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ELECTIVE ABDOMINAL HYSTERECTOMY: INDICATIONS AND COMPLICATIONS IN ENUGU, EASTERN NIGERIA

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Abstract

A six-year review of hysterectomies at the University of Nigeria Teaching Hospital, Enugu, Nigeria, was undertaken to determine the rate, indications and complications of the operation. There were 14 hysterectomies per 100 gynaecological in-patients. In a decreasing order of frequency, the main indications for the 199 elective abdominal hysterectomies during the study period were: uterine fibroids (66.7%), ovarian tumour (12.1%) and cervical malignancy (11.6%). The sub-umbilical midline incision was used in 166 (83.4%) of the cases. Moderate to severe intra-pelvic adhesions were found in 59 (29.6%) of the patients. The uterine size was greater than 12 weeks gestation in 133 (66.8%) of the women. Appendicectomy was the most frequent incidental operation; it was performed on 56 (28.1%) of the subjects. Complications were recorded in 55 women, a complication rate of 27.6%. Approximately two-thirds of the complications involved the urinary tract or the abdominal incision wound. We conclude that although the hysterectomy rate in Enugu, Nigeria, is lower than in advanced countries, the indications and complications of the operation are similar to those from the latter countries. Suggestions are offered on how to minimise complications during hysterectomies.

Key words: Abdominal hysterectomy, indications, complications, Enugu.

INTRODUCTION

Hysterectomy is a frequently performed gynaecological operation. National and institutional data concerning the operation are mainly from the technologically advanced countries (Chan 1993, Pokras 1994, Cliby 1997). To our knowledge, no national data for hysterectomy are available in Nigeria and even institutional data are hardly available. Established in 1970, the University of Nigeria Teaching Hospital (UNTH), Enugu, is the oldest tertiary care centre in Eastern Nigeria. Hysterectomies performed in the institution have not been previously audited. This study was carried out with the following objectives: (1) to determine the rate of hysterectomy and (2) to document the indications for, and the frequency and type of complications encountered during elective abdominal hysterectomies at the UNTH, Enugu.

Materials and Methods

This was a retrospective study of hysterectomies performed at the University of Nigeria Teaching Hospital, Enugu, Eastern Nigeria from 1st January 1995 to 31st December 2000. The epidemiological characteristics of the patients, the indications for and the route, type and complications of the operation were extracted from their case files. The present paper reports mainly on the 199 women who underwent elective abdominal hysterectomy during the period under review, the detailed report on those who underwent either emergency or vaginal hysterectomy having been excluded. The total number of gynaecological operations and gynaecology admissions during this period were also obtained from both the

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Table 1 Age distribution of 199 hysterectomy patients in Enugu, Nigeria

Age (years)	No.	%
< 20	1	0.5
21-30	13	6.5
31-40	55	27.6
41-50	98	49.2
51-60	20	10.1
61-70	9	4.5
Unrecorded	3	1.5
Total	199	100.0

theatre and ward registers.

RESULTS

During the six-year period, there were 364 hysterectomies out of a total of 6417 gynaecological operations giving a ratio of one hysterectomy to seventeen gynaecological operations. During the same period, there were 2522 gynaecological admissions, giving a rate of 14 hysterectomies per 100 gynaecological admissions. There were 280 abdominal hysterectomies (199 elective and 81 emergency hysterectomies) and 84 vaginal hysterectomies. The age distribution of the 199 women who underwent elective abdominal hysterectomy is shown in Table 1. It is noteworthy that although no age group was exempt, 76.8% of the women were within the 31 - 50 year age group. Additionally, 83.8% were pre-menopausal. The parity distribution of the patients is shown in Table 2. All parity groups were involved, the modal parity being para 0. Eleven of the 38 nulliparous women were Catholic nuns. Eighteen (9.0%), 33 (16.6%), and 133 (66.8%) subjects belonged to the high, middle, and low socio-economic classes respectively while the socio-economic status of the remaining 15 (7.5%) subjects was not recorded.

