

## A DECADE OF HYSTERECTOMY IN A TERTIARY HOSPITAL IN URBAN NIGER-DELTA REGION OF NIGERIA

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### ABSTRACT

**Background:** Hysterectomy is a very common gynaecological procedure which has a significant place in optimizing the reproductive health outcomes of women.

**Objectives:** To document the indications, the type of hysterectomy commonly performed, the difficulties encountered and complications of the procedure at the Central Hospital, Benin City.

**Materials and Methods:** This was a retrospective review of the service delivery records of patients that had hysterectomy in the gynaecological unit between January, 1994 and December, 2003.

**Results:** There were 1216 major gynaecological operations during the study period. Of these, 131 (10.8%) hysterectomies were done. Total abdominal hysterectomy accounted for 80.4% of the procedures performed and most were done by consultants (94.4%). The mean age of the patients was 45.7 years with a median of 46 years and they were commonly grandmultiparous (71.0%). The commonest indication for the procedure was symptomatic uterine fibroid (62.3%) followed by urogenital prolapse (13.1%). The crude morbidity rate was 30.3% and the mortality rate was 1.6%.

**Conclusion:** Hysterectomy in this centre is a fairly safe procedure. There is paucity of skills for vaginal and radical procedures. Training is advocated with a view to reducing the presently high morbidity rate as well as achieving our aim of optimizing the reproductive health outcomes of our women.

**Key Words:** Decade, Hysterectomy, Tertiary Hospital, Urban Nigeria

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### INTRODUCTION

Hysterectomy is a very common gynaecological procedure, and available data indicates that it accounts for 3.4-20% of major operations undertaken by the female pelvic surgeons<sup>1,2,3,4</sup>. The procedure may be total or subtotal<sup>2,6</sup>. Hysterectomy can be done through the abdominal route or vaginal route. Additionally, laparoscopic hysterectomy is now one of the modalities used for removal of the uterus in the more developed regions of the world<sup>5</sup>.

The uterus is a key female reproductive organ, and has implications for the reproductive health outcomes of women<sup>6</sup>. It is the nidus for the developing fetus and the origin of a number of female genital tract malignancies. Also, a number of benign lesions such as fibroid, polyps, adenomyosis and prolapse are some other pathologies of the uterus. These malignant and benign lesions are often the indications for removal of the uterus.

Before surgeons learned to safely remove the cervix, the tendency was to leave it in place during a

hysterectomy. In the 1940s, ninety five percent of hysterectomies performed in the United States were subtotal<sup>3</sup>. However, in the late 1940s and the 1950s, improvements in surgical technique (better anaesthesia, availability of antibiotics and blood products, as well as a greater number of trained gynaecologists) and a desire to prevent cervical cancer, resulted in the adoption of the routine removal of the cervix at hysterectomy<sup>3</sup>. Thus, complete hysterectomy became the method of choice.

For a number of reasons that are not substantiated by best available evidence, there has been a resurgence of interest in leaving the cervix behind especially in countries where cytological screening is compulsorily done<sup>8,9</sup>. This should not be the practice in developing countries where screening for genital tract malignancies is usually opportunistic and as such we believe that total hysterectomy has a significant place in optimizing the reproductive health outcomes of women in low resource countries<sup>10</sup>.

However, it must be said that hysterectomy is not an operation for the inexperienced surgeon, and this becomes more compelling in hysterectomy for

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malignant conditions as this is a radical procedure fashioned after the seminal description of Wertheim<sup>11</sup>. Therefore, to be able to translate to reality our position that total hysterectomy is one of the most important ways of preventing and reducing the incidence of female genital tract malignancies, specifically cervical cancer in low resource settings, then our efforts should always aim to train competent pelvic surgeons in whose hands the total operation is safe.

As a first step in this direction, we decided to embark on the survey of this procedure with particular reference to documenting the common indications, the type of hysterectomy commonly undertaken, difficulties encountered and complications of the operation at Central Hospital, Benin City, Nigeria. We believe that the findings have the potential of identifying issues that can be leveraged to improve the act and practice of this important gynaecological procedure in our sub-region. This will certainly position it as a veritable tool for improving the reproductive health status of our women.

## MATERIALS AND METHODS

The service delivery records of patients that had hysterectomy in the gynaecological unit of Central Hospital, Benin City from 1<sup>st</sup> January 1994 to 31<sup>st</sup> December, 2003 was retrospectively reviewed. Central Hospital Benin City is a state government owned tertiary centre rendering gynaecological care to the entire state, particularly serving as a referral centre for other state government owned secondary and primary health care outfits.

