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Histopathological Findings in Hysterectomy Specimens in A Tertiary Care Hospital: A Retrospective Study

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Abstract

Objective: To describe the patterns of histopathological lesions seen in hysterectomy specimens in different age groups.

Methods and Materials: The study is done retrospectively from the data collected from the pathology department at a tertiary care hospital. A total of 285 cases were collected over a period of one year and their histopathological slides and clinical records were evaluated.

Results: Out of 280 cases majority belonged to the 41–50 age group and the least number of cases had an age of below 30. In the uterus, among lesions of the myometrium, adenomyosis were the maximum followed closely by leiomyomas. In the cervix, cervicitis grossed the highest number of cases followed by squamous cell carcinoma of the cervix. The ovarian pathologies are diverse and were found to be equally distributed.

Conclusion: This study outlines the most common lesions seen in various organs of the female reproductive tract in hysterectomy patients.

Keywords: Hysterectomy; Endometrial hyperplasia; Adenomyosis; Leiomyoma; Ovarian cystic lesions; Chronic cervicitis.

Introduction

The female reproductive tract organs like the uterus, cervix and ovaries are subject to a lot of pathologies distributed over a wide range of age groups and a variety of histopathological presentation under the microscope.

A majority of these cases present clinically with abnormal uterine bleeding. On further investigations it is found that most of the pathologies are benign as compared to their malignant counterpart. This study presents a similar outline with maximum patients presenting with leiomyomas, adenomyosis of the myometrium, and endometrial hyperplasia of the endometrial lining.[1] Cervicitis of both the ectocervix and endocervix remain prevalent among the reproductive age group.[2] The ovaries display pathologies like serous and mucinous cystadenoma, dermoid cyst, and rare cases of Brenner tumour, granulosa cell tumour, etc.[3]

Material and Methods

This study is a retrospective study with a total of 285 cases, including various pathological lesions seen in hysterectomy specimens collected over a period of a year from January 2019 to December 2019 in a tertiary care hospital in India. The data is collected according to the age of presentation of the patients and various diseases seen in each part of the female reproductive tract using excel tables.

Results

After a thorough study of 285 patients over a span of one year was conducted it was found that majority of patients, precisely 36.14% belonged to the 41–50 age group. This age group included a variety of pathologies widespread in the uterus, cervix and the ovaries.

Pathology in the myometrium was more common than that seen in the endometrium, of which the most common one affecting the females was endometrial hyperplasia (40%), followed by endometrial polyp (17.5%). Other common conditions like vesicular mole (7.5%), endometriosis (7.5%) and adenocarcinoma of the endometrium (10%) were also commonly involved. (Table 1)

Table 1: Various endometrial lesions in hysterectomy specimens.

Histopathology of the endometrium	Number of cases	Percentage
Endometrial Hyperplasia	16	40
Endometrial polyp	7	17.5
Vesicular mole	3	7.5
Endometritis	2	5
Endometriosis	3	7.5
Atrophic endometrium	3	7.5
Adenocarcinoma	4	10
Rhabdomyosarcoma	1	2.5
Mixed mullerian tumour	1	2.5

Patients presenting with myometrial pathologies comprised maximum of Adenomyosis (59.03%) in the myometrium followed by leiomyomas (39.75%), commonly known as fibroids. (Table 2)

Table 2: Various myometrial lesions in hysterectomy specimens.

Histopathology of the myometrium	Number of cases	Percentage
Adenomyosis	40	48.19
Leiomyoma	37	44.57
Leiomyoma and Adenomyosis	5	6.02
Leiomyosarcoma	1	1.2
Total	83	

The cervix was subject to a range of diseases the most common one being of cervicitis, affecting both the ectocervix and the endocervix. As many as 35.48%, of cervical pathologies were identified as chronic cervicitis in this study. Squamous cell carcinoma of the cervix was found to be the second most common pathology (24.19%). Very few cases were caught in the earlier stages of Cervical Intraepithelial Neoplasia (CIN) - I (1.6%), CIN - II (1.6%) and CIN - III (4.03%). A lot of females presented with Uterovaginal Prolapse (20.96%). Endocervical polyp, papillary transitional cell carcinoma, cervical erosions were seen to a lesser as compared to the other lesions. (Table 3)

Table 3: Different cervical lesions in hysterectomy specimens.

Histopathology of cervical lesions	Number of cases	Percentage
Chronic cervicitis	44	35.48
Prolapse	26	20.96
Endocervical polyp	4	3.22
Cervicitis + CIN I	2	1.6
Cervicitis + CIN II	2	1.6
Cervicitis + CIN III	5	4.03
Cervical erosion	5	4.03
Squamous cell carcinoma	30	24.19
Adenocarcinoma	6	4.83

Only 35 out of the 285 pathologies were found to be ovarian and the maximum of them turned out to be serous cystadenoma (25.71%), mucinous cystadenoma (22.8%) and benign simple cysts (17.14%). Cases of serous cystadenocarcinoma (5.7%) were found to be relative fewer as compared to its benign counterpart. Lesions identified as dermoid cyst, yolk sac tumour, granulosa cell tumour, Brenner cell tumour, ovarian fibroma were also identified. (Table 4)

Table 4: Various ovarian lesions in hysterectomy specimens.