The indications for the elective abdominal hysterectomies are shown in Table 3. Eight women had two indications each, raising the total number of indications to 207. The main indications were: uterine fibroids (66.7%), ovarian tumour (12.1%), cervical malignancy (11.6%), and eudiometrical cancer (2.9%). The sub-umbilical midline incision was used in 166 (83.4%) women, the paramedian incision in 19 (9.5%), the Pfannenstiel incision in 11 (5.5%) while the abdominal incision was not indicated in

Table 2 Parity distribution of 199 hysterectomy patients in Enugu, Nigeria

Parity	No.	%
0	38	19.1
1	9	4.5
2	19	9.5
3	16	8.0
4	14	7.0
5	23	11.6
6	28	14.1
7	20	10.1
8	12	6.0
9	6	3.0
10	7	3.5
11	4	2.0
12	2	1.0
Not recorded	1	0.5
Total	199	100.0

the remaining 4 (2.0%) women. 190 (95.5%) women had simple total abdominal hysterectomy, 7 (3.5%) had radical hysterectomy while 2 (1.0%) had subtotal hysterectomy as a result of gross intra-pelvic adhesions. Overall, 59 (29.6%) of the 199 women had moderate to severe intra-pelvic adhesions. In 133 (66.8%) women, the uterine size was greater than 12 weeks gestation size. Of the 62 women who had bilateral oophorectomy, 39 were premenopausal while the remaining 23 were postmenopausal.

Incidental operations performed were: appendicectomy 56 (28.1%), ovarian cystectomy 1 (0.5%), wedge resection of polycystic ovary 1(0.5%) and mastectomy 1(0.5%). The incidence of wound sepsis or dehiscence or incisional hernia did not differ significantly between the 56 women who had, and the 143 women who did not have incidental appendicectomy (8.9% versus 8.4%, $p > 0.05$). Furthermore, appendicitis was not recorded subsequently in any of those who did not have incidental appendicectomy. The intra-operative blood loss was less than 500 mls in 125 (62.8%) women, 500 - 1000 mls in 60 (30.2%) and 1001 - 2000 mls in the remaining 14 (7.0%) women.

Table 3. Indications for elective abdominal hysterectomy in Enugu, Nigeria

Indication	No	%
Uterine fibroids	138	66.7
Ovarian tumour	25	12.1
Cervical malignancy	24	11.6
Endometrial malignancy	6	2.9
Vesico-vaginal fistula	3	1.4
Adenomyosis	3	1.4
Dysfuntional uterine bleeding	2	1.0
Uterine sarcoma	2	1.0
Choriocarcinoma	2	1.0
Pelvic inflammatory disease	2	1.0
Total	207	100.0

Table 4 Complications of abdominal hysterectomy in Enugu,

Complication	No	%
1. Urinary tract infection	13	6.3
2. Ureteric injury	5	2.4
3. Bladder injury (including 2 vesico-vaginal fistulae)	4	2.0
4. Wound sepsis	8	3.9
5. Burst abdomen	5	2.4
6. Incisional hernia	4	2.0
7. Reactionary haemorrhage	2	1.0
8. Secondary haemorrhage	1	0.5
9. Pelvic haematoma	3	1.5
10. Anaemia	3	1.5
11. Jaundice	2	1.0
12. Deep vein thrombosis	1	0.5
13. Menopausal symptoms	4	2.0
14. Psychological problems	4	2.0
15. Intestinal injury	1	0.5
16. Vault prolapse	1	0.5
17. Death	0	0.0
18. No complication	144	70.2
Total	205	100.0

The complications encountered are shown in Table 4. No operative mortality was recorded in the series. Complications were recorded in 55

women, a complication rate of 27.6%. Six women had two complications each, raising the total number of complications to 61. Of these 61 complications, 22 involved the urinary system. Urinary tract infection was the most frequent complication occurring in 6.5% of all 199 hysterectomies. This was followed by operative injury to either the ureter (2.5% of all cases) or the bladder (2% of all cases). Problems with the abdominal incision arose in 17 (8.5%) women in the form of sepsis alone (4.%), burst abdomen (2.5%) or incision hernia (2.0%). Four of the 39 premenopausal women who had bilateral oophorectomy complained of menopausal symptoms and received hormone replacement therapy. The rest did not.