Of the 131 hysterectomies done within the study period, 122 (93.1%) patients' case notes/ward records/theatre records were the ones that could be retrieved and therefore formed the study population. A study protocol was used to extract the following information patient's socio-demographic profiles, indications for the surgery, type of hysterectomy, cadre of surgeon who performed the procedure, examination and operative findings, histology of specimen removed, length of hospital stay, operative complications and difficulties associated with undertaking hysterectomy in this centre. Pyrexia was defined by postoperative rise in temperature of 38°C on two consecutive occasions and wound infection as swelling with pathological characteristics of inflammation (rubor, dolor, calor, immobility, and or suppuration). Most of the patients had post-operative prophylactic antibiotics, however pre- and peri-operative antibiotic use was poor.

The coded data was fed into the computer using the SPSSPC+ statistical package. Univariate and bivariate analysis was done and the results are as presented in the tables below.

## RESULTS

There were 1216 major gynaecological operations during the study period. Of these, there were 131 hysterectomies accounting for 10.8% of major gynaecological procedures. Total hysterectomy accounted for 80.4% of the procedures performed, with total abdominal hysterectomy contributing 63.6% and vaginal hysterectomy 16.8%. On the other hand, subtotal hysterectomy was done in 19.6% of cases. There was no radical hysterectomy in this series. Most of the hysterectomy operations totalling 124 (94.4%) were performed by consultants while the remaining 7 (5.6%) were done by the senior registrars.

The vertical midline incision was used in 93 (76.2%) of the abdominal hysterectomies while in the others, access to the peritoneal cavity was achieved via a Pfannenstiel incision. For those that had abdominal hysterectomy, 54 (53%) also had bilateral salpingo-oophorectomy, while among those that had vaginal hysterectomy only 5 (25.0%) had bilateral salpingo-oophorectomy. Additionally, of those that had vaginal hysterectomy, 12 (60.0%) had anterior colporrhaphy and 2 (10.0%) had posterior colporrhaphy in addition to anterior colporrhaphy. However there was no documentation as to whether 2 (10%) of the patients with uterovaginal prolapse had anterior colporrhaphy and or posterior colporrhaphy.

A total of 26 patients had blood transfusion representing 21.3% and these were mostly in patients that had hysterectomy done for obstetric indications.

The mean age of patients in the series was 45.7 years  $\pm$  5.5(SD), with a median age of 46 years and a range of 32-66 years. Majority of the patients (71.0%) were grandmultiparous, 27 patients (22.4%) were para 4<sup>+</sup> and 8 patients (6.6%) were para 3<sup>+</sup>. Overall, 74 patients (60.7%) had 5 or more living children and the least number of living children by 9 patients (7.5%) was 3.

Symptomatic uterine fibroid was the commonest indication (62.3%) for hysterectomy amongst patients who undertook the procedure. This was followed by urogenital prolapse in 13.1% of the cases (see Table 1). There were ten (10) obstetric hysterectomies and majority (70%) of them were for ruptured uterus and 3 (30%) were done on account of severe post partum haemorrhage. At surgery, 34.6% of the patients had normal sized uterus while 51.4% had uterus whose sizes were equivalent to 14 weeks or less while 14 (11.2%) of cases had uterine size equivalent to 15-20 weeks and 3 (2.8%) had uterus larger than 20 weeks size. Thirty five (32.7%) cases had undertaken previous pelvic surgery.

Of the 122 cases only 58 had histology done (despite the fact that all samples were sent post-operatively to the histopathologist) and of these 52 agreed with pre

operative diagnosis, these were 29(55%) uterine fibroid, 21(40%) normal uterus and 1(2.5%) each for CIN and chronic cervicitis. There was however discordance in 6 and they were adenomyosis (2), endometrial hyperplasia (2) and CIN111 (2).

The average duration of hospital stay was 10.5 days  $\pm$  3.5SD, with seventy six (62.3%) of the cases staying for six to ten days (see Table 2). Table 3 shows the complications that occurred amongst the patients. There were 37 patients who had complications giving a crude morbidity rate of 30.3%. Pyrexia 18 (14.8%), anaemia 12 (9.8%) and wound infection 6 (4.9%) constituted the commonest complications. Three patients who came in severe shocked state following ruptured uterus died giving a mortality rate of 1.6%, and all 3 had obstetric hysterectomy with cardiac arrest in the immediate post operative state.

