



■ Original Research Article

An Audit of Gynecological Surgeries at the Modibbo Adama University Teaching Hospital, Yola, Adamawa State, Northeastern Nigeria.

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ABSTRACT

Background: The audit of surgeries in gynecological practice is essential for maintaining high standards of patient care, improving clinical outcomes, and fostering a culture of continuous quality improvement within the healthcare system. The study was aimed at determining the rate of all gynecological surgeries performed, the common gynecological surgeries and their indications within the period under review. **Materials and Methods:** This was a 5-year retrospective observational study of 587 gynecological surgeries performed between 1st January, 2018 and 31st December, 2022. Patients with complete relevant information in the registers were included in the audit and those with incomplete data were excluded. Data was analysed using IBM Statistical software SPSS package version 23.0 for frequencies and percentages and results were presented by simple statistical tables. **Results:** A total of 10,597 patients were gynecological attendees, out of which 587 patients had gynaecological surgeries performed, giving an institutional gynecological surgery rate of 5.5%, within the period under review. The most common gynecological surgery performed in our facility was hysterectomy (38.3%). The most common indication for the surgery was uterine fibroid (26.8%) and the route commonly used was the abdominal route (62.2%). General anaesthesia was given in about (68.7%) of cases. **Conclusion:** It is recommended to increase the frequency of audits for the services provided by the department. This can aid in pinpointing training and service gaps, thereby enhancing the overall quality and safety of healthcare delivery. Regular audits play a pivotal role in upholding and reinforcing the governance framework by overseeing and enhancing clinical practices.

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INTRODUCTION

Surgical audit is a systematic, critical analysis of the quality and outcomes of surgical care, including the

structures, processes, and results of surgical services. It involves the evaluation of surgical performance against established standards, guidelines, or benchmarks, with

the aim of identifying areas for improvement in patient care, safety, and overall surgical practice¹.

Gynecological operations including hysterectomy, laparoscopies, and manual vacuum aspiration (MVA), are thus the commonest procedures in medical practice². Gynecological procedures are performed on the female reproductive system in nonpregnant women. They are performed for emergency or elective purposes². Emergency procedures are indicated for ruptured ectopic pregnancy and Bartholin's abscesses amongst others, while elective ones can be performed for genital prolapse, obstetric fistulae, or even cancerous conditions³.

The common gynecological procedures reported in Nigerian literatures include myomectomy salpingectomy, hysterectomy and laparoscopy³⁻⁶. They are performed for various indications, as reported from various studies. In Abuja and Kano, Nigeria, the major indication for laparoscopy was infertility^{3,7}.

Reviewing surgical procedures through audits aids in recognizing and mitigating potential risks and complications associated with gynecological processes, offering valuable insights into the quality of care provided. Surgical audits play a vital role in clinical governance, and constitute an ongoing process aiming at enhancing healthcare services for optimal patient outcomes. Continuous learning and skill refinement contribute to advancing surgical techniques and ultimately improving patient results. Comparing surgical outcomes to national or international benchmarks enables gynecologists to evaluate their performance against established standards. Audit data serves as a valuable resource for research, facilitating the identification of trends, patterns, and factors influencing surgical outcomes. Routine scrutiny of surgical practices by healthcare providers demonstrates accountability and transparency, consequently minimizing the risk of legal issues. Furthermore, surgical audits contribute to comprehensive documentation and record-keeping, ensuring the availability of accurate and detailed information for each surgery. The assessment and enhancement of the quality of gynecological surgeries have a positive impact on patient satisfaction. This study was aimed at determining the rate of all gynecological surgeries performed, the common gynecological surgeries and their indications within the period under review.

