

Histopathological Spectrum of Lesions of Hysterectomy Specimens-A Study at Omdurman Military hospital Sudan

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Background: Hysterectomy is one of the common gynecological surgical procedures throughout the world. The objective of this study was to see the pattern of histopathological lesions in hysterectomy specimen.

Materials and Methods: This retrospective descriptive study was conducted in Omdurman Military Hospital Sudan, from January 2018 to December 2019. A total of 82 hysterectomies were included in the study .

Results: A total of 82 histopathology samples were received in this period. Histopathology diagnosis showed Leiomyoma in 48.6% (127 cases), Adenomyosis was seen in 10.3% (27 cases), Endometrioid Adenocarcinoma was seen in 1.14% (3 cases).

Conclusion: All hysterectomy specimens should be sent for histopathology department regardless of the pre-operative microscopic assessment, especially in malignant disease.

INTRODUCTION:

The uterus consists of endometrium and myometrium which is under the influence of different hormones periodically. So it is prone to develop several non-neoplastic and neoplastic conditions during the life time of a woman. Hysterectomy means removal of the uterus. It is one of the most common gynecological surgeries in the world. Hysterectomy is considered to be the most definitive treatment option for various diseases like Dysfunctional Uterine Bleeding (DUB), leiomyoma, malignancy,& prolapse uterus and others. Approximately 600,000 hysterectomies are performed every year in the United States & in United Kingdom 20% of women undergo hysterectomy before the age of sixty years [3]. The aim of our study was to determine the spectrum of pathologies in the hysterectomy specimens in a period of time at Omdurman military hospital in Sudan. Most common complaints presented are per vaginal bleeding, vaginal discharge, pain abdomen, irregular menstruation, postmenopausal bleeding, mass per abdomen, something coming out of vagina etc. many treatment options are available including medical and conservative surgical treatments but hysterectomy remains one of the definite treatment.

MATERIAL & METHODS:

This study is a retrospective descriptive study conducted at Omdurman military hospital, department of pathology in the central laboratory, in the period from January 2018 to December 2019. Sample size represents a full coverage of received samples during the period of the study, which were 82 cases. Of the 82 investigated cases, 75 cases were total abdominal hysterectomy (TAH) 6 cases vaginal and 1 case of subtotal hysterectomy specimens . All tissue blocks of cervical tissues are retrieved, stained by Haematoxyline and Eosin (H & E) stain and re-examined. All specimens were formalin-fixed and paraffin wax processed tissues.

Information regarding each patient was obtained from each patient’s file. The specimens were fixed in 10%formalin and then processed by tissue processing machine using a schedule adopting 24-hour scheduling. Three 5-micron thickness sections were obtained from each patient’s block using Rotary microtome.

RESULTS:

The study involving 82 cases most common age group underwent hysterectomy lie between 40-49 years (27cases) followed by 50-59 years (24 cases) age group and the least hysterectomies done in group of less than 40 years (Table 1). The most type of hysterectomy performed in this study was abdominal route followed by vaginal hysterectomy and subtotal hysterectomy (Table 2). The lesions seen in the endomymetrium 50 cases (60.9%), cervix 7 cases (8.5%) and ovary 16 cases (19.5%)Gestational & Placental 2 (2.5 %) and No specific pathology identified seen in 7(8.5) (Table 3).

Histopathology diagnosis (Table 4) showed that endometrial and myometrium lesion the commonest pathology seen in hysterectomy lesion 50(60.9%). Followed by ovarian (16(19.5%), and similar pathology seen in cervical and No specific pathology seen 7 (8.5%).

Leiomyoma which represent most common pathology seen in end myometrium 17% (15 cases), Simple hyperplasia seen in 8 cases (9,7%), Endometrial polyp was seen in 5 (6.1%) , Atrophic endometria seen 6 (7.3) , and Endometrioid adenocarcinoma was seen in 10.9% (9 cases) .Cervical lesion shows 7 cases(8.5%) out of them were 6.1% (5 cases) chronic cervicitis . While cervical carcinoma seen only in 2 cases (2.4%) .

The most common pathology seen in the ovary was Serous Cyst Adenocarcinoma 5 cases (6.1%), followed by Simple cyst 4 cases (5%) , Serous Cystadenoma in 2cases (2.4%) , Mature Cystic Teratoma in 2 cases (2.4%) , Granulosa cell tumor 2 cases (2.4) and Fibrothecoma 1 case (1.2%)

Table1: Distribution of the study population by age

AGE GROUP	NUMBER OF CASES (%)
< 40	9 (11%)
40-49	27 (33 %)
50-59	24 (29 %)
> 60	22 (27 %)
TOTAL	82

Table 2: Route of hysterectomy:

ROUTE OF HYSTERECTOMY	TOTAL NO. PATIENTS	PERCENTAGE
ABDOMINAL ROUTE	75	91.4%
VAGINAL ROUTE	6	7.4%
SUB TOTAL HYSTERECTOMY	1	1.2%

