GU. Vaginal hysterectomy in a Nigerian tertiary health facility. *Niger J Med* 2010;19:324-5.
4. Daru PH, Pam IC, Shambe I, Magaji A, Nyango D, Karshima J. Vaginal Hysterectomy at Jos University Teaching Hospital, Jos, Nigeria. *J West Afr Coll Surg* 2011;1:26-36.
5. Okeke TC, Ikeako LC, Ezenyeaku CCT. Underexposure of Residents in Training in the Art of Vaginal Hysterectomy in Nigeria. *Am J Clin Med Res* 2014;2:22-5.
6. Samaila MOA, Adesiyun AG, Agunbiade OA, Mohammed-Duro A. Clinico-pathological assessment of Hysterectomies in Zaria. *Eur J Med* 2009;6:150-3.
7. Ahmed ZD, Taiwo N. Indications and Outcome of Gynaecological Hysterectomy at Aminu Kano Teaching Hospital, Kano: A 5-Year Review. *Open J Obstet Gynecol* 2015;5:298-304.
8. Orji EO, Ndububa VI, Ajenifuja KO. Elective Hysterectomy in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife. *Sahel Med J* 2002;5:125-8.
9. Bukar M, Audu BM, Yahaya UR. Hysterectomy for benign gynaecological conditions at Gombe, north eastern Nigeria. *Niger Med J* 2010;1:35-8.
10. Okafor CI, Okanwa U, Nwankwo M, Ezeigwe CO. A Review of Gynaecological Hysterectomies in a Private Specialist Hospital in Nigeria. *Orient J Med* 2012;24:3-4.
11. Bello FA, Olayemi O, Odukogbe AA. An audit of vaginal hysterectomies at the University College Hospital, Ibadan. *Niger J Med* 2011;20:426-31.
12. Ocheke AN, Ekwempu CC, Musa J. Underutilization of vaginal hysterectomy and its impact on residency training. *West Afr J Med* 2009;28:323-6.
13. Oguntayo AO, Zayyan MS, Koledade AK, Adewuyi SA. A pictorial Overview of Gynaecological Cancers in Northern Nigeria. *Niger Postgrad Med J* 2008;15:15.
14. Broekmans FJ, Soules MR, Fauser BC. Ovarian aging: Mechanisms and Clinical consequences. *Endocr Rev* 2009;30:465-93.
15. Malenkovic V, Zoric S, Randelovic T. Advantage of Combined spinal, Epidural and General Anaesthesia in comparison to General Anaesthesia in abdominal surgery. *Srp Arh Celok Lek* 2003;131:232-7.