METHODOLOGY

This was a retrospective study of all gynaecological surgeries performed in the Department of Obstetrics and Gynecology in Modibbo Adama University Teaching Yola, Adamawa state, Northeastern, Nigeria, from January 2018 to December 2022. The records were

obtained from the theatre operation register. The following parameters were analysed; Total number of surgeries, the indication for the surgery, the type of surgery, age of the women and the type of anaesthesia used. Ethical approval was obtained from research and ethics committee of the hospital. Patients with complete relevant information in the registers were included in the audit and those with incomplete data were excluded. The total number of all gynecological attendees during the study period was also obtained from the medical records department. Data was analysed using IBM Statistical software SPSS package version 23.0 for frequencies and percentages and results were presented by simple statistical tables.

RESULTS

A total of 10,597 patients were gynecological attendees, out of which 587 patients had gynecological surgeries performed, giving an institutional gynecological procedure rate of 5.5% within the period under review. About 33 different types of gynecological surgeries were done, as presented in Table 1. Two hundred and twenty-five (38.3%) had hysterectomies, 157 myomectomies (26.8%), 48 cervical cerclage insertion (8.2%), 67 had examination under anaesthesia and biopsy (11.4%), 17 exploratory laparotomies (2.9%), 23 exploratory laparotomies and total salpingectomy (2.9%), 24 suction evacuation (4.1%) and 26 other major, intermediate and minor surgeries. Table: 1

Table 1: Frequency Distributions of All Gynecological Surgeries

Surgery	Frequency	%
Hysterectomy	225	38.3
Cervical cerclage insertion	48	8.2
Exploratory laparotomy	17	2.9
Suction evacuation	24	4.1
Myomectomy	157	26.8
Examination under anaesthesia and biopsy	67	11.4
Exploratory laparotomy and salpingectomy	23	3.9
Others	26	4.4
Total	587	100

The mean age of the women was 40.6 years and the minimum age was 4 years while the maximum age was 82 years. Majority of the gynecological surgeries (339) were among the 27–48year age group (57.7%), whilst the least were among the less than 5 and greater than 82year age group (0.2%). The peak age-specific distribution of number of gynecological surgeries of 30.3% was among the 27–37year age group. Table: 2.

The abdominal route was used in 365 (62.2%) while the vaginal route was utilized in 222 (37.8%) of cases.

Table 2: Age-Specific Distribution of Number of Gynecological Surgeries

AGE GROUP	FREQUENCY	%
<5	1	0.2
5-15	5	0.9
16-26	81	13.8
27-37	178	30.3
38-48	161	27.4
49-59	83	14.1
60-70	56	9.5
71-81	21	3.6
>82	1	0.2
TOTAL	587	100

Table 3: Indications for the Commonest Gynecological Surgeries

INDICATION	FREQUENCY	%
Uterine fibroid	157	26.7
Suspected cervical cancer	51	8.7
Utero vaginal prolapse	40	6.8
Endometrial neoplasia	36	6.1
Ovarian neoplasia	33	5.6
Hydatidiform mole	24	4.1
Gestational trophoblastic disease	6	1.0
Cervical insufficiency	48	8.2
Ectopic pregnancy	33	5.6
Vesico-vaginal fistula	23	3.9
Perineal tear	15	2.6
Uterine synechia	15	2.6
Transverse vaginal septum	7	1.2
Uterine inversion	5	0.9
Others	94	16.0
Total	587	100

Uterine Fibroid was the indication for the surgery in 157 (26.8%), suspected cervical cancer in 51(8.7%), pelvic floor prolapses in 40 (6.8%), endometrial neoplasia in 36 (6.1%), in 33 (5.6%); ovarian neoplasia, hydatidiform mole and gestational trophoblastic neoplasia in 24 (4.1%) and 6 (1.1%) respectively and in 45 cases were done for other reasons. Table: 3

Majority of the cases 403 (68.7%) had general anaesthesia given while 184 (31.3%) had regional anaesthesia.

DISCUSSION

The present study reports a gynecological surgery rate of 5.5% within the period under review which is, however, lower than the rates of 9.8% and 28.5% reported in previous studies conducted in Nigeria.¹⁻³ This may occur due to limitations in the availability of many skilled specialized staff, affecting the capacity for surgical procedures.

