

Original article

Hysterectomy - a clinico-pathological correlation in a rural setting

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Abstract

Hysterectomy is one of the commonest gynaecological surgeries throughout the world. There are only few studies to substantiate the clinicopathological correlation especially in a rural setting. This study was done to find out the most likely age group of hysterectomies, commonest pathology in hysterectomy specimens, clinically as well as histopathologically, in our setting, and its correlation to preoperative clinical indication. It also highlighted the possibility of missed double pathologies or malignancy. Retrospective study of 368 hysterectomy specimens over 2 years was undertaken. Formalin fixed specimens were sectioned, processed and stained with haematoxylin and eosin. The commonest age group was found to be 40-49 years which comprised 41% of the cases. Abdominal hysterectomy was the commonest route of surgery at 72% followed by vaginal route which was usually done for UV prolapsed. Fibroid was the commonest clinical indication for surgery at 40% followed by prolapsed at 25%. Histopathologically leiomyoma was most common impression (41%) followed by atrophic endometrium and adenomyosis. The correlation between the clinical and histopathological diagnosis with respect to benign uterine pathologies was found to be very good. more than 95% correlation was found in fibroids, UV prolapsed, adenomyosis and endometrial polyp. Few double pathologies were missed. 28 of the 32 clinically designated AUB showed specific pathology on histopathological examination. This study confirms a good correlation between clinical indications and histopathology especially in benign conditions. However, histopathological confirmation is mandatory so as to confirm diagnosis and not miss any pathology.

Key words - hysterectomy, histopathology

Introduction

Hysterectomy is the second most frequently performed major surgical procedure on women all over the world especially peri and post menopausal, second only to caesarean (1). According to literature about 100,000 hysterectomies are performed in UK alone (2) and about 60,000 in USA (3). No national statistics are available for India. A study in Northern India and one in Western India put the incidence at 7% among married women and 7-8% in rural and 5% in urban women respectively (4,5). The lifetime risk of hysterectomies ranges from 20%-35% according to various studies (6, 7, 8). Hysterectomy is usually

performed by a) Abdominal b) Vaginal and c) Laparoscopic routes (2). Historically Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal hysterectomy was done in 1929 (9). Hysterectomy is performed for a number of benign as well as malignant conditions. However, the final diagnosis is by histopathology and every specimen must be subjected to the same (10). Hence, a retrospective study was carried out in our institute in order to identify the most common pathology and correlate them with clinical indications in a rural setting.

Aim and objectives:

Aim - To study retrospectively all the hysterectomies performed in this institute since the past 2 years.

Objectives;

1. To study the commonest age group undergoing hysterectomies
2. To find out the commonest clinical indication for hysterectomies
3. To describe the clinicopathological correlation in these cases.

Materials and methods:

A retrospective study analysis of 318 cases received in Department of Pathology, NRI Institute of Medical Sciences, Visakhapatnam over a period of 2 years from January 2013 to December 2014 was

undertaken. On receiving the hysterectomy specimen as per protocol the gross features were noted. Multiple representative bits were taken, processed and paraffin blocks made. Sections were then stained with Haematoxylin and Eosin stain. After thorough microscopic examination a Histopathological diagnosis was given. If more than one pathology was identified both were included in their specific categories. Patient's age, type of surgery, clinical indication and Histopathological diagnosis were reviewed, analyzed and correlated.

Observations and result:

A total of 318 hysterectomy specimens were received between January 2013 and December 2014.

Table 1: Age distribution of the cases

AGE (years)	NO. OF CASES	PERCENTAGE (%)
20 – 29	20	6.2
30 – 39	104	32.7
40 – 49	133	41.8
50 – 59	39	12.2
60 – 69	19	5.9
Above 70	3	0.9

The age groups that underwent hysterectomy for various indications ranged from 20 – 75 years. Of 318 cases almost 133 were in the age group of 40 – 49 which comprised the commonest age group undergoing the surgery. 33% were in the age group of 30 – 39 years and 12% in 50 – 59 years. The correlation between age and hysterectomies is illustrated in Table 1 and Figure 1.