Histopathology of ovary	Number of cases	Percentage
Simple cyst	6	17.14
Serous cystadenoma	9	25.71
Mucinous cystadenoma	8	22.8
Dermoid cyst	3	8.5
Ovarian fibroma	1	2.8
Serous cystadenocarcinoma	4	11.4
Granulosa cell tumour	1	2.8
Sertoli cell tumour	1	2.8
Malignant Brenner cell tumour	1	2.8
Yolk sac tumour	1	2.8

Discussion

Hysterectomy is the most commonly performed gynaecological operation throughout the world. Its prevalence varies in different countries.[4,5] It is a very successful surgery in terms of symptoms, relief and patient satisfaction. It also provide a definitive cure to many pelvic pathologies like fibroid, abnormal uterine bleeding, adenomyosis, endometritis, uterine prolapse, cancer of reproductive organs etc.[6,7] This study aimed at analysing various patterns of lesions in hysterectomy specimens. In present

study, the commonest age range of hysterectomy is 41–50 years which is similar to that reported by Adelusola, Sarfaraz and Parveen.[8,9,10]

The commonest surgical approach in our study is abdominal hysterectomy (81.9%) followed by vaginal hysterectomy (18.1%). This is well correlated to a study by Macleanzie et al. in which abdominal approach was preferred in 79% cases and vaginal approach in 17% cases. 50% of their cases included bilateral salpingo-opherectomy.[11] In this study; majority of cases (90.7%) included bilateral salpingo-oopherectomy along with hysterectomy.

In our study, the commonest endometrial pathology observed is endometrial hyperplasia (40%). In a study by Lee NC[12] endometrial hyperplasia was reported in 95% which is somewhat higher than what we found. However, a study conducted by Ranabhat et al[13] reported 16% of cases which was lesser than ours. A great difference in opinion is seen in the literature regarding incidence of endometrial hyperplasia which may be due to difference of opinions of what constitutes endometrial hyperplasia. Endometrial hyperplasia can either be idiopathic or it may occur due to associated diseases. It can be transformed to endometrial carcinoma. So these patients must be treated properly with careful follow up.[14]

In the present study, we found adenomyosis (48.19%) was the commonest myometrial lesion followed by leiomyoma (44.57%). Adenomyosis also appears to be the commonest pathology and the same is true for other studies.[13,15,16] Leiomyoma (36.14%) was also a common pathology in this study which is correlating well with the data frequencies in studies by Pity IS[17] and Adelusola KA et al.[18]

Some of the hysterectomy specimens have more than one lesion in the body of uterus, among which most common co-existence is of adenomyosis and leiomyoma.[19] In current study, 6.02% cases had coexisting leiomyoma and adenomyosis which is similar to that reported (5.6%) in a study by Qamal et al.[20]

Chronic cervicitis was the main finding among all cervical pathologies and accounted for 35.48%. Almost similar figure was also reported in other studies.[20,21] Second most common lesion in our study was cervical malignancy. Most cervical cancers were squamous cell carcinomas with 30 cases (24.1%) which were similar to a study by Jain Atul et al. Squamous cell carcinomas account for 70–80% of all the cervical tumours, while adenocarcinoma are less common.[22]

Benign Ovarian neoplasm and benign cysts can occur at any age and are most commonly encountered ovarian lesions. Malignant ovarian tumours are more common in elderly.[3,23] Relative frequencies of these lesions are different for different countries.[3] Most of the literature mentions that commonest ovarian cysts are benign surface epithelial tumors.[24] In this study too most common lesion was serous cystadenoma (25.7%) closely followed by mucinous cystadenoma (22.8%). This is well correlated with the findings reported by Pity et al.[13] Lower results were reported by Gupta et al[25] with 2.7% and higher results (90.5%) were obtained in a study done in Nepal.[27] In our study, commonest malignant ovarian tumour was serous cystadenocarcinoma which represent 11.4% of the cases. This figure approximates with the data published by Jha et al.[26]

Conclusion

As per the trends seen in this study, it has been found that most of the lesions females suffered from belonged to the 41–50 age group. The pre-operative diagnosis of majority of these patients was verified on post-operative histopathological analysis.

It is found that the organs are more prone to benign diseases more than malignancies. The study showed that females with cervical pathologies showed squamous cell carcinoma as the strong contender with 24.19% patients presenting with it.

A yearly analysis of histopathological specimens should be done to understand the change and prevalence of diseases seen in hysterectomy subjects.

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