

CLINICO-PATHOLOGICAL STUDY OF HYSTERECTOMY SPECIMENS IN KATHMANDU MEDICAL COLLEGE TEACHING HOSPITAL

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ABSTRACT

Uterus is subjected to many non-neoplastic and neoplastic diseases. Hysterectomy is the commonest gynecological surgery done for the management of the pathologies of the female reproductive system. Histopathological examination of hysterectomy specimens is done routinely which has both diagnostic and therapeutic significance.

Objective

To study the common pathologies identified in hysterectomy specimens and to correlate them with the clinical findings.

Methodology

A cross sectional study was carried out among all the hysterectomy specimens irrespective of primary lesion sent for histopathological examination from January 2016 to December 2017 in Department of Pathology, Kathmandu Medical College Teaching Hospital (KMCTH). Relevant history was taken from the requisition form. Ethical clearance was obtained from the Institutional Review Committee of KMCTH.

Results

A total of 198 cases were studied. The most common pathology encountered was leiomyoma (60.0%) followed by adenomyosis (14.0%). Atrophic endometrium was seen in 24.3% cases. Chronic cervicitis was found in most of the cases (96.5%) along with endocervical polyp in 8.1% cases. Leiomyoma was found to be the most common indication for hysterectomy comprising 48.0% followed by abnormal uterine bleeding (24.75%) and utero-vaginal prolapse (18.25%). Hysterectomy was most commonly performed in the age group of 41 - 50 years and total abdominal hysterectomy with bilateral salpingo-oophorectomy was found to be the commonest procedure done comprising 80.0%.

Conclusion

Leiomyoma was found to be the most common pathology in myometrium and chronic cervicitis in cervix. Abnormal uterine bleeding and vaginal prolapsed were also found to be common. Lesions which can be managed conservatively do need hysterectomy or not, is a matter of great concern.

KEY WORDS

Hysterectomy, uterus, leiomyoma.



INTRODUCTION

Uterus is a vital female reproductive organ. Due to continuous influence of different hormones, life style, strenuous physical activities and poor hygiene, it is subjected to many non-neoplastic conditions like abnormal uterine bleeding (AUB), utero-vaginal prolapse (UVP), endometriosis, adenomyosis, and neoplastic conditions like leiomyoma, stromal sarcoma, leiomyosarcoma, cervical carcinoma, endometrial carcinoma.¹ These lesions may occur throughout the life time of a women and have a great impact on many aspects of quality of life which includes reproductive ability, mental health, ability to work and to perform routine physical activities.^{2,3,4}

Hysterectomy is the commonest gynecological surgery done for the management of the pathologies of the female reproductive system though many treatment options are available including both medical and surgical procedures.⁵ Hysterectomy causes the patient unable to bear children and of course have surgical risks and long term effects. So hysterectomy is recommended when other possible treatment is not available or not improving with the conservative treatment or the patient had completed her family.⁶ Hysterectomy is often done on patients demand to get rid of monthly disturbances and to improve quality of life.⁷

Hysterectomy may be total where body, fundus and cervix of the uterus are removed whereas in subtotal, cervix is left behind. It may also involve removal of cervix, ovaries and fallopian tubes however oophorectomy is done unilaterally or bilaterally depending on the nature of the disease. Hysterectomy is approached through abdominal or vaginal or laparoscopically.⁸ The routinely done hysterectomies are total abdominal hysterectomy (TAH), total abdominal hysterectomy with bilateral salpingoophorectomy (TAH with BSO) and vaginal hysterectomy (VH)

Histopathological examination of hysterectomy specimens is done routinely which has both diagnostic and therapeutic significance. The attempt was made with a view to study the histopathological patterns of lesions in hysterectomy specimens, clinical indication of hysterectomy, surgical procedures performed and distribution of various lesions in relation to age group of the patients.

METHODOLOGY

This is a cross sectional study carried out in the Department of Pathology, Kathmandu Medical College Teaching Hospital, Nepal. A total of 198 hysterectomy specimens, irrespective of primary lesion were received in the study period from January 2016 to December 2017 (2 years). Relevant history like age, type of operation, clinical indications were taken from the histopathological requisition form received along with the specimens. The sections were taken from different sites of the specimen as per protocol after the gross examination and were stained with Haematoxylin and eosin stain for histopathological examination. All the findings were recorded in the database and analyzed using SPSS 16.0 version. Ethical clearance was obtained from the Institutional Review Committee of KMCTH.

RESULTS

A total of 198 cases were studied. Atrophic endometrium was seen in 48 (24.3%) cases (Table 1). Malignant tumors were found in only 1(0.5%)case.

