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Abdominal Hysterectomy for Benign Gynaecological Conditions at Ibadan, Nigeria

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Abstract

Context: *Total abdominal hysterectomy is one of the commonly performed major gynaecological operations in our hospital and it is desirable to review its safety in view of the advanced pathology that is frequently encountered.*

Objective: *To determine the indications for and the pattern of morbidity and mortality in abdominal hysterectomy done for benign conditions over a 10-year period.*

Study Design: *A retrospective study of all cases of abdominal hysterectomy for benign conditions over a ten-year period.*

Main Outcome Measures: *The relative proportion of cases of abdominal hysterectomy compared to the total number of operations, the prevalence of various peri- and post-operative complications or mortality.*

Results: *Total abdominal hysterectomy accounted for 10.2% of all major gynaecological operations during the study period. The indication was uterine fibroids in 82% of cases done for benign indications. The crude morbidity rate was 31% and there was no mortality.*

Conclusion: *In spite of advanced pathology, abdominal hysterectomy for benign conditions is a fairly safe procedure in UCH Ibadan. There is a need to further reduce the high morbidity rate associated with the procedure especially the use of peri-operative antibiotic prophylaxis.*

Key Words: Abdominal Hysterectomy; Morbidity; Mortality; Antibiotics. [Trop J Obstet Gynaecol, 2001, 18: 19-23]

Introduction

The operation of hysterectomy was first described in the third century AD writings of Soranus and before the turn of the nineteenth century, carried a horrendous surgical morbidity and mortality rate[1]. This was mainly from haemorrhage and shock. The lower part of the uterus was usually tied in a mass ligature and the corpus removed with the cervical stump often fixed extra-peritoneally to the incision. The first surgeon to deliberately and successfully perform total abdominal hysterectomy was G. Kimball of Massachusetts, U.S.A. in 1853[2]. However, the first refined abdominal hysterectomy is credited to Wilhelm Alexander Freund of Breslau on January 30, 1878[3]. With better recognition and treatment of complicating medical diseases, proper use of blood transfusions and antibiotics as well as improvements in anaesthetic techniques, a hysterectomy can be done quite safely by the skilful gynaecological surgeon of today. A mortality rate of 12 per 10,000 procedures was quoted by Bachman in 1990[1].

Although alternatives to total abdominal hysterectomy such as laparoscopically assisted vaginal hysterectomy (LAVH)[4] and endometrial resection and ablation[5,6] are being utilized in developed countries, they are not widely utilized in the tropics. This is probably due to lack of facilities to make these new techniques take off as they did elsewhere. There are not many reports on hysterectomy and its associated problems in this environment. Although hysterectomy is less commonly performed in Nigeria than in the developed world because of cultural and other reasons[7], enough are being done to warrant a study of its effects on patients

This study was embarked upon to determine the indications for hysterectomy and the pattern and extent of morbidity and mortality associated with abdominal hysterectomy in a Nigerian tertiary hospital.

Materials and Methods

All cases coded under hysterectomy in the Medical Records Department of the University College Hospital between January 1986 and December 1995 were reviewed. The case and ward records were sought and analysed with regard to socio-demographic characteristics, presenting symptoms, examination and operative findings, histology, cadre of surgeon, duration of hospital stay, post-operative complications during admission and at the follow-up visit at six weeks. Pyrexia was defined as fever of 38°c or greater on two consecutive occasions and wound infection as local erythema or suppuration. The information from the case records was transcribed unto proforma already designed for the purpose. These forms were then utilized in the final analysis, using simple frequency tables, means and standard deviations where applicable.

Results

The total number of major gynaecological operations performed in the 10-year period was 4,230. Of these, 67 were coded as vaginal hysterectomy and 432 as abdominal hysterectomy, which amounts to 1.6 and 10.2 percent of major gynaecological procedures respectively.

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Of the 432 cases of abdominal hysterectomy, 347 case records were complete, while 60 were incomplete for analysis and 25 case records were unavailable. There were 247 cases of hysterectomy for benign gynaecological conditions while the remaining 100 cases were for malignancies and puerperal complications. Among the 78 patients with genital tract malignancies, 50 had carcinoma of the ovary, 15 had frank carcinoma of the cervix, 8 patients had endometrial carcinoma, 2 women had gestational trophoblastic disease, one patient had microinvasive cervical cancer, one had leiomyosarcoma and there was one case of metastasising leiomyoma with haemothorax. Twenty-two patients had puerperal hysterectomy.

