


Clinico-Pathological Assessment of Hysterectomies in Zaria

Samaila Modupeola OA¹, Adesiyun AG², Agunbiade OA², Mohammed-Duro A²

Departments of Pathology¹ and
Obstetrics &Gynaecology² Ahmadu
Bello University Teaching Hospital,
Shika- Zaria, Nigeria

Eur J Gen Med 2009; 6(3): 150-153

ABSTRACT

Aim: To assess and compare accuracy of the clinical indications and histopathological diagnoses from hysterectomy specimens in Zaria.

Methods: All hysterectomy specimens received in the department of Pathology, Ahmadu Bello University Teaching Hospital, Zaria from January 1995 to December 2005 were analyzed. The specimens were fixed in formalin, processed in paraffin wax and histology slides stained with haematoxylin and eosin were studied. Frequency of clinical indications were compiled and compared with histopathological diagnoses.

Results: 317 hysterectomies were analyzed. Of these 288 (90.9%) were associated with salpingo-oophrectomies. Median age of patients' was 45 years and mean age was 44.6 years. Parity of the women ranged from 0-11 with an average of 4.

The clinical indications comprised non-neoplastic- 47 (14.8%) and neoplastic-226 (71.3%) causes. The commonest benign neoplastic indication was uterine fibroid 196 (61.8%). Malignant neoplastic indication included cervical cancer 12 (3.8%) and endometrial cancer 6 (1.9%). Cervical intraepithelial neoplasia (CIN), a preneoplastic lesion accounted for 44 (13.9%). Histopathological diagnosis of leiomyoma was made in 218 (68.8%), cervical cancer -20 (6.3%) and CIN- 49 (15.5%). Incidental pathologies seen included chronic cervicitis -24, adenomyosis- 13 and cystadenoma - 8. Clinical indications in 14 (4.4%) patients were at variance with histological diagnosis.

Conclusion: The clinical indication for hysterectomy and histopathological outcome are comparable in over 90% of cases. The commonest indication and histological finding in our setting is leiomyoma.

Key words: Hysterectomy, Indication, Pathology, Leiomyoma.

Correspondence:

Dr, MOA Soetan Samaila FMCPATH
Department of Pathology
A.B.U.T.H, Zaria, Nigeria.
Postal code: 810001
Fax no:+23469332271-2
Email: mamak97@ yahoo.com
Mobile: +2348035891007

INTRODUCTION

Women world wide suffer from gynaecologic and obstetric disorders that require hysterectomy as a treatment option (1-3). This may involve removal of the fallopian tube and ovary depending on clinical indication, age and parity of the woman (4). The procedure is not well embraced in developing countries, in particular Nigeria due to socio cultural reasons (5). Thus, the clinical indication for the procedure should be justifiable. This study is a comparative assessment of the accuracy of clinical indication for hysterectomy and the histopathological outcome.

MATERIALS and METHODS

All hysterectomy specimens sent to the Department of Pathology, Ahmadu Bello University Teaching Hospital, Zaria over a period of 11 years (1995-2005) were studied. Specimens were received from in-patients in the teaching hospital, general, private and federal medical center hospitals within and bordering Zaria. These specimens were received in 10% formalin and processed in paraffin wax. Histology sections stained with haematoxylin and eosin (H&E) were studied. Relevant information on the clinical indication, age, parity and duration of symptoms of patients were retrieved from accompanying request cards. Histopathological diagnoses of these specimens

were compared with the clinical indications for the procedure. All hysterectomies without histology report or where slides or tissue blocks could not be traced were excluded from the study.

RESULTS

317 hysterectomies were analysed. Of these 288 (90.9%) included a salpingo-oophrectomy. 26 (8.2%) cases were from outside the teaching hospital.

Median age of patients' was 45years and mean age was 44.6 years. The peak age for the procedure in these patients was the fifth decade (40-49 years) (Table 1).

Parity of the women ranged from 0-11 with an average of 4 and duration of symptoms ranged from six months to three years.

The clinical indications comprised non-neoplastic-47 (14.8%), pre-neoplastic- 44 (13.9%) and neoplastic-226 (71.3%) causes (Table 1).

The commonest benign neoplastic clinical indication was uterine fibroid 196 (61.8%). Malignant neoplastic indication included cervical cancer 12 (3.8%) and endometrial cancer- 6 (1.9%).

Histopathological diagnoses were categorized into non-neoplastic- (%), pre-neoplastic- (%) and neoplastic- (%) (Table 2).

Table 1. Age groups and clinical indications.

| Indications | Age in | | | | Total (%) |
|--------------------------|----------|-----------|------------|-----------|-------------------|
| | 20-29 | 30-39 | 40-49 | 50+ | |
| a. Nonneoplastic | | | | | |
| Adenomyosis | 0 | 2 | 4 | 0 | 6 (1.9) |
| Pelvic pain | 0 | 1 | 5 | 0 | 6 (1.9) |
| Polyp | 0 | 0 | 1 | 1 | 2 (0.6) |
| UV prolapse | 0 | 0 | 4 | 2 | 6 (1.9) |
| Vaginal bleeding | 0 | 2 | 10 | 3 | 15 (4.7) |
| Uterine rupture | 0 | 2 | 0 | 0 | 2 (0.6) |
| Ovarian cyst | 2 | 3 | 5 | 0 | 10 (3.2) |
| Subtotal | 2 | 10 | 29 | 6 | 47 (14.8) |
| b. Pre-neoplastic | | | | | |
| Dysplasia | 0 | 8 | 34 | 2 | 44 (13.9) |
| c. Neoplastic | | | | | |
| Fibroid | 0 | 29 | 126 | 41 | 196 (61.8) |
| Ovarian tumour | 1 | 1 | 3 | 0 | 5 (1.6) |
| Cervical cancer | 0 | 2 | 7 | 3 | 12 (3.8) |
| Endometrial cancer | 0 | 2 | 3 | 1 | 6 (1.9) |
| Adenocarcinoma | 0 | 0 | 2 | 2 | 4 (1.3) |
| Choriocarcinoma | 0 | 0 | 2 | 1 | 3 (0.9) |
| Subtotal | 1 | 34 | 143 | 48 | 226 (71.3) |
| Total | 3 | 52 | 206 | 56 | 317 |