Psychiatric morbidity was recorded in 4 women, an incidence of 2.0%. The psychiatric disorders predated, but were worsened by, the surgery in two of these. Hypertension was the commonest associated medical disorder occurring in 15 (7.5%) of the subjects. Other disorders were bronchial asthma (1), Addison's disease (1), and diabetes mellitus (1). 105 (52.8%) of the 199 women were discharged within 10 days and the rest between the 11th and the 15th post-operative days.

DISCUSSION

The hysterectomy rate of 14 per 100 women obtained in this study is not directly comparable to the 33 per 100 women obtained amongst the women in the United States of America (USA) (Cliby 1997) because the present study was hospital-based while that of the USA was population-based. But it at least suggests that the operation is less frequently performed in Nigeria than in the USA, since one would have expected a higher figure for the highly selective hospital population. That no age or parity group was exempt suggests that the operation has a reasonably good acceptability amongst our women once the indication is clear to the patient. This is rather surprising considering the high premium placed on child bearing in our society. However, the apparent ready acceptability can be explained by the fact that most of the nulliparous or low parity women in the series were either catholic nuns or had longstanding tubal infertility in association with symptomatic uterine fibroids. For them therefore the restoration of their health through hysterectomy was a more important consideration than the retention of a non-functional uterus. The predominance of women of low socio-economic status in the series reflects the overall distribution of our gynaecology patients, the majority of whom belong to this class.

The most frequent indication for hysterectomy in this study (uterine fibroids) is the same as documented in other reviews (Chan et al 1993, Pokras et al 1994, Cliby 1997). While the predominant use of either the median or paramedian incision may reflect the surgeon's preferences, it was more likely due to the big sizes of the fibroid uteri and the associated high prevalence of pelvic adhesions. A Pfannenstiel incision under these circumstances would have made surgical access difficult although it would have resulted in a lower complication rate of incisional hernia or burst abdomen as has been noted in other studies (Willocks et al 1963, Greenall et al 1980, Ozumba et al 1991).

It was surprising that only 4 (10.3%) of the 39 premenopausal women who had bilateral salpingo-oophorectomy complained of menopausal symptoms, a figure much lower than the 50% reported by Tindall (1987). Equally surprising was the fact that only these four patients received hormone replacement therapy (HRT). HRT should have been beneficial in all such castrated young women as has been recommended by other workers (Tindall 1987, Speroff et al 1994, te Velde et al 1994). The incidence of other complications is quite comparable to other published reports (Chan et al 1993, Pokras et al 1994, Cliby 1997). However, the predominance of urinary tract complications is quite striking. With regard to urinary tract infection (UTI), urine cultures were done only in cases with symptoms suggestive of UTI. Additionally, all patients were on

prophylactic antibiotic therapy. Furthermore, in those with proven UTI, it was difficult to know whether the infection predated or post-dated the surgery since urine cultures were not done preoperatively in any of the patients. Had urine cultures been done in all cases either pre- or post-operatively, a higher incidence of UTI was likely to have been recorded. In order to minimise the risk of UTI, midstream urine should form part of the preoperative evaluation of hysterectomy patients. Additionally, full aseptic techniques must be observed during preoperative urethral catheterisation. In the postoperative period, intermittent urine cultures should be carried out. Although bladder and ureteric injury may not be completely avoidable during hysterectomy, identification and appropriate mobilisation of the ureter have been shown to reduce the risk of ureteric injury (Symmonds 1976, Cliby 1997).

The issue of incidental appendicectomy during hysterectomy has remained controversial (Kovac et al 1993). Some surgeons favour it because of increased risk of appendicitis later, while others are against it because of increased risk of postoperative infectious morbidity. The data in the present study do not support either view. Therefore, while routine appendicectomy during hysterectomy may not carry any increased risk of infective morbidity, it does not seem to confer any benefit. The choice is therefore left to the individual surgeon. Since 1 in 10 women undergoing hysterectomy has an associated medical disorder, a full preoperative clinical and laboratory evaluation is important to detect and treat these so as to minimise complications. A consultation with physicians is usually necessary and beneficial in such cases and is recommended.

We conclude that the hysterectomy rate in Enugu, Nigeria, is 14 per 100 gynaecological in-patients; the most frequent indication is uterine fibroids while urinary tract infection/injury and incisional wound problems are the most frequent complications.

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