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Research Article

Prevalence of Hysterectomy for Benign Conditions in the Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Nigeria

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Abstract

Background: Hysterectomy is one of the common major gynaecological surgeries performed around the world. Globally, over 1.2 million women undergo this surgery annually. Hysterectomy is the surgical removal of the uterus. It could be done via the abdominal, vaginal and laparoscopic routes. Hysterectomy can be done for benign and malignant gynaecological conditions, and occasionally obstetric conditions. The main indication for hysterectomy in benign conditions is abnormal uterine bleeding secondary to uterine fibroids, adenomyosis and endometrial hyperplasia. The aim of this study is to determine the prevalence of hysterectomy for benign conditions at the Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Nigeria, its indications and the associated complications.

Materials and Methods: This was a retrospective cross sectional study of 227 hysterectomy cases done from January 2019 - December 2023 for benign indications. The case notes were retrieved from the medical records department. Further information was got from theatre and ward records. Data were sorted, coded and analysed using IBM SPSS (Statistical Package for Social Sciences) version 25 for Windows®.

Results: A total of 1,205 major gynaecological surgeries were done during the study period. Of these, 268 were hysterectomies, indicating a prevalence of 22.24%. Benign indications were 227 cases, while 41 were for malignant conditions. Average age was 45 ± 5 years. Mean Parity was 3-4. Major indications were abnormal uterine bleeding and uterine fibroids. Major complications were haemorrhage and infection. No mortalities were recorded.

Conclusion: Hysterectomy is a relatively safe surgery. More training is required for better skills on laparoscopic and vaginal approaches in our setting. Thus reducing complications associated with abdominal hysterectomy.

Keywords: *Hysterectomy; Abnormal Uterine Bleeding; Gynaecological Surgery*

Introduction

Hysterectomy is a common major gynaecological surgery performed around the world [1]. The prevalence worldwide is 17.2%. In Nigeria, the prevalence is between 14.6% - 18.18% [2]. Hysterectomy is the surgical removal of the uterus. It could either be sub-total (supra cervical), in which case the cervix is retained, or total hysterectomy, when the uterus and cervix are removed, or radical hysterectomy, when the upper 1/3rd of the vagina is removed in addition to total hysterectomy. The routes for performing hysterectomy are abdominal, vaginal or laparoscopic. The abdominal route is the most commonly used; because it required less specialized skills to perform compared to the other routes.

There are various clinical indications and patient's preferences for this surgery [2,3]. Hysterectomy can be done for benign and malignant gynaecological conditions. The most common benign indications for this surgery are uterine fibroids, abnormal uterine bleeding, disabling levels of pelvic pain and discomfort, utero-vaginal prolapse and adenomyosis [1-5]. Occasionally, hysterectomy may also be done for obstetric conditions e.g., severe primary post-partum haemorrhage, ruptured uterus.

Although this procedure is highly successful in curing the condition for which it is indicated, it is associated with intra-operative and post-operative morbidities, like most surgical operations. These complications could be short-term or long-term, depending on the extent of surgery and the period of follow-up. This study is aimed at determining the prevalence of this surgery in RSUTH, the indications and likely complications of hysterectomy.

Materials and Methods

Study site/Area

This study was carried out at the Rivers State University Teaching Hospital (RSUTH), Port Harcourt, Rivers State, Nigeria. The RSUTH is the largest and the only state-owned tertiary health facility in Rivers State. The hospital serves as a referral centre for health facilities in the state and also for neighboring states. It also serves as a training centre for resident doctors and medical students of the Rivers State University and Pamo University of Medical Sciences. The hospital has qualified specialists from various medical fields inclusive of obstetricians and gynaecologists, anaesthetists, surgeons, and physicians. The average number of major gynaecological surgeries done are > 230 annually.

Study design and population

This was a retrospective cross-sectional study conducted for cases of hysterectomy that were done from January 2019 to December 2023. The study population were women aged between 25 and 65 years of age who had hysterectomy for benign conditions within the study period. Patients that had hysterectomy for malignant conditions or suspected malignancy were excluded from this study. All the women had a packed cell volume of at least 30% before surgery. Anaemia, if present, was corrected before surgery with blood transfusion and or haematinics. Two pints of whole blood were made available by each patient before surgery.