Table 1: Pattern of Endometrial Findings

Age group (Years)	Number	Endometrium			
		Proliferative	Secretory	Atrophic	Carcinoma
<30	1	1			
31-40	31	21	10		
41-50	105	62	32	11	
51-60	39	16	2	20	1
>60	22	5		17	
TOTAL	198 (100.0%)	105(53.0%)	44(22.2%)	48 (24.3%)	1(0.5%)

Regarding myometrium, the most common pathology encountered was leiomyoma 119 (60.0%) followed by adenomyosis 28 (14.0%) (Table 2). It was found to be unremarkable in 52 (26.0%) cases.

Table 2: Pattern of Myometrial Findings

Age group (Years)	Number	Myometrium		
		Leiomyoma	Adenomyosis	Unremarkable
<30	1			1
31-40	31	20	5	6
41-50	105	69	18	18
51-60	39	25	4	10
>60	22	5	1	16
TOTAL	198(100.0%)	119 (60.0%)	28 (14.0%)	52(26.0%)

Most of the cases showed chronic cervicitis as the main cervical pathology in 191 (96.5%) cases. Along with chronic cervicitis, 16 (8.1%) cases were found to have endocervical polyp and 23 (11.6%) cases were found to have squamous metaplasia (Table 3).

Table 3: Pattern of Cervical Findings

Age group (Years)	Number	Cervix		
		Chronic cervicitis	Chronic cervicitis with Endocervical polyp	Chronic cervicitis with Squamous metaplasia
<30	1	1		
31-40	31	29	3	2
41-50	105	101	11	12
51-60	39	38	1	7
>60	22	22	1	2
TOTAL	198(100.0%)	191(96.5%)	16 (8.1%)	23(11.6%)

Hysterectomy specimens as per age group

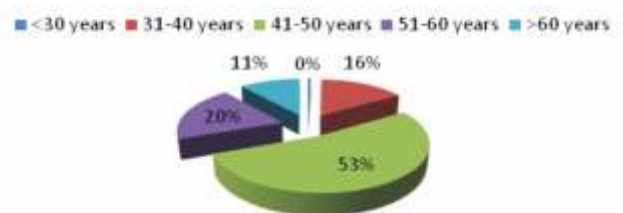


Figure 1: Age wise distribution of hysterectomy cases

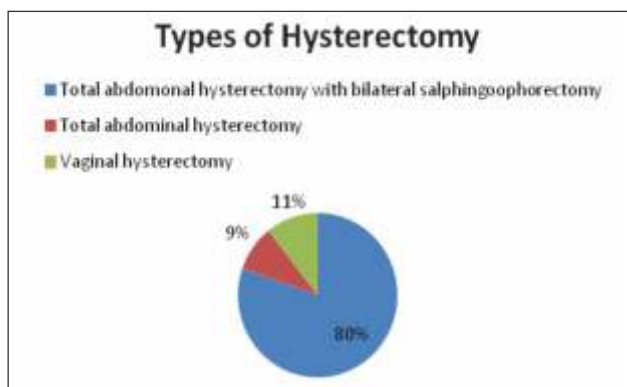


Figure 2: Types of Hysterectomy

Table 4: Clinical Indications for Hysterectomy

Age group (Years)	Number	Indication			
		Uterine causes			Ovarian Pathologies
		Leiomyoma	Utero Vaginal prolapse	Abnormal uterine bleeding	
<30	1				1
31-40	31	16		9	6
41-50	105	66	4	29	6
51-60	39	11	18	9	1
>60	22	2	14	2	4
TOTAL	198 (100.0%)	95 (48.0%)	36 (18.25%)	49 (24.75%)	18 (9.0%)

Hysterectomy was most commonly performed in the age group of 41 - 50 years (Fig 1) comprising 105 (53%) followed by 51-60 years age group which comprises 39 (20.0%).

Among different types of hysterectomies, TAH & BSO was the most commonly done procedure comprising 159(80.0%) followed by VH comprising 21 (11.0%) cases. Least number of cases 18 (9.01%) were of TAH. (Fig 2)

Indications for hysterectomy are shown in Table 4. The most common indication was found to be leiomyoma comprising 95 (48.0%) cases followed by AUB 49 (24.75%) and UVP 36 (18.25%) cases.

DISCUSSION

Uterus is a vital female reproductive organ. Due to continuous influence of different hormones, strenuous physical activities, poor hygiene, various non-neoplastic and neoplastic pathologies occurs in uterus. It has a great impact on many aspects of quality of life of women like reproductive ability, mental health, ability to work and to perform routine physical activities.^{2,3,4}

Though many treatment options are available, hysterectomy is commonly being practiced for the management of the pathologies of the female reproductive system.⁵ Generally, hysterectomy is recommended when other possible treatment is not available or not improving with the conservative treatment as hysterectomy causes the patient unable to bear children and of course have surgical risks and long term effects.

