

Original Research

Histopathological analysis of uterus specimens

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ABSTRACT:

Background: A hysterectomy is a surgical procedure to remove a woman's uterus. The present study was conducted to evaluate uterus specimens histopathologically. **Materials & Methods:** 78 uterus specimens obtained in department of general pathology were recruited. The pathologists grossed the specimens, and the tissues were processed in the tissue processor and standard stain of haematoxylin and eosin were used on these sections. **Results:** Age group 20-30 years had 9, 30-40 years had 22, 40-50 years had 34 and 50-60 years had 14 cases. The difference was significant ($P < 0.05$). Histopathological findings were inflammatory endocervical polyp in 8 cases, endometrial hyperplasia in 7, endometrial hyperplasia in 8, endometritis in 10, atrophic endometrium in 3, adenomyosis in 4, benign leiomyoma in 12, chronic myometritis in 9, chronic cervicitis in 7, uterovaginal prolapse in 5, squamous cell carcinoma in 4 cases. The difference was significant ($P < 0.05$). **Conclusion:** The most common uterus lesion was benign leiomyoma, endometritis, chronic myometritis, and inflammatory endocervical polyp.

Key words: hysterectomy, endometrial hyperplasia, Uterus

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INTRODUCTION

A hysterectomy is a surgical procedure to remove a woman's uterus. It may be performed for various medical reasons, including uterine fibroids, endometriosis, uterine prolapse, chronic pelvic pain, abnormal bleeding, and cancer. Here is a comprehensive overview of hysterectomy, including its types, indications, procedure, recovery, and potential complications.¹

A woman's uterus can develop a number of benign and malignant disorders during the course of her lifetime. The endometrium and myometrium that make up the uterus are periodically influenced by several hormones. Numerous investigations have revealed a wide variety of abnormalities in the fallopian tubes and ovaries. Many non-neoplastic and neoplastic disorders, which are most common in the reproductive age group, can affect the cervix.² These illnesses affect people of all ages and greatly raise the morbidity and mortality rates among women. Perineal bleeding, vaginal discharge, abdominal pain, irregular

menstruation, postmenopausal bleeding, abdominal mass, something coming out of the vagina, and other typical complaints are the most frequently reported issues. There are numerous choices for treatment, such as conservative surgery and medicine, but hysterectomy is not one of them.³

For the clinical diagnosis of endometrial pathology, light microscopy's assessment of the histological features of the endometrial biopsy material continues to be the gold standard.⁴ In fact, curettage or endometrial biopsy are used to make the initial diagnosis, which may have therapeutic benefits in and of itself. On the other hand, if the whole endometrium is not sampled during the biopsy or curettage, the areas with the highest histological or cytological severity might not be identified histologically.⁵ The present study was conducted to evaluate uterus specimens histopathologically.

MATERIALS & METHODS

The present study was conducted among 78 uterus specimens obtained in department of general pathology. All were informed regarding the study and their consent was obtained.

Data such as name, age, etc. was recorded. The pathologists grossed the specimens, and the tissues were processed in the tissue processor for a whole

night. In the microtome, blocks were formed and sections were cut to a thickness of 4 microns. The Histotechnicians used a standard stain of haematoxylin and eosin on these sections. Pathologists then carefully scrutinized each slide. Results thus obtained was subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (Years)	Number	P value
20-30	8	0.05
30-40	22	
40-50	34	
50-60	14	

