

Indications and Histopathological Findings among Gynaecological Hysterectomy Specimens in a Tertiary Care Centre in South India

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Abstract

Introduction: Hysterectomy is the most common major gynaecological surgery done in the world. Common reasons include abnormal uterine bleeding (AUB) and leiomyoma. *Aim and Objectives:* This study was done to assess the indications and associated pathological findings among hysterectomy cases in our centre. *Materials and Methods:* This was a prospective study conducted over a period of three years from Jan 2014 to Dec 2016. All cases of hysterectomy conducted for gynaecological reasons were included in the study. *Results:* A total of 319 cases were included in the study. Most of the patients who underwent surgery were in the 4th and 5th decade. Common clinical indications included AUB and fibroid. In 45.76% of the hysterectomy specimens, no significant pathology was identified. Most significant histopathological findings were leiomyoma followed by adenomyosis. *Conclusion:* Hysterectomy still continues to be the surgery of choice for benign conditions, even though in developed countries, it continues to reduce with advent of newer methods. Larger studies are necessary to identify the reasons for hysterectomy, and to avoid hysterectomy for benign conditions, particularly in our part of the world.

Keywords: Hysterectomy; AUB; Leiomyoma; Adenomyosis.

Introduction

Hysterectomy is the surgical removal of uterus and is the most common gynaecological procedure conducted worldwide. It may be total or subtotal and involves removal of tube or ovarian, unilateral or bilateral. The routes involved could be vaginal or abdominal or even laparoscopic depending on the patients presenting features and surgical expertise of the operating surgeon [1,2].

The hysterectomy procedure is often recommended, when all medical lines of management have failed. It renders the patient unable to bear children and could carry long-term surgical and well as psychological side effects. With improving treatment modalities, the number of hysterectomy since the first subtotal

hysterectomy in 1843 or the total hysterectomy in 1929, could fall down. Common indications for hysterectomy include dysfunctional or abnormal uterine bleeding (AUB), fibroids, adenomyosis, prolapse and cancer. Studies have shown hysterectomy with oophorectomy to be beneficial in reducing risk of breast and ovarian cancer [1-3].

Very few studies are conducted in recent years to identify the reasons for hysterectomy and the pathologies associated. This study was conducted to identify the indications and associated pathological findings in our centre.

Materials and Methods

This is a three year prospective study (January 2014 – December 2016) of all consecutive gynaecological patients who underwent hysterectomy for various clinical indications at Vinayaka Missions Kirupananda Variyar Medical College, Salem. Our

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hospital caters predominantly to the middle and lower socio economic class in and around Salem district.

The decision to perform hysterectomy was taken by the gynaecologist for various indications. All hysterectomy specimens during the three years, which were conducted for gynaecological indications, were included in the study. Brief clinical data was collected and correlated with histopathological diagnosis. Hysterectomy procedures conducted for obstetric causes or incomplete clinical data were excluded from the study. Surgical specimens were received in the Department of Pathology and were appropriately evaluated, grossed and Hematoxylin and Eosin sections were prepared. Specimens were received as per protocol and fixed in 10% formalin. Larger specimens were cut for fixation. Gross features were recorded and representative samples were taken and sent for processing and slide preparation. All slides were stained with H&E and were evaluated by experienced pathologists and diagnosis made. Special stains, when necessary were used to identify associated pathologies. Descriptive statistics was used for statistical analysis.

Results

A total of 319 patients underwent hysterectomy during the study period. The minimum age was 27

years and the maximum age was 73 years with a mean age of 44.72 years. The age distribution is as shown in Table 1. Hysterectomy alone was done in 8 of 319 cases with fibroid (5/8, 62.5%) being the most common indication. Four cases of hysterectomy with unilateral salphingoophorectomy was done. Histopathology revealed two cases of leiomyoma with concomitant ovarian cyst in one case. The remaining 307 cases consisted of patients with hysterectomy with bilateral salphingoophorectomy. Types of hysterectomy with common clinical indications are as shown in Table 2.

Clinical indications for hysterectomy (Table 3) included adenomyosis (29), AUB (67), AUB with fibroid/ adenomyosis (60), Carcinoma Cervix (3), Carcinoma ovary (3), Endometrial carcinoma (1), Cervical intraepithelial neoplasia -2 (2), Chronic Pelvic inflammatory disease (4), fibroid alone (97), endometrial polyp (4), Prolapse (27), and Ovarian cyst (18). No significant pathology was identified in 45.76% (146/319) of the cases in the pathology department. Among the significant histopathological findings, common findings were leiomyoma followed by adenomyosis, and simple endometrial hyperplasia. Among the ovarian cysts, serous cystadenoma was the most common finding. No patient's death or major complications were reported among these patients during the study period or up to a month of follow-up post surgery.

