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HISTOMORPHOLOGICAL SPECTRUM OF LESIONS OF HYSTERECTOMY SPECIMENS IN GCS MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTER, AHMEDABAD : A STUDY OF 100 CASES

Pathology

Dr. Shweta Shah* Resident doctor, Department of Pathology,GCS medical college, Hospital & Research centre. *Corresponding Author

Dr.S.K.Suri HOD and professor, Department of Pathology,GCS medical college, Hospital & Research centre.

Dr.Ami Shah Assistant Professor, Department of Obstetrics and gynaecology, GCS medical college, Hospital & Research centre.

ABSTRACT

Background: Most frequently performed gynaecological surgery is hysterectomy. The prevalence of hysterectomy varies within different regions. There are mainly two types of hysterectomies according to which part of uterus is removed. The main types of hysterectomy are total and subtotal or partial hysterectomy. The hysterectomy can be performed by three routes abdominal, laproscopic and vaginal hysterectomy. The main objective of our study is to know most common pathology and different age groups of the patients underwent hysterectomy.

Materials and Methods: In this retrospective study was carried during period 6 months, at GCS medical college, hospital and research centre, Ahmedabad. Total 100 hysterectomy specimens were analyzed for histopathological lesions. We had taken the clinical and histopathological findings of these cases from the records of department of pathology, GCS medical college , hospital and research centre.

Results: In our study of 100 cases, most common age group underwent hysterectomy was 40-49 years and least common age group was 20-29 years. Type of hysterectomy performed most commonly in this study was total abdominal hysterectomy with bilateral salpingoophorectomy. Most of lesions were seen in the myometrium 42 cases (42%), Endometrium 32 cases (32%), Cervix 16 cases (16%) and Ovary 10 cases (10%). Hysterectomy remains the widely used treatment modality.

KEYWORDS

Hysterectomy, Benign, Malignant, Abnormal Uterine Bleeding, Leiomyoma.

INTRODUCTION

Most frequently performed gynaecological surgery is hysterectomy. Hysterectomy means surgical removal of uterus. Historically Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal hysterectomy was done in 1929 [1].

There are mainly two types of hysterectomies. Total hysterectomy means removing the body, fundus, and cervix of the uterus; often called complete hysterectomy. Partial hysterectomy/subtotal hysterectomy means removal of the uterine body while leaving the cervix intact; also called as supracervical hysterectomy. It may involve removal of the ovaries, fallopian tubes and other surrounding structures. Oophorectomy is unilateral or bilateral removal of ovaries is frequently done together with hysterectomy to decrease the risk of ovarian cancer. Salpingectomy is removal of unilateral or bilateral fallopian tubes.

Hysterectomy is usually performed by a) Abdominal b) Vaginal and c) Laparoscopic routes [2]. It is the treatment of choice for many indications which include dysfunctional uterine bleeding, fibroids, gynaecological cancers and obstetric disorders [3]

MATERIALAND METHODS

This retrospective study was carried out in department of pathology during a period of 1year from March 2019 to March 2020 . A total 100 hysterectomy specimen were analysed for histopathological spectrum of lesions. We had taken the clinical data like age, clinical diagnosis, type of hysterectomy and histopathological diagnosis from the histopathology requisition forms of those patients.

Study Design: Retrospective study.
Study Location: This was a tertiary care centre teaching hospital based study done in Department of Pathology at GCS medical college, hospital and research centre ,Ahmedabad.
Study Duration: 1st March 2019 to 31st march 2020, 1 year.
Sample size: 100 patients

INCLUSION CRITERIA:

1. All females underwent hysterectomy.
2. Benign and malignant lesions of uterus and ovary.

EXCLUSION CRITERIA:

1. Obstetric hysterectomy.
2. Reports which were inconclusive.
3. Paraffin blocks made from frozen specimen.

Procedure methodology

On receiving the hysterectomy specimen with histopathology requisition form, we have recorded the data eg. Patient's age, clinical diagnosis and type of hysterectomy. Data retrived from clinical case sheets were entered in the proforma for the study and analyzed. Specimens were fixed in 10% buffered formalin in ratio of 1:10 for 24 hours .Large specimens were cut and left for fixation with 10% formalin. Gross features were recorded like size, wall thickness and any mass present. The sections were taken from uterus that includes endometrium, myometrium, cervix. If salpingoophorectomy was done then sections from ovary and fallopian tubes were also taken. Representative bits were processed and paraffin blocks were made. Additional minimum of 3 sections from the lesion were taken if required. Paraffin blocks were cut with the microtome and slides were prepared. Then sections were stained with Hematoxylin and Eosin stains (H & E Staining). After thorough microscopic examination a histopathological diagnosis was made which was recorded in our proforma.