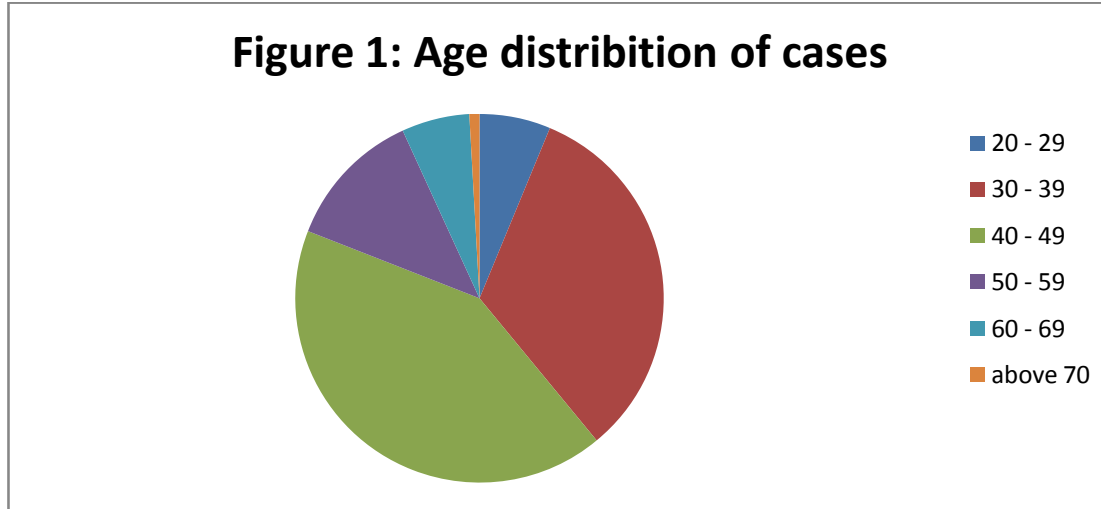


Table 2: Type of Hysterectomy

TYPE	NUMBER	PERCENTAGE (%)
Abdominal Hysterectomy	232	72.9
Vaginal Hysterectomy	77	24.2
Laprosopic Hysterectomy	9	2.8

The commonest procedure in our setting was found to be abdominal hysterectomy at 72%. Laprosopic hysterectomy was rarely performed at 3% of cases. Vaginal route was usually adopted for prolapsed uterus. The type of hysterectomy performed is illustrated in Table 2.

Table 3: Clinical indication for hysterectomy

CLINICAL DIAGNOSIS	NUMBER	PERCENTAGE (%)
Fibroid	125	39.3
AUB	32	10
Adenomyosis	39	12.2
UV Prolapse	80	25.1
Endometrial polyp	20	6.2
Ca Cervix / CIN	15	4.7
Ovarian cyst	6	1.8
Ovarian tumor	1	0.3

Clinical indication for hysterectomy ranged from abnormal uterine bleeding to suspected malignancies. 95% of the hysterectomies were performed for benign conditions. Only 5% were done with a clinical diagnosis of malignancy.

Of the 318 cases, 125 (40%) were preoperatively diagnosed as Fibroid. 25% of the cases were of Utero vaginal prolapse. Following this in incidence were Abnormal uterine bleeding and Adenomyosis at 10% and 12% respectively. The clinical indications for hysterectomy have been tabulated in Table 3.

Table 4 : Histopathological Diagnosis

HISTOPATHOLOGICAL DIAGNOSIS	NUMBER	PERCENTAGE (%)
Leiomyoma	134	41
Atrophic endometrium	80	24.5
Adenomyosis	62	19
Endometrial Polyp	20	6.1
Ca cervix / CIN	9	2.7
Endometrial AdenoCarcinoma	2	0.6
Endometrial Hyperplasia	10	3
Endometrial stromal tumor	1	0.3
GIST	1	0.3
Ovarian cyst	6	1.8
Ovarian tumor	1	0.3