Table 1: Age distribution

Age group	Number of cases	Most common clinical indication
20-29	5	AUB
30-39	57	AUB
40-49	202	Fibroid/ AUB
50-59	37	Utero-Vaginal prolapse
60-69	15	Proplapse/ ovarian cyst
70-79	3	Carcinoma/ Post Menopausal Bleeding

Table 2: Types of hysterectomies

Type	Number	Most common clinical indication
Hysterectomy	8	Fibroid
Hysterectomy with unilateral salphingo-oophorectomy	4	AUB
Hysterectomy with bilateral salphingo-oophorectomy	307	AUB

Table 3: Most common clinical indications for hysterectomy:

Clinical Diagnosis	Number of cases
AUB	185 (57.99%)
Leiomyoma/ Fibroid	78 (24.45%)
Ovarian cysts/ tumors	23 (7.21%)
Adenomyosis	14 (4.39%)
Uterovaginal prolapse	19 (5.96%)

Table 4: Comparison with other studies

Study	Year	Most common clinical indication
Maresh MJ et al (9)	2002	AUB
Jaleel R et al (6)	2009	Fibroid
Akhter S et al (4)	2015	Fibroid
Neelgund S et al (5)	2016	AUB
Present study	2017	AUB

Discussion

Hysterectomy is the most commonly performed gynaecological surgery worldwide. It is known to be successful in terms of symptomatic relief and patient satisfaction and data regarding clinical and histopathological correlation is very less in our country. This study was conducted to analyze the patterns of lesions in hysterectomy specimens in our institution.

Hysterectomy is often performed in the age group of 30-50 years and in our study, 81.19% of the patients belonged to this age group. Similar age incidence has been reported in other studies [4-6].

Hysterectomy with bilateral salpingo-oophorectomy was the most common surgery performed during the study period. Similar incidence has been reported by other studies [5].

AUB is the most common presenting symptom in the gynaecological department and in terms of relief, hysterectomy is the most common surgical procedure done for patients symptom relief and general satisfaction [7]. In our study 31.9% of the patients had AUB. Patients were most often in the fourth and fifth decade and hysterectomy with bilateral salpingo-oophorectomy was the most common procedure done. Leiomyoma and simple endometrial hyperplasia were common histopathological findings in these patients. Multiple studies report AUB and fibroid has common causes for hysterectomy [8].

Oophorectomy is common among women over 40 years of age and almost always after 50 years. Significant pathologies are usually less than 10% and in our study, most common significant finding was serous cystadenoma of ovary. Only one case of serous cystadenocarcinoma was noted. Removal of ovaries to reduce risk of ovarian cancer is still controversial [9].

Amongst uterine cancers 4 cases were seen. Three were cervical cancer and one was endometrial carcinoma. Compared to cervical cancers, malignancies of body of uterus are comparatively rare in India and other studies have shown similar data [8,10].

The most common myometrial lesions in our study were leiomyoma followed by adenomyosis. Leiomyoma were mostly intramural, followed by subserosal and submucosal. Multiple leiomyomas were commonly seen and size varied between <0.5 cm to 15 cm diameter. Most of the patients clinically presented as predominantly AUB or fibroid. No case of leiomyosarcoma was seen in our study. Other studies also show leiomyomas as common endometrial lesions [4,5,8,11].

Adenomyosis is the presence of functioning endometrial glands and stroma in the myometrium. In our study, histopathologically, it was the second most common significant finding. In our study, histopathologically adenomyosis was found to be present in 18% of the cases. Other studies have shown higher prevalence [5,12]. Comparison of present study with various studies is as shown in Table 4.

Worldwide, in developed countries, the number of hysterectomies for benign conditions is reducing due to improving conservative methods of treatment (endometrial resection, ablation or intrauterine hormone releasing system). Improved methods of management could reduce the number of unnecessary hysterectomies. (13,14)

Conclusion

Hysterectomy is the most commonly performed gynaecological surgery. Predominant clinical indications include AUB and fibroid. Common histopathological findings include leiomyoma, adenomyosis and simple endometrial hyperplasia.

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