

AN AUDIT OF HYSTERECTOMY AT THE JOS UNIVERSITY TEACHING HOSPITAL, JOS, PLATEAU STATE, NORTH CENTRAL NIGERIA.

Authors: Obikili C. G¹, Magaji F.A¹.

¹Department of Obstetrics and Gynecology, Jos University Teaching Hospital.

Corresponding Author email: obikilichinedu@gmail.com

ABSTRACT:

Background: Hysterectomy is the most common gynaecological surgery performed worldwide. A surgical list for an obstetrician and gynaecologist is not complete without a hysterectomy. The exact burden and reasons for this is often not known as statistics and record keeping in our environment tends to be poor. The objective of this study was to ascertain the burden of this procedure at the Jos University Teaching Hospital in order to plan appropriately regarding channeling of scarce resources, research and advancement in areas where the need is highest.

Materials and Methods: This was a 6year retrospective observational study of 602 gynaecological surgeries performed.

Results: Hysterectomy was the most common gynaecological surgery; with uterine fibroid being the commonest

Conclusion: Hysterectomy should remain a focus for funding, in terms of acquisition of more skills particularly in the area of minimal access and tackling this burden to the general population.

Key Words: Hysterectomy, Jos, Indications, Nigeria

INTRODUCTION

Hysterectomy is the most common non-pregnancy related major surgery performed on women worldwide¹. This surgical procedure involves removal of the uterus and cervix and for some conditions the fallopian tubes and ovaries. It was first performed as far back as 1843 by Charles Clay in Manchester, England¹. In 1929 Richardson performed the first total abdominal hysterectomy (TAH) in which the entire uterus and cervix were removed.¹

Hysterectomies represent a huge financial burden to the health care system and understanding the indications and prevalence of this surgical procedure will go a long way to deciding how to channel the limited available resources particularly in the developing countries like Nigeria. In the United States of America approximately 600,000 hysterectomies are performed annually with a cost of approximately \$5billion per year.² In the year 2016 the federal government of Nigeria announced plans to offer free healthcare to 100million Nigerians over

the next two years³, considering that maternal and child health is key to a nations health system and understanding that women are often the least empowered and most in need. It would mean that a firm and detailed grasp of the demography of the most common gynecological procedure would significantly aid in deciding how to properly channel these resources in order to have maximal impact. Uterine fibroids has been implicated in the most common indication for hysterectomy globally^{4,6,7,16}, in several African studies^{5,9,11} and in Nigerian^{8,10,12} with menorrhagia being the most common reason for their presentation^{13,14}. In the developed countries of the United States of America and Europe Endometriosis was the next most common indication^{4, 7} whilst pelvic organ prolapsed was the second commonest indication in developing countries of India and Africa⁵. Studies from Nigeria showed similar findings with fibroids being the most frequent indication in Kano, Jos and Maiduguri with 66.4%, 60.6% and 63.3% respectively followed by pelvic organ prolapse with 16.3% in Kano and 10.6%

in Maiduguri. However in the Jos study, cervical intraepithelial neoplasia was the next most common indication at 27%^{8,10,12}.

A possible reason for the disparity in indications between the developed and developing countries are the availability of resources and difficulty in diagnosing endometriosis, which often requires laparoscopy. Other less common indications include adenomyosis, ovarian tumours, endometrial hyperplasia and cancer with varying prevalence in the various regions of the world.

Various routes for hysterectomy have been described; these include abdominal hysterectomy, vaginal hysterectomy, laparoscopically assisted vaginal hysterectomy, laparoscopic hysterectomy and robotic hysterectomy^{17,18}. The abdominal route is the most common route worldwide as shown in several studies with a 66% occurrence in the United States of America¹⁹, 74.7% in India⁶, 67% in Europe⁷, 92.7% in Tanzania⁹, 65.8% in Mali⁵, while in Nigeria it was used 79.1% of the time in Kano⁸, 88% in Jos²⁰ and 89.4% in Maiduguri¹². The next most common route was the vaginal route in all reviewed studies.

Vaginal hysterectomy when feasible is the safest and most cost effective procedure for removal of the uterus. However this is not possible in a number of cases thus the abdominal route is still the most common^{21,22}. Interestingly in all the African and Nigerian studies found none reported the use of laparoscopically assisted vaginal hysterectomy unlike the studies from the developed world.

Common complications that could occur include post-operative abdominal pain, pyrexia, wound infection, vaginal bleeding, post-operative anemia and vault prolapse.^{20,23}

The purpose of the study therefore was to review the surgeries carried out over the study period to establish the prevalence, indications and routes of hysterectomies.

Ethical approval was gotten from the hospital authority.