The 247 cases of abdominal hysterectomy for benign conditions were analysed. Table 1 shows the socio-demographic characteristics of the women who had hysterectomy. The mean age at hysterectomy is 44.2 years (range 30-70 years). In all, 239 (96.8%) of the women were married, 4 women were single, one was separated from her spouse, one was divorced and two were widowed.

Table 2 reveals that majority of the patients (55.8%) had delivered five or more children and 77.3 per cent had three or more living children. Of the seven nulliparous women who had hysterectomy, 5 had uterine fibroids with infertility, one had metastasising leiomyoma and one had uterine perforation after induced abortion. Table 3 reveals that the commonest indication for total abdominal hysterectomy is uterine fibroids, with or without menorrhagia. This also agrees with the mode of presentation.

Pre-hysterectomy investigations included intravenous urography (IVU) performed in 91 patients (37%) and ultrasound scan (USS) in 134 cases (54%). In some cases, both IVU and USS were performed. Table 4 shows that only 10 per cent of cases had a normal sized uterus at operation while the majority had uterine sizes compatible with 15-weeks gestation or more. Pelvic adhesions (evidence of previous pelvic inflammatory disease) were found in 78 patients (31.6%) and there was evidence of previous pelvic surgery in 53 cases (21.5%). Endometriosis was noted in two patients (0.8%).

Of the 207 cases with histology reports, the report agreed with pre-operative diagnosis in 193 cases but there was discordance in 14 patients (6.8%). A total of 87 patients (35.2%) had blood transfusion. Abdominal hysterectomy was performed by Senior Registrars in 126 cases (51.01%) by Consultants in 106 cases (42.92%) and by Registrars in 15 cases (6.07%).

The vertical midline skin incision was employed in 193 cases or 78% of cases while in the other cases the Pfannenstiel incision was used. The commonest procedure, performed in 124 cases (50.2%), is total abdominal hysterectomy with bilateral salpingo-oophorectomy. A total of 220 patients (89%) had Ampiclox (Ampicillin 250 mg and Cloxacillin 250mg) as post-operative antibiotic prophylaxis. Peri-operative prophylaxis was uncommon.

Table 5 shows that the largest proportion of the patients had a hospital stay of 6 to 10 days, but the average length of hospital stay was 12 days. Table 6 shows the morbidity pattern in the patients who developed complications. There were 77 such cases, giving a crude morbidity rate of 31.2 percent. Pyrexia and wound infection constituted the commonest complications.

At the outpatient follow-up visit, 23 patients or 9.3 per cent defaulted, 203 or 82.2 per cent were found to be asymptomatic, while 21 cases had problems such as vaginal discharge, urinary symptoms and intestinal obstruction. Only 4 women complained of climacteric symptoms.

Table 1

Socio-Demographic Characteristics

Age Groups (years)	*Total No. of Cases*	*%age*	*Ethnic Group*				*Occupation*			
			Yoruba	*Ibo*	*Minority*	*Hausa*	*Skilled*	*Business*	*Unskilled*	*Housewife*
30-35	**16**	6.48	14	1	-	1	8	4	3	1
36-40	**58**	23.48	53	3	1	1	28	16	11	3
41-45	**83**	33.60	74	5	2	2	42	22	15	4
46-50	**62**	25.10	55	4	2	1	30	16	12	4
> 50	**28**	11.34	26	1	1	-	14	1	12	1
Total	**247**	100	222	14	6	5	122	59	53	13
%age		***100***	***89.9***	***5.7***	***2.4***	***2.0***	***49.4***	***23.89***	***21.45***	***5.26***

Mean age at Hysterectomy (SD) = 44.20 (5.82)

Table 2

Obstetric History of the Hysterectomy Patients

Number of Deliveries	*Number of Patients*	*(%)*	*Number of Living Children*	*Number of Patients*	*(%)*
0	7	2.83	0	9	3.64
1	17	6.88	1	20	8.10
2	24	9.72	2	28	11.34
3	25	10.12	3	28	11.34
4	36	14.58	4	39	15.79
5 or more	138	55.87	5 or more	123	49.79
Total	*247*	*100.00*		*247*	*100.00*

Table 3

Indications (Reasons) For Hysterectomy

Pre-Operative Diagnosis	*Cases*	*Percentage*
Uterine Fibroids ± Menorrhagia	203	82.19
Cervical Intra epithelial Neoplasm	11	4.46
Menorrhagia only	10	4.05
Ovarian mass	12	4.86
Dysfunctional Uterine Bleeding	4	1.62
Cervical Fibroid Polyp+ Uterine Fibroids	3	1.22
Pelvic Inflammatory Diseases	2	0.80
Chronic Cervicitis	1	0.40
Post-menopausal bleeding with Fibroids	1	0.40
TOTAL	***247***	***100.00***

Discussion

Majority of the patients undergoing hysterectomy during the study period were in their fourth and fifth decade of life, which is similar to those in other published series [7,8,9,10]. Ninety percent of the patients are of Yoruba origin, in keeping with the location of the hospital in the Yoruba-speaking area of Nigeria. While the exact level of education of the subjects could not be assessed from the available records, about half of them were in skilled occupations. This suggests at least a secondary school education.