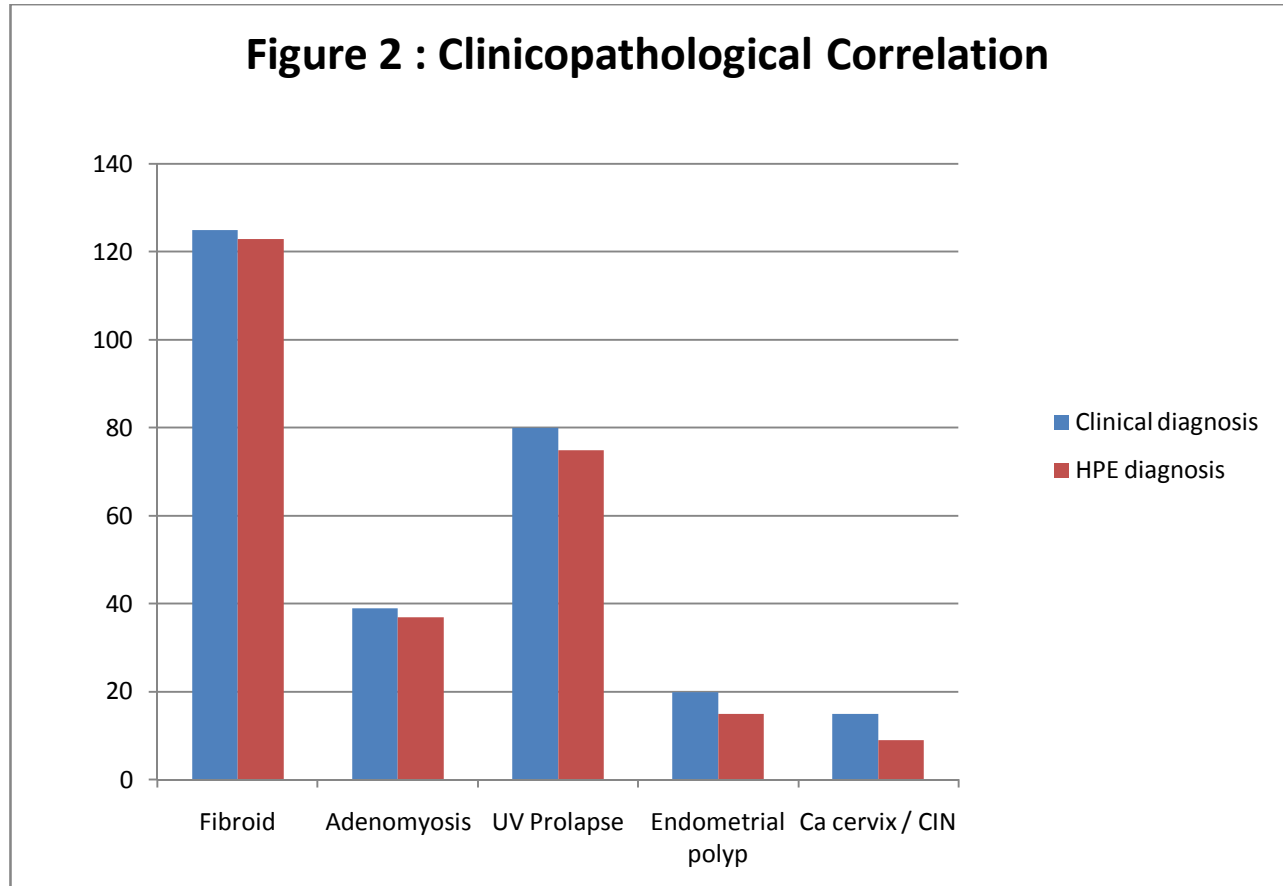
On Histopathological examination the commonest pathology, similar to clinical impression , was found to be Leiomyoma at 41% (n = 134). Atrophic endometrium was reported in 25% of cases (n = 80) as the pathology in UV prolapsed cases. 19% of the cases were diagnosed as adenomyosis. 6.1% (n = 20) cases of Endometrial Polyp were identified. Besides, 09 Carcinoma Cervix / CIN , 02 Endometrial Adenocarcinoma , 01 each of Endometrial stromal tumor and Gastrointestinal stromal tumor and one ovarian tumor was also reported.