METHODOLOGY

The study was carried out in Jos, Plateau state, North Central Nigeria.

This was a retrospective observational study carried out among women operated upon in the theatre from January 2011 to December 2016.

The records were obtained from the theatre operation register which was imputed shortly after each case. This was carried out by the surgeon or his assistant.

The following parameters were analyzed; Total number of surgeries, the indication for the surgery, the type of surgery and the age of the women.

RESULTS

There were six hundred and two (602) major gynaecological surgeries performed during the study period (2011-2016). There were two hundred and forty six (246) hysterectomies, 223 myomectomies, 36 ovarian cystectomies, 28 pelvic floor and fistula repairs, 29 exploratory laparotomies and 40 other major surgeries.

The abdominal route was used in 218 while the vaginal route in 28.

Uterine Fibroid was the indication for the surgery in 113 cervical neoplasia in 65, pelvic floor prolapses in 22, endometrial neoplasia in 14, ovarian neoplasia in 11 and in 21 cases, it was done for other reasons.

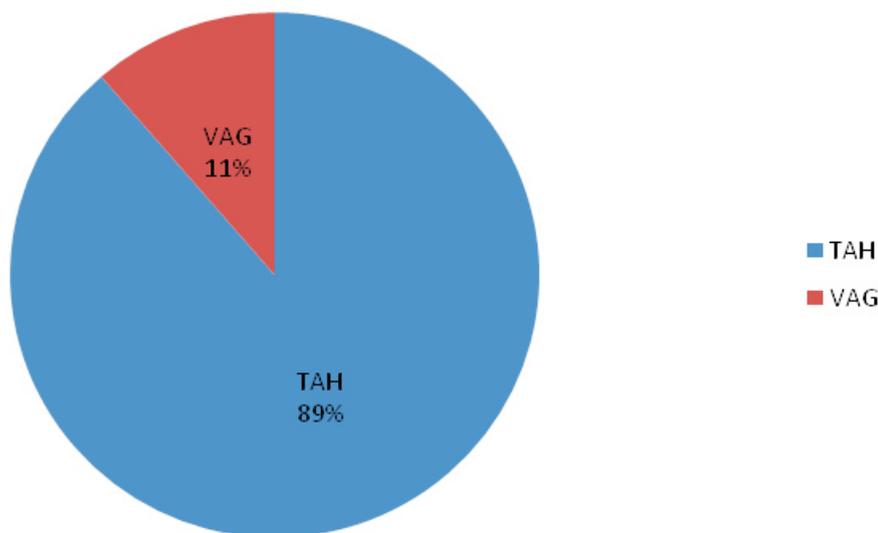
For the abdominal route, uterine fibroid was the indication in 112 cases, cervical neoplasia in 61, endometrial neoplasia in 14, ovarian neoplasia in 11 and 20 for other reasons.

For the vaginal route pelvic floor prolapse was the indication in 22, cervical neoplasia 4 times and twice for other reasons.

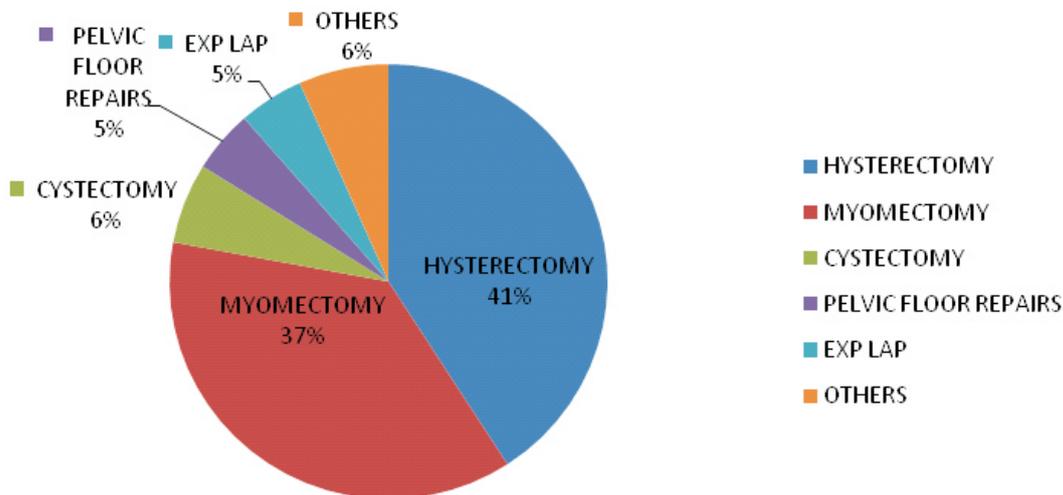
Uterine fibroid was the indication for 336 of the 602 major gynaecological surgeries performed.