Common surgeries carried out in our facility include hysterectomy, myomectomy, examination under anaesthesia and biopsy, cervical cerclage insertion, suction evacuation and others. While less frequent surgeries outlined in our audit include excision of transverse vaginal septum, cauterization for vulval warts, cruciate incision for imperforate hymen and marsupialization, all of which are done for very rare conditions. The primary indications for surgeries in our study align with those reported in other studies.^{2,4-9}

In this audit, one third of the surgeries were hysterectomies, making it the most common surgery performed in our department. This prevalence surpasses that observed in other studies conducted for benign gynecological conditions in Kano and Gombe.¹⁰⁻¹⁴ This finding aligns with a study in Pakistan, where hysterectomy accounted for two thirds of total gynecological surgeries in their facility.¹⁵ In our study, a majority of hysterectomies were conducted abdominally, while the vaginal route was utilized in 37.8% of cases, a trend similar to a study in Anambra.¹⁶

The average age of women undergoing these procedures was 40.6 years, with a minimum age of 4 years and a maximum of 82 years. Gynecological surgeries typically target women of childbearing age, given that many indications are related to this demographic. The majority of these procedures were performed in the 27–48 year age group, while the least common were in the less than 5 and greater than 82-year age group (0.2%). The age group of 27–37 years has the highest proportion of gynecological surgeries, accounting for nearly one-third of the total, which was similarly observed in Kano.² Gynecological surgeries are common in reproductive-age individuals due to prevalent medical conditions associated with this stage of life. The frequency of these surgeries underscores the importance of addressing reproductive health for the well-being of individuals during their childbearing years.

Common indications for gynaecological surgeries identified in this audit were uterine fibroids for myomectomy and hysterectomy all shown in table 3. This finding diverges from other studies where uterovaginal prolapse (47.3%), followed by uterine fibroids (33.3%), emerged as the leading indications for hysterectomy.¹⁷ The documented factors contributing to lower hysterectomy rates in developing countries encompass concerns about surgery, the potential

cessation of menstruation in premenopausal individuals, and cultural, religious, and social beliefs/misconceptions. These misconceptions include fears such as loss of sex drive, femininity, and potential sexual rejection by a spouse and other cultural beliefs, which contributes to the relative unacceptability of hysterectomy among women in our setting.¹⁸⁻¹⁹ Conversely, higher rates of hysterectomy in developed countries can be attributed to factors such as smaller family sizes, weaker cultural ties, elevated literacy levels, improved health-seeking behaviors, and early detection and treatment of premalignant gynecological conditions, among other reasons.^{18,20}

CONCLUSION

This study provided a comprehensive documentation of the landscape of gynecological surgeries carried out at the Department of Obstetrics and Gynaecology in Modibbo Adama University Teaching Hospital, situated in Yola, Adamawa State, North Eastern Nigeria. This comprehensive analysis contributes valuable insights into the surgical view of gynecological interventions in this particular healthcare setting.

Limitation and Recommendation:

One limitation of this study lies in its retrospective nature, which could introduce challenges related to data storage and retrieval. Additionally, the study is constrained by the absence of an audit on the outcomes of the gynecological surgeries investigated. It is recommended to enhance the data storage method through the adoption of a computer-assisted record system. Furthermore, advocating for a more frequent audit of the department's services is advised, as this could effectively pinpoint gaps in training and service delivery. This approach aims to improve versatility and competence. Ultimately, individual audits may prove more advantageous for the department's overall performance.