The Histopathological findings are illustrated in Table 4.

Table 5: Correlation Between clinical and Histopathological diagnosis.

CLINICAL DIAGNOSIS	NUMBER	HPE CORRELATED	PERCENTAGE CORRELATED (%)
Fibroid	125	123	98
Adenomyosis	39	37	95
UV Prolapse	80	75	94
Endometrial polyp	20	15	75
Ca cervix / CIN	15	9	60
Ovarian cyst	6	6	
Ovarian tumor	1	1	

Figure 2 : Clinicopathological Correlation



The correlation between the clinical and histopathological diagnosis with respect to benign uterine pathologies was found to be very good. 98% of the Fibroids diagnosed clinically were confirmed on histopathology as leiomyoma. However, double pathologies of Adenomyosis in 5 cases and endometrial polyp in 3 cases co existed. One case diagnosed as fibroid was found to be Endometrial Stromal tumor and one was histopathologically diagnosed as Gastrointestinal stromal tumor. Almost 100% correlation was found between clinical and histopathological examination in Adenomyosis but 2 cases with coexisting Fibroid were missed.

95% clinically diagnosed UV prolapse were reported as atrophic endometrium with 4 with coexistent adenomyosis and 1 with fibroid.

In cases designated Abnormal Uterine Bleeding (AUB) the histopathological examination found definitive pathology in about 88% of the cases. Out of 32 cases of AUB, 5 were diagnosed as Leiomyoma, 11 Adenomyosis, 10 Endometrial Hyperplasia, 02 Endometrial adenocarcinoma with 04 cases being untraceable. The clinicopathological correlation in the diagnosis is depicted in Table 5 and figure 2.

Discussion:

Hysterectomy is one of the commonest gynaecological surgeries throughout the world. However, the decision to sacrifice the organ is a vital one and must be taken judiciously only after all conservative modes of management are exhausted. The commonest age group undergoing hysterectomies was found to be 40 – 49 years in our study. This is in accordance with a number of studies in India where the commonest age group is similar (11, 12, 13, 14). In a Nepalese study the mean age was 46.3 (15). The commonest route of hysterectomy in our hospital, as in other parts of the world, was abdominal followed by vaginal. The vaginal route was especially done for UV prolapse cases. Various International studies from Canada with abdominal at 78% (16), Hongkong with abdominal hysterectomy of 71% (17) and 5-6 fold more abdominal hysterectomies in UK (18). In Indian studies also the abdominal route predominates (11, 12,14).

The commonest clinical indication for surgery was Fibroid in USA (14), Hongkong (19), Pakistan (20) and South Africa (21). In a study In Canada however DUB was the commonest pathology noted (11). Pandey et al (22) in an audit of hysterectomy cases in India suggested that hysterectomy was justified in

98.9% women based on post operative HPE. In this study also 40% were clinically diagnosed as fibroid and 16.3% were UV prolapse. So also in our study with 39% fibroid and 25% UV prolapse. In our study on histopathology 41% of the cases were Leiomyoma and 25% showed microscopic features of atrophic endometrium. The incidence of Leiomyoma was 25.8% in Saudi Arabia, 78% in USA and 48% in Nigeria (10, 23,24). The clinicopathological correlation between preoperative and histopathological examination was more than 90% especially in benign conditions. Lee et al (25) found 80% concordance in 80% cases. Miller (26) studied 246 cases and 50% concordance rate was established.

Conclusion:

Hysterectomy remains the widely used treatment modality for various uterine pathologies. This study confirms the high incidence of benign conditions of uterus in our rural set up. A strong clinicopathological correlation has been found in the cases. A thorough histopathological confirmation is mandatory to not only substantiate the clinical diagnosis but also to find missed pathologies especially malignancies and establish definitive cause in a number of cases designated abnormal uterine bleeding.

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