Table 1: Indications for Hysterectomy

Pre-operative diagnosis	Frequency	%
Symptomatic uterine fibroid	76	62.3
Dysfunctional uterine bleeding	11	9.0
Utero-vaginal prolapse	16	13.1
Cervical fibroid polyp	4	3.3
Cervical intraepithelial neoplasia	2	1.6
Chronic cervicitis	3	2.5
Obstetric indications	10	8.2
<b>Total</b>	<b>122</b>	<b>100</b>

Table 2: Duration of Hospital Stay

Length of Stay (Days)	Frequency	%
6-10	76	62.6
11-15	31	25.2
16-20	15	12.2
<b>Total</b>	<b>122</b>	<b>100</b>

Table 3: Complications Following Surgery

Complication	Frequency	%
Wound infection	6	4.9
Anaemia	12	9.8
Pyrexia	18	14.8
Wound dehiscence	2	1.6
Pelvic abscess	1	0.8
Vault /Pelvic haematoma	2	1.6

## DISCUSSION

The finding that hysterectomy constituted 10.8% of major surgeries in the gynaecological and obstetric unit in this series confirms similar reports from studies undertaken in other parts of the country<sup>12-14</sup>. This is however different from available data from the developed world where it can be as high as 20% of major gynaecological procedures<sup>15</sup>. This difference in frequency is largely explained by

the strong cultural aversion for the removal of the uterus by Nigerian women<sup>12-14</sup>.

Majority of the patients that undertook hysterectomy were in their fourth and fifth decades of life with the highest frequency in those within 46-50 years bracket, and this is comparable with results from other published works<sup>4,12,13,15</sup>. Clearly, at this age range, most of our women would have completed their family size and are peri-menopausal<sup>16,17</sup>. They are therefore more amenable to accepting hysterectomy as a management option for uterine pathologies. This is positively corroborated by the finding that the entire patients in this review had 3 or more children with majority of them being grandmultiparous, and this finding is similar to results from other centres in Nigeria<sup>4,12,13,15</sup>.

Seventy six women had hysterectomy on account of symptomatic uterine fibroids, while the indication for all the vaginal hysterectomy was utero-vaginal prolapse. This pattern is similar to reports from other parts of the country<sup>3,4,13-15</sup>. It is however different from findings amongst the Caucasian populations where menstrual abnormality was the major indication for hysterectomy<sup>18,19</sup>.

The higher proportion of abdominal hysterectomy compared to the vaginal procedure noted in this review is similar to that reported from Illorin Teaching Hospital in Nigeria<sup>3</sup>. It would have been expected that given the lower morbidity rate and shorter hospital stay associated with vaginal hysterectomy<sup>20</sup>, and in particular when the uteri were largely normal sized, that the vaginal route would have been preferred to the abdominal route. We believe that all cases of dysfunctional uterine bleeding and cervical fibroid polyps in this review (table 1) would have benefited from the vaginal procedure. This is certainly advocated and is in keeping with the submission of Onah and Ezegwu<sup>21</sup>. The rule of thumb for all surgeries where body tissues are removed is to have such samples sent for histology to exclude possibility of malignancies. While efforts were made in all instances in this review to ensure that samples were sent to the histopathologist, retrieval rate at follow-up was below average and we suggest that concerted efforts must be made by the attending surgeons to ensure that histology reports are retrieved, reviewed and documented clearly in the medical records of patients.

We note with interest that the aim in majority of the cases done within the period under review was to remove the cervix along with the other parts of the uterus at hysterectomy. The few subtotal procedures done were largely for obstetric indications where speed was necessary to salvage a severely bleeding and moribund post-partum patient<sup>22,23</sup>. This is consistent with our conviction that removal of the

cervix at the time of indicated hysterectomy in order to prevent future morbidity and mortality to women is an important reproductive health goal that should be pursued as a way to enhance women's health in low resource settings, particularly when evidence clearly shows that there is no advantage of one procedure over the other<sup>6,8,9,24</sup>. However no radical hysterectomy was performed over a decade in this centre. This calls for urgent attention, as the radical procedure is one of the treatment options for early malignant lesions of the female genital tract, particularly in our setting where there is extreme paucity of centres with facilities for alternative radio-therapeutic mode of management<sup>25</sup>. Febrile morbidity, anaemia and wound infection were the leading complications recorded in these patients, similar to findings of the Ilorin study<sup>3</sup>. However, the rate of infectious morbidity was lower in this study and we hypothesize that this is due to the well laid down policy of post-operative prophylactic antibiotic use<sup>26</sup>. The overall crude morbidity rate of 30.3% correlates well with the 31% reported by Roberts and Okunlola from Ibadan, Nigeria<sup>13</sup>. Unlike in the Ibadan series where there was no mortality, three mortalities were recorded over the ten-year period in this centre akin to reports of other studies<sup>1,2,3,4</sup>. In keeping with studies<sup>27,28</sup> in which it was noted that ureteral or intestinal complications are rare with gynaecological surgeries, none was documented in this review.

In conclusion, hysterectomy at the Central Hospital, Benin is a fairly safe procedure with most cases done by consultants. There is paucity of skill for vaginal and radical procedures; therefore training in these regards is advocated with a view to reducing the presently high morbidity rate as well as achieving our goal of optimising the reproductive health outcomes of our women.

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