RESULT

In our study of 100 cases over 1 year duration,the hysterectomies were distributed over a wide age range of 20 years to 80 years. Most common age group underwent hysterectomy was 40-49 years with 59(59%)cases followed by 19(19%)cases in 50-59 years of age and least common age group was 20-29 years with 1(1%)case.

Table no 1 : Age Wise Distribution Of Cases.

AGE GROUP	NUMBER OF CASES
20-29 Years	01
30-39 Years	12
40-49 Years	59
50-59 Years	19
60-69 Years	06
70-79 Years	03
TOTAL	**100**

A total 100 hysterectomies were performed during the period of six months. Hysterectomy was performed abdominal in 64 cases (64%) and vaginal in 31 cases (31%).

Out of 100 hysterectomy specimen total hysterectomy were in 47 cases(47%) and 48 (48%)specimen were Total hysterectomy with unilateral or bilateral salphingo-oophorectomy (TH+USO/BSO) .

Table no 2: Types Of Hysterectomies.

TYPE OF HYSTERECTOMY	NUMBER OF CASES
Subtotal Hysterectomy / Supracervical Hysterectomy	05
Vaginal Hysterectomy	31
Total Abdominal Hysterectomy With Bilateral Salphingo-Oophorectomy	48
Total Abdominal Hysterectomy	16
Total	**100**

Most common anatomical site for lesions is myometrium in 42 cases(42%),followed by endometrium in 22 cases(22%),cervix in 16 cases(16%) and least common site is ovary in 10cases(10%).

Table no 3: Distribution Of The Lesions- Anatomical Site Wise.

ANATOMICAL SITE	NUMBER OF CASES (%)
CERVIX	16 (16.0 %)
ENDOMETRIUM	22 (22.0 %)
MYOMETRIUM	42 (42.0 %)
OVARY	10 (10.0 %)
TOTAL	**!00**

Chronic nonspecific cervicits was found in 9 specimens out of 100 hysterectomy specimens out of which 5 cases were of chronic nonspecific cervicitis with squamous metaplasia. Cervical polyp was found in 2 cases, cervical leiomyoma in 3 cases and carcinoma of cervix in 2 cases.

Amongst endometrial pathology most common lesion is simple hyperplasia of endometrium in 15 cases,followed by postmenopausal atrophy in 5 cases, endometrial adenocarcinoma in 4 cases, endometritis in 2 cases, complex hyperplasia with atypia in 2 cases and complex hyperplasia without aypia in 2 cases.

Most common myometrial lesion is leiomyoma in 16 cases followed by adenomyosis with leiomyoma in 14 cases , adenomyosis in 8 cases, leiomyomata in 2 case , adenomyosis with leiomyomata in 1 case and adenomyosis with monckeberg sclerosis in 1 case.

Amongst the 10 cases of ovarian lesions 2 cases are of serous cystadenocarcinoma and mucinous cystadenoma each. Serous cystadenoma, dermoid cyst, granulosa cell tumour and chocolate cyst were found in 1 cases each.

Table no 4: Histopathological Lesions Of Hysterectomy Specimens.

ANATOMICAL SITE	TYPE OF LESION	No.OF CASES
Cervix (N=16)	Chronic Non-Specific Cervicitis With Squamous Metaplasia	05
	Chronic nonspecific cervicitis	04
	Cervical Polyp	02
	Cervical Leiomyoma	03
	Carcinoma cervix	02
Endometrium (N=32)	Endometrial Polyp	02
	Simple Hyperplasia	15
	Complex Hyperplasia Without Atypia	02
	Complex Hyperplasia With Atypia	02
	Endometroid Adenocarcinoma	04
	Endometritis	02
	Postmenopausal Atrophy	05
Myometrium (N=42)	Leiomyoma	16
	Leiomyomata	02
	Adenomyosis	08
	Adenomyosis With Leiomyoma	14
	Adenomyosis With Leiomyomata	01
	Leiomyomata With Monckeberg's Sclerosis	01
Ovary (N=10)	Simple Cyst	02
	Serous Cystadenoma	01
	Mucinous Cystadenoma	02
	Dermoid Cyst	01
	Granulosa Cell Tumour	01
	Chocolate Cyst	01
	Serous Cystadenocarcinoma	02
Total		100

In 100 hysterectomy specimen presenting complaint was reported as abnormal uterine bleeding in 31% cases,followed by leiomyoma in 30% cases and pelvic mass in 10% of cases. 5% cases were specimen of uterovaginal prolapse had complaint of something coming out per vaginum.