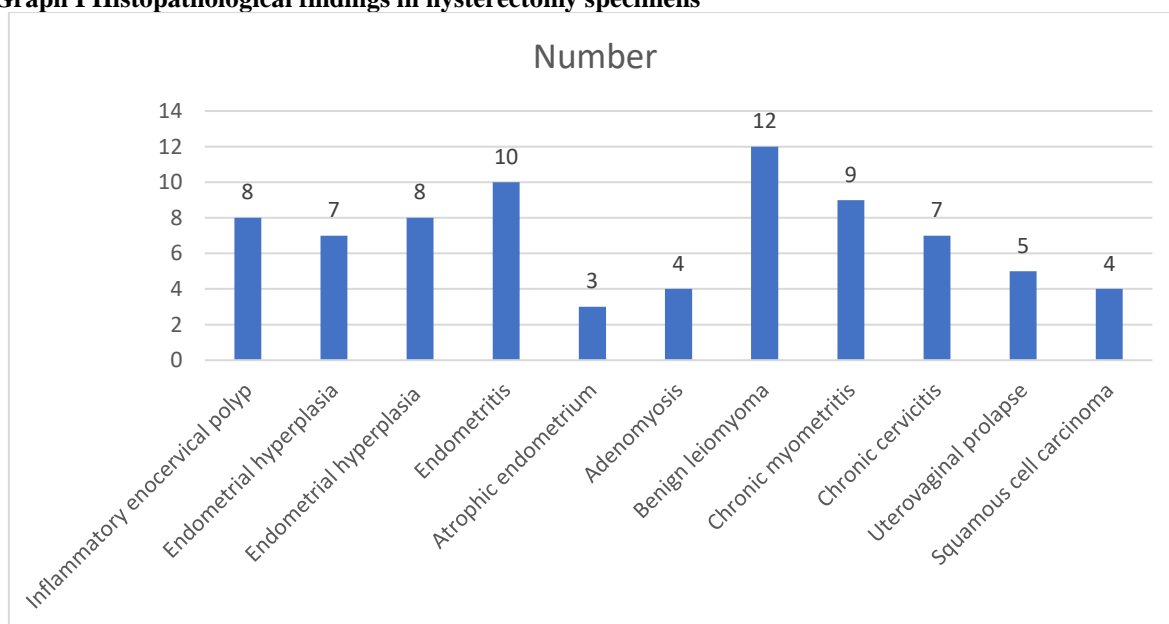
Table I shows that age group 20-30 years had 9, 30-40 years had 22, 40-50 years had 34 and 50-60 years had 14 cases. The difference was significant (P<0.05).

Table II Histopathological findings in hysterectomy specimens

Histopathological findings	Number	P value
Inflammatory encocervical polyp	8	0.01
Endometrial hyperplasia	7	
Endometrial hyperplasia	8	
Endometritis	10	
Atrophic endometrium	3	
Adenomyosis	4	
Benign leiomyoma	12	
Chronic myometritis	9	
Chronic cervicitis	7	
Uterovaginal prolapse	5	
Squamous cell carcinoma	4	

Table II, graph I shows that histopathological findings were inflammatory encocervical polyp in 8 cases, endometrial hyperplasiain 7, endometrial hyperplasia in 8, endometritis in 10, atrophic endometrium in 3, adenomyosis in 4, benign leiomyoma in 12, chronic myometritis in 9, chronic cervicitis in 7, uterovaginal prolapse in 5, squamous cell carcinoma in 4 cases. The difference was significant (P<0.05).

Graph I Histopathological findings in hysterectomy specimens



DISCUSSION

A crucial reproductive organ, the uterus is prone to numerous benign and malignant illnesses. Although there are many different therapeutic alternatives, such as conservative surgery and medicine, hysterectomy is still the most common gynecological procedure carried out globally. Because the treatment is not widely accepted in developing nations, the age and parity of the women as well as the therapeutic justifications for the procedure should be justified.

Hysterectomy is the removal of the uterus and it is the most common gynecological procedure performed in the females worldwide, as it is affected by various nonneoplastic and neoplastic conditions during the life time of a woman. The uterine corpus, which is made up of the endometrium and myometrium, and the cervix are parts of the female genital tract. The uterus is a crucial reproductive organ that can develop a variety of benign and malignant diseases.⁶ The endometrial mucosa of the uterine corpus is periodically removed due to hormonal influences. The majority of patient appointments to gynecologists are related to lesions of the uterine corpus and cervix. Although there are many treatment options available now, such as conservative surgery and medication, hysterectomy is still the most recommended way to treat gynecological problems.⁷

The International Society of Gynecological Pathologists and the World Health Organization (WHO) have developed a classification system that distinguishes four distinct kinds with differing malignant potential.⁸ Simple and complicated hyperplasias are distinguished by the presence or absence of architectural anomalies such glandular complexity and crowding. Most importantly, hyperplasias are classified as atypical in addition if they exhibit nuclear, or cytologic, atypia.⁹ It is evident that only atypical endometrial hyperplasias are linked to the eventual development of adenocarcinoma. About 8% of patients with simple atypical hyperplasia may develop cancer if treatment is not received; in contrast, women with complicated atypical hyperplasia have a progression rate of approximately 30% in one research and as high as 52% in another.¹⁰ The present study was conducted to evaluate uterus specimens histopathologically.