Table 2. Spectrum of histopathological diagnoses.

| Histological diagnosis | Frequency | | |
|-------------------------------|------------------|-----------------------------|--------------|
| | Actual | Incidental pathology | Total |
| a. Nonneoplastic | | | |
| Chronic cervicitis | 8 | 24 | 32 |
| Squamous metaplasia | 0 | 10 | 10 |
| Adenomyosis | 6 | 13 | 19 |
| Hydatidiform mole | 0 | 3 | 3 |
| Subtotal | 14 | 50 | 64 |
| b. Preneoplastic | | | |
| CIN | 44 | 5 | 49 |
| c. Neoplastic | | | |
| Leiomyoma | 196 | 22 | 218 |
| Thecoma | 1 | 0 | 1 |
| Cystadenoma | 6 | 8 | 14 |
| Mature teratoma | 3 | 0 | 3 |
| Cystadenocarcinoma | 5 | 0 | 5 |
| Dysgerminoma | 1 | 0 | 1 |
| Embryonal carcinoma | 1 | 0 | 1 |
| Squamous cell carcinoma | 18 | 2 | 20 |
| Leiomyosarcoma | 4 | 0 | 4 |
| Adenocarcinoma | 4 | 2 | 6 |
| Choriocarcinoma | 2 | 1 | 3 |
| Stromal sarcoma | 1 | 0 | 1 |
| Granulosa cell tumour | 3 | 0 | 3 |
| Subtotal | 245 | 35 | 280 |
| Total | 303 | 90 | 393 |

Incidental pathologies seen included chronic cervicitis -24, adenomyosis -13, cystadenoma -7 and hydatidiform mole -3. Clinical indications in 14 (4.4%) patients were at variance with histological diagnosis.

DISCUSSION

Hysterectomy is a major surgical procedure which involves the total removal of the uterus with or without the fallopian tubes and ovaries (4). Many women in Africa and Nigeria in particular are reluctant to undergo this procedure because of the socio-cultural attachment to procreation and taboos associated with lack of menstruation (5). As such indication for the procedure must be cogent.

Hysterectomy specimens accounted for 1.5% of all specimens received in our department within the study period. Reports on the incidence of hysterectomies ranges from 14.3% to 22.7% (1, 2,6-8). The low frequency rate in this review may be related to reluctance of our women to part with their uterus.

Age and parity are factors usually considered before hysterectomy is performed in our setting (9). The

peak age for the procedure was the fifth decade (40-49). Estimated age range is 31- 60 years (5,8,10-12). The average parity in our study was four with a range of 0-11. Our finding is comparable with the 3-9 parity range reported in Ibadan, Western Nigeria (10). Twenty- five of the women were nulliparous. Gynaecologists practicing in developing countries, in particular Nigeria are usually reluctant to perform hysterectomy in young nulliparous females except in advanced malignant diseases, unsuccessful myomectomy for uterine fibroids and uterine rupture which is a medical emergency (9,13). In developed countries, parity is not a limiting factor (1,2,10).

The most frequent clinical indication was uterine fibroid, a disease with predilection for black women. This correlated well with histologic findings of bundles of spindle cells having fairly uniform rod shaped nuclei arranged in predominant interlacing patterns in a fibrocollagenized stroma. 22 incidental leiomyomata were also found in specimens removed for other reasons. Many studies in Nigeria and other parts of Africa have documented fibroid as the

leading indication for hysterectomy in Black African Women (8-11,13).

Cervical intraepithelial neoplasia (CIN), a pre-neoplastic disease which early detection impacts positively on the incidence of cervical cancer was the second commonest clinically and histologically. Over 70% of the cases were high grade lesions histologically. All the women with CIN as clinical indication were identified from prior cervical smear cytology. We thus, recorded a high degree of correlation with subsequent tissue specimen. Unfortunately, the cervical cytology is not widely employed in our setting due to lack of awareness and socioeconomic factors (14,15). 5 incidental CIN lesions were recorded.

Vaginal bleeding ranked a poor third in the clinical indication. Histology of these cases revealed cervical SCC in 6, endometrial cystic hyperplasia in 2, chronic cervicitis -5 and CIN- 2. All six SCC were advanced stage disease. Patients in our setting more often present late in the course of their disease (14). Of the 143 patients with neoplastic clinical indication, 11.9% was malignant. 5 of the women with malignant clinical indication had previous histological diagnosis.

Incidental pathological findings ranged from seemingly innocuous chronic cervicitis, squamous metaplasia and hydatidiform mole to malignant diseases comprising, squamous cell carcinoma and choriocarcinoma.

Clinical accuracy of 95.6% was observed. Of the 14 clinical indications at variance with histology, 12 (86%) did not require hysterectomy as the treatment of choice.

In conclusion, the leading clinical indication for hysterectomy and histological finding was leiomyomata. Over 90% of clinical indications compared well with histopathological outcome.

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