Table 5: Clinical Indications of Hysterectomy

CLINICAL DIAGNOSIS	NUMBER OF CASES (%)
Abnormal Uterine Bleeding (AUB)	31 (31.0%)
Leiomyoma (Fibroids)	30 (30.0%)
Ovarian Cysts/Tumors	10 (10.0%)
Adenomyosis	08 (08.0%)
Uterovaginal (UV) Prolapse	05 (5.0%)
Cervical Leiomyoma	03 (3.0%)
Carcinoma Cervix/Cervical Intraepithelial Neoplasia	02(2.0%)
Endocervical Polyp	02 (2.0%)
Pelvic mass	04 (4.0%)
Chronic cervicitis	05 (5.0%)
Total	**Total 100**

DISCUSSION

Most frequently performed gynaecological surgery is hysterectomy. Hysterectomy means surgical removal of uterus. Historically Charles Clay performed the first subtotal hysterectomy in Manchester England in 1843 and the first Total abdominal hysterectomy was done in 1929[1].

Hysterectomy is a successful operation in terms of less complications, symptom relief and patient satisfaction and provides definitive cure to many diseases involving uterus as well as adnexae [4]. The clinical presentation and the indication for hysterectomy varies depending upon the pathology of the uterus, it can range from benign to malignant.

In our study of 100 cases of 1 year duration,the hysterectomies were distributed over a wide age range of 20 years to 80 years. Most common age group underwent hysterectomy was 40-49 years with 59(59%)cases followed by 19(19%)cases in 50-59 years of age and least common age group was 20-29 years with 1(1%)case. This incidence is correlating with the various studies conducted by Yogesh Neena *et al* [5] ,G Gupta *et al* [6], Jha R *et al* [7] and Vandana *et al* [8] are 45 years,45.6 years,46.3 years and 40-49 years respectively.

The commonest clinical complaint was abnormal uterine bleeding (AUB) in 31% patients, which correlated with the findings of Sreedhar *et al*[9] and Arzoo Amin *et al* [10]. In their study most of the patients presented with complaints of menorrhagia and abnormal uterine bleeding. Any bleeding not fulfilling criterias of normal menstruation referred to as an **abnormal uterine bleeding.** Bleeding not associated with an organic cause in women of childbearing age belongs to the category known as **dysfunctional uterine bleeding.**

Most common myometrial lesion found in our study was Leiomyoma of the uterus which is benign smooth muscle tumour of myometrium. Studies done by WF et al, Ranabhat SK et al and Abdullah LS et al had distribution of fibroid being 41.5%, 34.6%, and 30.3% respectively [11,12,13].

Malignancy was seen in endometrium which was endometrial adenocarcinoma. Most common lesion found in endometrium was Simple hyperplasia.

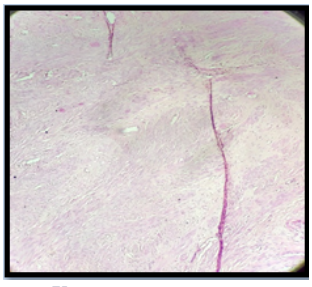

Figure 1: Leiomyoma Uterus
High power view 40x H&E stain : Whorled pattern of smooth muscle bundle separated by well vascularized connective tissue

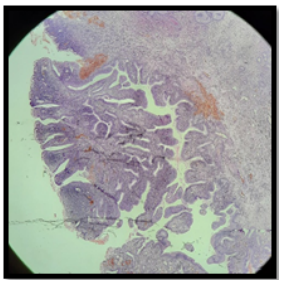

Figure 2 : Endocervical Polyp
Scanner view 4x H&E stain : Proliferation of endocervical glands with fibrovascular core with variable sized architecture.

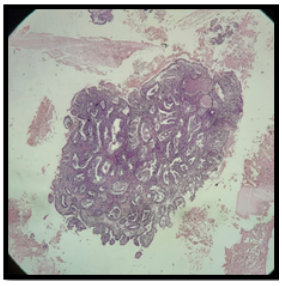

Figure 3 :Serous Papillary carcinoma endometrium
Scanner view 4x H&E stain: Papillary architecture with fibrovascular cores and gland like spaces.

Figure 4 :Mature Cystic Teratoma of Ovary
Low power view 10x H&E stain: Showing keratin material and sebaceous glands.

CONCLUSION

In the present study cases of fibroids presented with symptoms.In Leiomyoma with high recurrence rate hysterectomy is the only treatment that prevents regrowth. The present study provides awareness into the wide range of histopathological spectrum of lesions in uterus and cervix in hysterectomy specimens. Though the histopathological diagnosis correlates well with the clinical diagnosis. .Microscopic assessment and clinopathological correlation is necessary as grossly identifiable benign lesion may harbor the focus of malignancy.

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