TOTAL NUMBER OF CASES: 602
 HYSTERECTOMY: 246(40.9%)
 MYOMECTOMY: 223(37%)
 CYSTECTOMY: 36(6%)
 PELVIC FLOOR/FISTULA REPAIRS: 28(4.7%)
 EXPLORATORY LAPAROTOMY: 29(4.8%)
 OTHERS: 40 (6.6%)

ROUTE OF SURGERY



MAJOR GYNAECOLOGIC SURGERIES



AVERAGE AGE AT SURGERY

MYOMECTOMY	35.7years
ABDOMINAL HYSTERECTOMY	47.6 years
VAGINAL HYSTERECTOMY	55.8years

Indications	Frequency	Percentage (%)
Indications for Hysterectomy	n=246	
Uterine Fibroid	113	46.0
Cervical neoplasia	65	26.4
Pelvic floor prolapse	22	8.9
Endometrial neoplasia	14	5.7
Ovarian neoplasia	11	4.5
Others	21	8.5
Indications for abdominal hysterectomy	n=218	
Uterine fibroid	112	51.4
Cervical neoplasia	61	28.0
Endometrial neoplasia	14	6.4
Ovarian neoplasia	11	5.0
Others	20	9.2
Indications for Vaginal hysterectomy	n=28	
Cervical neoplasia	4	14.3
Pelvic floor prolapse	22	78.6
Others	2	7.1

DISCUSSION

There were 602 gynaecological surgeries, the most frequently performed was the hysterectomy which represented 40.9% (246), the next most frequently performed was the myomectomy representing 37% of all surgeries. Hysterectomy being the most common surgery was in keeping with other surgeries globally. Locally however it represents a higher proportion of gynaecological surgeries than similar studies^{8, 10, 20}. This is possibly due to the high prevalence of fibroids in this sub-region and the extensive screening programs to detect pre-invasive lesions of the cervix in the facility this study was conducted, which makes the need for this surgery higher.

The most common indication for hysterectomy was the uterine fibroid representing just under half of the reasons hysterectomies were performed at 46% (113), this was followed by cervical neoplasia at 26.4% (65), pelvic floor prolapse, endometrial neoplasia and ovarian neoplasia. All studies reviewed locally, and in the sub-region showed fibroid to be the most common indication as was seen in this study accounting for just under half in most of

these studies^{4,5,6,7,8,9,13}, showing a similar pattern and buttressing the burden of fibroid in our environment. The prominence of pelvic floor prolapse as an indication for hysterectomy was also reflected in previous studies^{4, 6, 11, 20}, however the prominence of cervical neoplasia as the second most common indication was not replicated in other studies except the 2 previous studies done in Jos^{10, 20} probably a consequence of the screening programs at the facility or the preference for surgical management for pre-invasive lesions. The prominence of other neoplastic lesions were similar to other studies^{8,9,12,15}.

The most commonly used route for hysterectomy in this study was abdominal, this is the favored route in all other studies^{2, 7, 9, 11, 12, 15}. It was not surprising that there was no laparoscopic or laparoscopically assisted vaginal hysterectomy in this and other African studies as compared to studies in the developed world. This shows the gap in the level of advancement of healthcare in our sub-region as compared to advanced countries when the technology is advancing to robotic and long distance surgeries^{6,7,19}.

The type of condition affected the route of

hysterectomy as evidenced by 78.6% of vaginal hysterectomies being done for pelvic floor prolapse, whilst most other indications were performed abdominally. This was similar to a study done in the same facility 6years ago with almost identical findings²⁰.

It was also noticed that the intervention had a tendency to reflect the age of the patient, younger women had more conservative surgeries with the average age for women having myomectomy being 35.7years, while women having abdominal hysterectomy were mostly in their perimenopausal age with an average age of 47.6years and post menopausal women were the ones who most had vaginal hysterectomy with an average age of 55.8years probably due to pelvic floor prolapse in these women.

Also of note is that the single most common reason for operative gynaecological intervention was uterine fibroid representing 55.9% of all gynaecological pre-surgical diagnosis reflecting the significant burden that this condition carries in this region of the world, suggesting that a lot of resources are and should be dedicated to tackle this.

Vaginal hysterectomies are generally known to be associated with less risk than the abdominal route.

CONCLUSION

Hysterectomy remains the most commonly performed gynaecological surgery globally and locally with the uterine fibroid being the most common indication. Therefore in channeling resources steps must be taken to use available information towards addressing the burden of hysterectomy in this environment.