We observed that age group 20-30 years had 9, 30-40 years had 22, 40-50 years had 34 and 50-60 years had 14 cases. Perveen et al¹¹ evaluated correlation between indications and histopathology of elective abdominal hysterectomy. During 2 years a total of 54 elective abdominal hysterectomies were performed. Abdominal hysterectomy rate was 4.4 /1000 during study period. In 97% indications were for benign conditions. Peak age incidence was 41-50 years and peak parity was 4-6. In 27.7 % indication for hysterectomy was menstrual problem followed by leiomyoma in 22.2 %. On histopathology of uterus in 59.2 % leiomyoma and in 24% adenomyosis were confirmed. There was no mortality associated with the

procedure. Menstrual disturbance is leading indication of hysterectomy and leiomyoma is the commonest pathology. Adenomyosis is main cause of menstrual problem.

We found that histopathological findings were inflammatory encervical polyp in 8 cases, endometrial hyperplasia in 7, endometrial hyperplasia in 8, endometritis in 10, atrophic endometrium in 3, adenomyosis in 4, benign leiomyoma in 12, chronic myometritis in 9, chronic cervicitis in 7, uterovaginal prolapse in 5, squamous cell carcinoma in 4 cases. Jaleel et al¹² in their study one hundred sixty- six patients undergoing abdominal hysterectomy for gynecological disease, were studied. Commonest indication for hysterectomy was fibroid in 40% followed by dysfunctional uterine bleeding (DUB) in 29% cases. Histopathological confirmation of pre-operative diagnosis was 100% for malignancy, endometrial hyperplasia, endometritis and hydatidiform mole, 94% for fibroids, 83% for adenomyosis, 60% for pelvic inflammatory disease and 14.1% for DUB. Majority of cases (65%) pre-operatively diagnosed as DUB were found to have adenomyosis. One case of undifferentiated uterine sarcoma was discovered on histopathology. Histopathological analysis correlates well with the pre-operative diagnosis / indication for hysterectomy. Histo-pathology is mandatory for ensuring diagnosis and thus management, in particular of malignant disease.

Verma et al¹³ assessed the histopathological features of varied uterine lesions, their profile and distribution of different lesions in relation of age. A total of 3576 histopathology samples were received in this period. There were 1173 gynaecology samples during this period out of which 22% (261 cases) were that of hysterectomy. 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).

Baral et al¹⁴ found that a total of 300 specimens were analyzed. In the group of patients less than 40 years of age, 73 (50%) were normal, 34(23%) had abnormal physiologic changes and 13 (9%) had pregnancy related complications and benign changes. In the age group between 40 – 55 years, abnormal physiological changes, benign conditions and normal physiological changes were 45 (32%), 41 (29%) and 37 (26%) respectively. In the age group > 55 years, there were 3(21%) malignant and 3(21%) benign conditions. There were 5(36%) unsatisfactory samples in this age group.

Ansari et al¹⁵ in their study found that out of the 313 major gynecological operations performed, abdominal hysterectomies accounted for 53.9% of the total. The mean age of the women was 44.3 ± 5.3 years, and the majority were multiparous (Para 5 and above). Abnormal uterine bleeding was the most common presenting symptom (59.8%), followed by discomfort and abnormal uterine hemorrhage (21.9%) and lower

abdominal mass (8.3%). Dysfunctional uterine hemorrhage was the most common reason for hysterectomy (39.6%), followed by fibroid (29.6%) and adenomyosis (8.9%). Pre-operative diagnosis was 100% confirmed in cases of malignancy, endometrial hyperplasia, adnexal masses, endometriosis, and pelvic inflammatory disease in the final histological reports of the hysterectomy specimens. There was a discrepancy between the histological and clinical diagnoses in cases with dysfunctional uterine hemorrhage (39.6% clinical and 16.6% histological) and fibroid (29.6% clinical and 32.6% histological).

CONCLUSION

Authors found that most common uterus lesion was benign leiomyoma, endometritis, chronic myometritis, and inflammatory endocervical polyp.

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