Table 3: Distribution of the Lesions- Anatomical Site:

ANATOMICAL SITE	NUMBER OF CASES (%)
CERVIX	7 (8.5 %)
ENDOMETRIUM & MYOMETRIUM	50 (60.9 %)
Gestational & Placental	2 (2.4 %)
OVARY	16 (19.5 %)
No specific pathology	7 (8.5 %)

Table 4: Histopathological Lesions Of Hysterectomy Specimens

ANATOMICAL SITE	TYPE OF LESION	No. OF CASES	
Cervix (N=7) (8.5%)		07 (8.5%)	
	Chronic Non-Specific Cervicitis	5(6.1%)	
	Carcinoma Cervix	2(2.4%)	
End myometrium (N=50)(60.9%)		N=50(60.9%)	
	Endometrial Polyp	5- (6.1%)	
	Simple Hyperplasia	8 (9.7%)	
	Atypical hyperplasia	2 (2.4%)	
	Endometroid Adenocarcinoma	9(10.9%)	
	Endometritis	3 (3.6%)	
	Atrophic endometria	6(7.3%)	
	Leiomyomata	12 (14.6%)	
	Adenomyosis	3 (3.6%)	
	Adenomyosis With Leiomyoma	2 (2.4%)	
Ovary (N=16 (19.5%))		16 (19.5 %)	
	Simple Cyst	04 (5%)	
	Serous Cystadenoma	2(2.4%)	
	Fibrothecoma	1 (1.2%)	
	Dermoid Cyst	2 (2.4%)	
	Granulosa Cell Tumor	2(2.4%)	
	Serous Cyst adenocarcinoma	5 (6.1%)	
	Placenta 2(2.4%)		
		Placenta accrete	1.2%
		Products of conception	1.2%
No specific Pathology	No specific Pathology	7(8.5%)	

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DISCUSSION:

Hysterectomy is a common surgical procedure performed on women in the peri and postmenopausal period. It is usually performed to relieve symptoms such as abnormal vaginal bleeding and pelvic pain and is often also performed as a definite management for gynecological diseases such as fibroids, adenomyosis and uterovaginal prolapse^[5].

In our study the difference from the previously published studies that benign lesions, such as, uterine fibroids were the most common clinical indication^[6,7,8] Shergill et al reviewed 100 cases of hysterectomies and the most common clinical indications were uterine fibroid (34%)^[7] In our study Leiomyoma was seen in 17% (14 cases), representing the major histopathological diagnosis of benign condition followed by Simple hyperplasia which seen in 8 cases (9,7%), Endometrial polyp was seen in 5 (6.1%) , Atrophic endometria seen 6 (7.3) , and Adenomyosis was seen in 3.6% (3 cases). This result shows that most common diagnosis although our study has small sample size but reflect the situation. Other studies done by Baral et al^[9] and Layla S Abdullah^[10] showed that Leiomyoma seen in 48.6% and 34% respectively, and represent the majority of .

In our study 82 cases most common age group underwent hysterectomy lie between 40-49 years 27 (33 %), followed by 50-59 years 24 (29 %) and least hysterectomies done in group less than 40 years 9 (11%) . This incidence is correlating with These findings conducted by Yogesh Neena *et al*^[11] ,G Gupta *et al*^[11], Jha R *et al*^[12] and Vandana *et al*^[13] .

The most common surgical route for hysterectomy was a abdominal hysterectomy (n = 75 - 91.4 %,) and vaginal hysterectomy (n=6 -7.4%,). Subtotal hysterectomy seen 1case (1.2%) . This study correlated with the findings of Chryssiopoulos *et al*^[14] studied 3410 total hysterectomies over a period of sixteen years and the abdominal approach was preferred in 85.33% and the vaginal route in 14.67%.

Chronic cervicitis is the most common finding in the cervical lesion that underwent hysterectomy. In our study 5 cases (6.1%) . The malignant lesion of the cervix namely Squamous cell carcinoma is seen only in 2cases 2.4%. This maybe because squamous cell carcinoma diagnosed in the cervical biopsy . this is consistent with Baral et al^[9] study that showed chronic cervicitis is common pathology in cervical causes of hysterectomized patients, while squamous cell carcinoma is 2(2.4%).In our study the hysterectomy was done in cases of ovarian pathology 16 case (19.5 %) . The commonest ovarian lesion noted was serous cystadenocarcinoma (5cases -6.1%) , in contrast to most of studies like Bushra^[4] the ovarian pathology represent only 7.93% and most of them were benign causes. Although Histopathology is the gold standard for the diagnosis in hysterectomy specimen. in minority of cases histopathology cannot yield specific diagnosis and this also seen in many studies Dr Shish Ram^[15] (11.97%) ,in our study (8.5%) which of considerable importance .

CONCLUSION

The result of this study is in concordance with the similar published data as regards to the most common pathologies identified in hysterectomies and the commonest surgical route for hysterectomy in Sudan as other countries.

(80.6%). While the malignant (19.6%).

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