The two most common modes of presentation in this series were menorrhagia and an abdominal mass. This is in line with a high pre-operative diagnosis of uterine fibroids. It would be noted that about 80 per cent of the women had had three or more deliveries, which suggests that uterine fibroids tend to occur in our environment in multiparous patients [11,12]. It is also believed that, culturally, only women with children commonly accept the operation in this environment, even in the presence of advanced pathology. This is due to the preference for retention of regular menstrual function as an indication of hope of bearing children in the future.

Dysfunctional uterine bleeding and endometriosis are relatively uncommon in the Negroid race and the finding here is similar to that of Ezem and Otubu in 1981 [7]. Vessey *et al* in 1992 [13] found that prevalence of hysterectomy for fibroids fell with parity while the prevalence of hysterectomy for menstrual disturbances rose sharply with parity in their large cohort study in Oxford. Pelvic inflammatory disease (PID) was present in about one third of the patients as was the case in Northern Nigeria [7]. Pelvic adhesions are frequent companions of uterine fibroids in our environment due to a high incidence of pelvic infections [8,14].

The fact that over half of the patients had total abdominal hysterectomy together with bilateral salpingo-oophorectomy is a reflection of the average age at hysterectomy, most surgeons preferring to remove the ovaries when the patient is closer to 50 years [15]. A vertical midline skin incision was employed in 78 per cent of cases, which can be explained by the advantages of such an incision in the high proportion of cases with advanced pathology. Also the practice of removing abdominal sutures from such wounds on the eighth post-operative day while those from Pfannenstiel wounds are removed on the sixth day may have accounted for the longer duration of hospital stay in such patients.

The pre-operative diagnosis was confirmed by pathologic examination in 94 per cent of cases with histology reports and in the remaining 6 per cent this was dissimilar. This is not surprising as majority of the operations were performed for a pre-operative diagnosis that could potentially be confirmed by histology.

Table 4

Operative Findings

Uterine size	*Normal Size*	*≤14/40*	*15 – 20/40*	*> 20/40*	*Total*
Number	27	77	89	54	247
%	10.93	31.18	36.03	21.86	100.00

Table 5

Length Of Hospital Stay

Days	*6 – 10*	*11 – 15*	*16 – 20*	*> 20*	*Total*
Number	127	95	13	12	247
%	51.42	38.46	5.26	4.86	100.00

Average Length of Hospital Stay (S.D) = 11.98 days (4.98)

Table 6

Post-Operative Morbidity Pattern

Complication	*Number of Cases*	*Proportion of Patients with Complications (%)*
Pyrexia	34	44.1
Wound Infection	24	31.2
Anaemia	13	16.9
Wound Dehiscence	10	13.0
Bowel/Bladder Injury	3	3.9
Pelvic Abscess	2	2.6
Pelvic Haematoma	1	1.3
2^0 Haemorrhage	2	2.6
Intestinal Obstruction	1	1.3
Ureteric damage	Nil	-

The commonest form of antibiotic prophylaxis was post-operative parental Ampicillin and Cloxacillin, used in 89 per cent of cases. However, peri-operative prophylaxis using a third generation cephalosporin or amoxycillin potentiated with clavulanic acid ('Augmentin') was used in the latter years of the study period with good result. The advantage of chemoprophylaxis was demonstrated in the study of Tanos and Rojansky [16].

The crude morbidity rate of 31 per cent is high, but mainly attributed to post-operative pyrexia and wound infection. This is much lower than 65 per cent in the Northern Nigeria study [7]. However, their cases included malignant diseases. Morbidity of some sort is said to complicate 50 per cent of patients undergoing abdominal hysterectomy [2,17].

There was no mortality recorded in this series. While admitting that this is a reflection of the standard of surgery and optimum use of ancillary services, the fact that some patients were lost to follow-up after discharge may be due to death from thrombo-embolism after discharge.

There is a need to re-appraise antibiotic prophylaxis in order to further lower the incidence or major pelvic and wound infections and hence reducing hospital stay and costs. Also there is need to institute anti-thrombotic prophylaxis such as thrombo-embolic disease stockings, inflatable calf cuffs and selective heparinisation to reduce the risk of thromboembolism.

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