A total of 198 hysterectomy cases were received during study period. The endometrium was histologically unremarkable (proliferative or secretory) in most of the

cases 149 (75.2%). The most common endometrial pathology was found to be atrophic endometrium 48 (24.3%). The findings are similar in a study done by Mehboob R et al.⁹ where atrophic endometrium was found in 26.53%. Malignant tumor comprises only 0.5% of cases which is of Endometroid adenocarcinoma- villoglandular type but slightly higher incidence (1.8%) was reported in a study done by Jaleel R et al.¹⁰ Similarly, in a study done by Jha R et al, atrophic endometrium was found in 26.2% and tumour in 1.8%.¹¹ Out of 49 AUB cases, 4(8.1%) cases were found to have Disorder proliferative endometrium (DPE) which could be due to the hormonal treatment given prior to the hysterectomy. Only one case was found to have endometrial polyp which may be the cause of AUB.

Regarding myometrium, the most common pathology encountered was leiomyoma 119(60.0%), out of which 4 cases found to have hyaline degeneration and calcification in 1 case. Adenomyosis was found in 28(14.0%) cases and unremarkable in 52(26.0%). Jha et al found leiomyoma in 27.1%, adenomyosis in 20.3% and normal in 55.2%.¹¹ However a lower incidence of leiomyoma (3.59%) and adenomyosis (17.3%) was found in a study done by Salmon HA et al.¹² It was the commonest comprising 46.34% in a study done by Rizvi G et al.¹³ Adenomyosis is usually diagnosed by histopathological examination and is rarely diagnosed preoperatively however leiomyoma is diagnosed preoperatively by ultrasonogram.¹⁴

Most of the cases showed chronic cervicitis as the main cervical pathology 191(96.5%) in our study which is similar to the findings of study done by Talukder SI et al comprising 87.8%.¹⁵ Along with chronic cervicitis, in our study, 16(8.1%) cases were found to have endocervical polyp and squamous metaplasia in 23(11.6%) cases. Study done by Jha R et al also revealed the similar finding where chronic cervicitis was found in 95.9% however cervical polyp was found in only 1.4%.¹¹

Hysterectomy was most commonly performed in the age group of 41 - 50 years comprising 105(53%) followed by 51-60 years age group which comprises 39(20.0%). The findings are similar in the study done by Rather GR et al, where the commonest age group was found to be 41-50 years for hysterectomy comprising 47.27%.¹⁶

The most common procedure done for hysterectomy was total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH with BSO) comprising 159(80.0%) followed by vaginal hysterectomy comprising 21(11.0%). Least number of cases 18(9.01%) was of total abdominal hysterectomy. Similarly, 56.1% were of TAH with BSO, 37.1% were of vaginal hysterectomy and only 6.8% were of total abdominal hysterectomy in a study done by Jha R et al.¹¹ In a study of MacKenzie IZ et al, abdominal approach was found to be the preferred procedure comprising 79% cases followed by vaginal route in 17% cases.¹⁷

The most common indication for hysterectomy was found to be leiomyoma comprising 95 (48.0%) followed by AUB 49(24.75%) cases and utero-vaginal prolapse 36 (18.25%) cases. Studies done by Jaleel R et al¹⁰ also revealed the

similar finding with leiomyoma being the most common indication (40.0%) followed by DUB (29%), however in a study done by Perveen S et al, DUB was found to be the commonest indication for hysterectomy comprising 27.7% followed by leiomyoma 22.2%.¹⁸ In a study done by Jha R et al uterine prolapse was the commonest indication for hysterectomy comprising 37.1% followed by fibroid 24.9%, ovarian tumour 14.9%, DUB 7.7% and rest (20.4%) being others.¹¹

CONCLUSION

Leiomyoma was found to be the most common pathology in myometrium and chronic cervicitis in cervix. Hysterectomy was most commonly performed in the age group of 41 - 50 years and the most preferred surgical procedure was total abdominal hysterectomy with bilateral salpingo-oophorectomy. Leiomyoma was found to be the most common indication for hysterectomy and found to be commonly done for abnormal uterine bleeding and utero-vaginal prolapse as well.

RECOMMENDATIONS

Hysterectomy causes the patient unable to bear children

and of course have surgical risks and long term effects. Effort should be made to manage the pathologies with conservative treatment as much as possible to avoid operative procedure.

LIMITATION OF THE STUDY

Hysterectomy specimen operated for various indications of female reproductive system disorder were included in this study. So this study may limit the true uterine pathology.

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CONFLICT OF INTEREST

None

FINANCIAL DISCLOSURE

None

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