Data collection

With the aid of a predesigned pro-forma, data were collected from patient's folders and from the theatre and gynaecological ward records. Analysis was done using IBM SPSS (Statistical Package for Social Sciences) version 25 for Windows®. Categorical variables were summarized in frequencies and percentages, while continuous variables were summarized using mean and standard deviation (SD) with 95% CI and *p* value of 0.05.

Results

The total number of major gynaecological surgeries done at the Rivers State University Teaching Hospital between January 2019 to December 2023 was 1,205. Of these, 268 (22.2%) were hysterectomies. Thus, prevalence of hysterectomy in RSUTH was 22.2%. Hysterectomy for benign conditions alone was 227. This was 84.9% of the total hysterectomy cases (Table 1).

Year	Number of Gynaecological Surgeries	Number of Hysterectomies	Number of Hysterectomies for Benign Indications	Number of Hysterectomies for Malignant Indications
2019	203	48	43	5
2020	188	39	31	8
2021	247	45	38	7
2022	289	69	59	10
2023	278	67	56	11
Total (%)	1,205 (100%)	268 (22.2%)	227	41

Table 1: *Gynaecological surgeries and distribution of hysterectomies.*

Table 2 shows the socio-demographic characteristics of the women who underwent hysterectomy at the RSUTH. The mean age was 45 ± 5 years with their ages ranging from 50 to 55 years. Majority (%) of the women were above years. All of the patients were parous with almost half of them 111 (48.9%) being grand multiparous. Most of the women, 186, had tertiary level of education and made up 81.9% of the study population. Almost all of the women were Christians, 222 (98.2%), which is the prevalent religion in the study area. Majority, 217 (95.6%), of the women studied were engaged in various occupations with most of them, 102 (44.9%) being business women.

Age (Years)	**No. of subjects (n = 227)**	**Percentage (%)**
25- 30	6	2.6%
31-35	8	3.5%
36 - 40	8	3.5%
41- 45	12	5.4%
46- 50	55	24.3%
51- 55	93	40.9%
56- 60	25	11.0%
>60	20	8.8%
Mean Age	SD	95% CI
50-55yrs		
Parity	**No. of subjects (n = 227)**	**Percentage (%)**
1 - 2	10	4.4%
3 - 4	106	46.7%
5 - 6	36	15.9%
> 6	75`	33%
Educational status	**No. of subjects (n = 227)**	**Percentage (%)**
No Formal Education	0	0
Primary	7	3.2%
Secondary	34	14.9%
Tertiary	186	81.9%
Religion	**No. of subjects (n = 227)**	**Percentage (%)**
Christianity	223	98.2

Islam	4	1.8
Atheist	0	0
Occupation	**No. of subjects (n = 227)**	**Percentage (%)**
Business woman	102	44.9
Civil Servant	42	18.5
Public servant	54	23.8
Trader	19	8.4
House wife	10	4.4

Table 2: *Socio-demo characteristics of women who underwent hysterectomy.*

Table 3 shows the relevant clinical characteristics of the study group. Majority of the patients, 132 (58.1%), had a packed cell volume of < 30% before surgery; these sub-group of patients had blood transfusion(s) to correct the anaemia. The most common indication for hysterectomy for benign purposes was abnormal uterine bleeding; this was seen in 86 (37.9%) of the women studied. Complications related to hysterectomy was seen in 87 (38.3%) of the women studied, with the most common complication being intra-operative haemorrhage seen in 41 (47.1%) of those who had complications. One hundred and forty patients (61.7%) had no complications.