The vast majority of hysterectomies were abdominal however steps need to be taken to select other routes particularly the laparoscopic route, which has been associated with less morbidity and mortality. This should be enhanced in both training and purchase of equipment to reduce the overall burden to the society at large. The area of laparoscopic surgeries appears to be limited in our sub region and this needs to change.

REFERENCES

1. John A. Supracervical versus total abdominal hysterectomy. *Clin Obstet Gynecol.* 1997. 40(4):903-913.
2. Reiter R C, Gambore J C, Lench J B. Appropriateness of hysterectomies performed for multiple preoperative indications. *Obstet Gynecol.* 2002. 80(6):902-905.
3. Cletus U. Federal Government of Nigeria to offer free health services to 100million Nigerians in two years-minister. Available at premiumtimesng.com. 2016.
4. Whiteman MK, Hillis S, Jamieson J, Marrow B, Pogornik MN, Brett KM. Inpatient hysterectomy surveillance in the United States, 2000-2004. *Am J Obstet Gynecol.* 2008. 198(1):34, 1-7.
5. Traore M, Togo A, Traore Y, Dembele BT, Giakite I. Hysterectomy: Indications and advantages of the vaginal route in Mali. *Med Trop(Mars)* 2011. 71(6):636-637.
6. Deeksha P, Kriti S, Aashish S, Shripa H, Jayaram N, Rajeshwari G. An audit of indications, complications and justifications of hysterectomies at a teaching hospital in India. *Int J Reprod Med.* 2014. 6
7. Maresh MJ, Metcalfe MA, McPherson K, Overton C, Hall V, Hargreaves J, Brigama S. The VALUE national hysterectomy study: description of patients and their surgery. *BJOG: an International Journal of Obstetrics and Gynaecology.* 2002. 109:302-312.
8. Zainab A, Nafi'ah T. Indications and outcome of Gynaecological Hysterectomy at Amino Kano Teaching Hospital: A 5year Review. *Open Journal of Obstetrics and Gynaecology.* 2015. 5:298-304.
9. Ismail HM. Hysterectomy: Indications, histological pattern and role of pelvic ultrasound at Buguno Mwanze, Tanzania. *Allied Sciences.* 2014.
10. Anzaku AS, Musa J. Total Abdominal Hysterectomy for benign gynaecological conditions. *Niger J Med.* 2012. 21(3): 326-330.
11. Gaym A. Elective hysterectomy at Tikur Anbessa Teaching Hospital Addis-Ababa. *Ethiop Med J.* 2002. 40(3);217-226.
12. Kawuwa MB, Mairiga AG, Audu BM. Indications and complications of hysterectomy in Maiduguri, North-Eastern Nigeria. *Kanem Journal of Meical Sciences.* 2007. 1(1):20-25.
13. Craner SF, Patel A. The frequency of uterine leiomyomas. *Am J Clin Pathol.* 1990. 94. 435-438.

14. Aurangies H, Hatsa I, Iram I, Rabia B, Saime B, Samra K, Sana A, Sarah S. Indications of abdominal hysterectomy. *Ann Pak Inst Me Sci.* 2013. 9(1):30-32.
15. Raha K, Prameela G, Chanrasekharan PA, Swath P, Raha G, Keerthana. Epidemiology of Hysterectomy-A cross sectional study among pilgrims of Tirumala. *IOSR Journal of Dental and Medical Sciences.* 2015. 14(7):1-5.
16. Mucus JB, Magnin G. Indications of laparoscopic hysterectomy. *European Journal of Obstetrics, Gynaecology and Reproductive Biology.* 1997. 74(1):49-52.
17. Moawad G, Robinson JK. Dual Port Hysterectomy: A Novel Technique and Initial Experience *Journal of Minimally Invasive Gynecology.* 2012. 19(6):86.
18. Thomas B, Magos A. Subtotal hysterectomy and myomectomy –vaginally. *Best Practice & Research Clinical Obstetrics & Gynaecology.* 2011. 25(2):133-152.
19. Wu JM, Wechter ME, Geller EJ, Nguyen TV, Visco AG. Hysterectomy rates in the United States in 2003. *Obstet Gynecol* 2007. 110(5):1091-1095.
20. 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
21. ACOG Committee opinion No. 444: choosing the route of hysterectomy for benign disease. *Obstet Gynecol.* 2009. 114(5):1156-1158.
22. Gupta J. Vaginal Hysterectomy is the best minimal access method for hysterectomy. *Evid Based Med.* 2015. 7.
23. Odidika UJ, Robinson CO, Justus NE, Igberase G. Abdominal versus vaginal hysterectomy: Appraisal of indications and complications in a Nigerian Federal Medical Centre. *NJOG* 2009; 4(1): 25-29