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REFERENCE

1. National Institute for Health and Care Excellence (NICE). (2009). Principles for Best Practice in Clinical Audit.
2. Takai IU, Yakasai IA, Omeje II, Emmanuel AU. An Audit of Gynaecological Procedures Performed at Aminu Kano Teaching Hospital, Kano. *Journal of Basic and Clinical Reproductive Sciences*. 2012;4(2):64-69.
3. Klufio CA. Abortion. Comprehensive obstetrics in the tropics. In: EY Kwawukume and EE Emuveyan editors 1st ed. Vol 1; Dansoman: Asante and Hittscher Press Limited 2002; p. 226-42.
4. Burado AT, Panti AA, Shehu CE, Ukwu AE. Elective hysterectomy at Usmanu Danfodiyo University Teaching Hospital Sokoto North West Nigeria. *Bo Med J* 2013;10:21-5.
5. Omole-Ohonsi A, Belga F. Surgical management of uterine fibroid at Aminu Kano teaching hospital. *Obstet Gynecol Int* 2012;702325:1-6.
6. Yakasai IA, Abdullahi J, Abubakar IS. Management of ectopic pregnancy in Aminu Kano Teaching Hospital: A 3-year review. *Global Res J* 2012;1:181-5.
7. Efetie ER, Abubakar JS, Habeeb SA. Audit of gynaecological laparoscopies in National Hospital Abuja Nigeria. *Niger J Clin Pract* 2009;12:149-52.
8. Zainab A, Nafi'ah T. Indications and outcome of Gynaecological Hysterectomy at Aminu Kano Teaching Hospital: A 5year Review. *Open J Obstet and Gynaecol*. 2015;5:298-304.
9. Anzaku AS, Musa J. Total Abdominal Hysterectomy for benign gynaecological conditions. *Niger J Med*. 2012;21(3):326-330.
10. 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(3):26-36.
11. Obikili CG, Magaji FA. An audit of Hysterectomy at the Jos University Teaching Hospital, Jos, Plateau State, North central Nigeria. *Jos J Med*, 13(1):13-18.
12. Adesiyun A, Nkeiruka A, Avidime S, Kokori S. An audit of reproductive surgery among infertile women in northern Nigeria. *Internet J Gynecol Obstet* 2012;1(16):1-6.
13. Bukar M, Audu BM, Yahaya UR. Hysterectomy for benign gynaecological conditions at Gombe, north eastern Nigeria. *Nig J Med* 2010;51:35-8.
14. Ahmed ZD, Taiwo N. Indications and Outcome of Gynecological Hysterectomy at Aminu Kano Teaching Hospital, Kano: 5-year review. *Open j Obstet Gynecol* 2015;5(5): 299-304.
15. Anbreen, F., Qadir, S., Batool, I., & Babar, R. An audit of gynaecological hysterectomy and uterovaginal prolapse revealing a need for safe motherhood. *Gomal Journal of Medical Sciences*, 2015;13(4):230-4.
16. Obiechina, N. J. A., Ugboaja, J. O., Onyegbule, O. A. & Eleje, G. U. Vaginal hysterectomy in a Nigerian tertiary health facility. *Niger J Med*, 2010;19(3):324-5.
17. Oseki C, Osaikhuwumwan JA. A Review of indications and outcome of total abdominal hysterectomy at a tertiary public health facility in Southern Nigeria. *N Niger J Clin Res* 2018;7: (11)21-4.
18. Onyeabochukwu DA, Duke-Onyeabo C, Onyegbule OA,

- Amajuoyi CC, Madu IP. A six-year review of hysterectomy for benign gynecological conditions at Federal Medical Centre, Owerri. *Int J Reprod Contracept Obstet Gynecol.* 2014;3(2): 352-356.
19. Onah HE, Ezegwui HV. Elective abdominal hysterectomy – Indications and complications in Enugu Eastern Nigeria. *Global J Med Sci* 2002;1(1):49-53.
20. Arowojolu AO. Hysterectomy In: Okonofua F, Odunsi KO, editors. *Contemporary Obstetrics and Gynaecology for Developing Countries*. 1st ed. Women's Health and Action Research Centre (WHARC): WHARC Pub; 2003. p.227-39.