Packed cell volume		
PCV	**No. of subjects (n = 227)**	**Percentage (%)**
< 30%	132	58.1
≧ 30%	95	41.9
Indication for hysterectomy		
Indication	**No. of subjects (n = 227)**	**Percentage (%)**
Abnormal uterine bleeding	86	37.9
Uterine fibroids	73	32.2
Utero-vaginal prolapse	36	15.9
Chronic pelvic pain	23	10.1
Adenomyosis	5	2.2
Endometriosis	2	8.8
Pelvic Infection	2	8.8
Complications associated with hysterectomy	**No. of subjects (n = 87)**	**Percentage (%)**
Haemorrhage (Intra-op blood loss ≥500mls)	41	47.1
Surgical site infection	34	39.1
Bladder injury	6	6.9
Intestinal injury	3	3.4
Ureteral injury	2	2.3
Thrombo-embolism	1	1.1

Table 3: *Relevant clinical characteristics.*

Discussion

In this study, the prevalence rate of hysterectomy was 22.2%. This is lower than 28% reported by Okafor C., *et al.* in 2012, and 25% reported by Daru PH., *et al.* in Jos. However, the rate in our facility is higher than 12.4% reported by Isiaka LS., *et al.* in Ilorin. The prevalence varies from place to place in Nigeria. Also, with more research and knowledge, other uterine sparing alternatives are considered for treatment of abnormal uterine bleeding instead of hysterectomy.

In the United States of America, hysterectomy is the most common major gynaecological operation, with approximately 600,000 hysterectomies performed yearly. In the Rivers State University Teaching Hospital (RSUTH), an average of 45 hysterectomies are performed yearly for benign conditions.

The average age of women who had hysterectomy was 50 - 55 years. This was because women in Africa are not willing to give consent for hysterectomy unless they have approached menopause. Having children was an important consideration before giving consent for hysterectomy, thus the parity with the highest occurrence in this study was 3 - 4.

The commonest indication for hysterectomy was Abnormal uterine bleeding (37.9%), followed by Uterine Fibroid (32.2%). This is different from similar studies in the sub-region, with uterine fibroid as the leading indication for hysterectomy [1-4]. The abdominal and vaginal routes were used in this study. Laparoscopic route was not recorded because there was no expertise in our facility. The necessary equipment to perform laparoscopic hysterectomy were not available yet. With more training and improved skill, this route could also be used with the appropriate equipment.

The abdominal route was used in 78% of the surgeries. This was because the abdominal route was easier to perform, did not require specialized instruments, with a shorter learning curve [1,3,5]. The main indication for vaginal hysterectomy was mainly utero-vaginal prolapse [1,3,5]. Total abdominal hysterectomy was done in 75% of the patients, especially those above age 40 years. This was because in sub-Saharan Africa, there is a great amount of apathy to cervical screening programmes, so hysterectomy was considered as an opportunity to also prevent cervical malignancy.

Anaemia pre-operatively was detected in 57.5% (PCV < 30%) of the patients, and was corrected by blood transfusion, oral and parenteral haematinics. The type of incision was decided by the surgeon, based on history of a previous abdominal surgery or presence of an associated abdominal mass. The decision to remove the ovaries during hysterectomy was also decided by the surgeon, depending on the age of the patient and the appearance of the ovaries intra-operatively.

The complications associated with hysterectomy can be short term and long term [3,5,10,11]. The complication rate in this study was 38%. The other cases (62%) did not have any short-term complications. No mortality was recorded. Intra-operative haemorrhage was the commonest short term complication (47.2%). This was followed by surgical site infection (39.2%).

Some of the limitations of this study were that there were no records of long - term follow up. Patients were followed up till six weeks. Farquhar CM., *et al.* reported 30% of post hysterectomy women had depression within 3 years of follow-up; another limitation was that this study was hospital-based, and as such, may not give a true population prevalence.

Conclusion

There are currently a growing number of uterine-sparing approaches for addressing many of the various indications for hysterectomy. Despite this, hysterectomy will remain a common major gynaecological procedure for the foreseeable future. It is a relatively safe procedure; more so, most previous studies did not record mortalities.

Training of doctors on laparoscopic techniques is needed to reduce complications associated with abdominal hysterectomy.

Conflict of Interest

There was no conflict of interest.

Ethical Approval

Ethical approval for the study was obtained from the Ethics committee of the hospital.

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