

Original Research Article

HISTOPATHOLOGICAL STUDY OF UTERINE LESIONS IN HYSTERECTOMY SPECIMENS RECEIVED AT A RURAL-BASED TERTIARY CARE CENTRE

Sheela Lakshmanrao Gaikwad¹, Madhukar Krishna Gavit², Arvind Namdeorao Bagate³

¹Associate Professor, Department of Pathology, SRTR Government Medical College Ambajogai, India.

²Junior resident Department of Pathology, SRTR Government Medical College Ambajogai, India.

³Professor and Head, Department of Pathology, SRTR Government Medical College Ambajogai, India.

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Corresponding Author:

Dr. Madhukar Gavit,
Junior resident Department of
Pathology SRTR government medical
college Ambajogai, India.
Email: madhukargavit@gmail.com

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ABSTRACT

Background: Uterus is a vital reproductive organ. It is subjected to many benign and malignant diseases. Many treatment options are available, including medical, conservative and surgical modalities; however, hysterectomy remains one of the commonly performed gynecological surgical procedures¹. Despite the availability of various treatment options, such as medical management and conservative surgical techniques, hysterectomy continues to be an important gynecological surgical procedure². The indications for hysterectomy vary from benign to malignant conditions and include abnormal uterine bleeding, leiomyoma, adenomyosis, endometriosis, uterine prolapse, chronic pelvic pain, pelvic inflammatory disease and gynecological malignancies.³ **Aim:** To Study different Histopathological Lesions of Uterus in female undergone Hysterectomy. **Objectives:** To study age wise incidence of uterine lesions in hysterectomy specimens and to analyze the patterns of lesions in hysterectomy specimens.

Materials and Methods: All hysterectomy specimens received in the histopathology section were included. Relevant clinical history was noted from case records. Specimens were fixed in 10% neutral buffered formalin, grossed and representative sections were submitted. After routine processing and embedding, sections were stained with hematoxylin and eosin and examined microscopically

Results: Total 363 hysterectomy specimens were examined by histopathological examination. Most common endometrial finding was secretory phase. In myometrium most common lesion was leiomyoma and in cervix most common finding is chronic non-specific cervicitis.

Keywords: Hysterectomy, uterine lesions.

INTRODUCTION

The uterus is affected by a wide spectrum of non-neoplastic and neoplastic lesions, and histopathological examination of hysterectomy specimens helps in correlating clinical indications with final pathological diagnosis.^[4] Diseases of the female reproductive system can be broadly classified into inflammatory and neoplastic, with neoplastic further divided into benign and malignant lesions. These lesions include endometritis, chronic cervicitis, salpingitis, endometrial hyperplasia, leiomyoma, adenomyosis,

polyps and malignancies. On the global basis out of the first eight ranking cancers in females, cancers of the female reproductive system rank as follows- 1st breast, 2nd cervix, 7th ovary and 8th body of the uterus. Despite availability of medical management of some of these diseases hysterectomy remains a common surgical procedure done for various lesions of uterus.^[5] The first partial hysterectomy was performed in Manchester, England, in 1843 by Charles Clay, and in 1929, the first total abdominal hysterectomy was performed.^[3] Numerous conditions such as abnormal uterine bleeding, pelvic pain, pelvic inflammatory disease (PID), prolapse of the uterus, adenomyosis, endometriosis, fibroids,

gynecological malignancies, and obstetric problems have been reported. Every hysterectomy sample must be examined histopathologically because histology is the only source of the final diagnosis.^[6] Histopathological examinations have both diagnostic and therapeutic significance.^[7] Uterine leiomyomas are the most common tumor in women. It constitutes a major public health cost to the community in terms of outpatient attendances and hospital costs for surgery of these disease.^[8] The growth of these tumors are strongly associated with unopposed estrogen excess which however regresses after menopause.^[9] The malignant counterpart of leiomyoma is leiomyosarcoma.^[10] Leiomyosarcoma though not so common may present like benign leiomyoma clinically.^[11] Therefore, histopathological evaluation of these lesions is very important in making appropriate diagnosis and differentiating them from a similar variants of benign lesions ranging from symplastic/atypical, cellular or mitotically active leiomyoma, low-grade, or high grade endometrial stromal sarcoma.

Aim

To Study different Histopathological Lesions of Uterus in females undergone Hysterectomy.

Objectives

1. To study age-wise incidence of uterine lesions in hysterectomy specimens.

2. To analyze the patterns of lesions in hysterectomy specimens.

MATERIALS AND METHODS

Study design: Prospective observational study.

Study period: October 2024 to March 2026 (18 months).

Study place: Department of Pathology, rural-based tertiary care hospital.

Sample size: 363 hysterectomy specimens received during the study period.

All hysterectomy specimens received in the histopathology section were included. Relevant clinical history was noted from case records. Specimens were fixed in 10% neutral buffered formalin, grossed and representative sections were submitted. After routine processing and embedding, sections were stained with hematoxylin and eosin and examined microscopically.

Inclusion Criteria: All hysterectomy specimens received in the pathology department during the study period.

Exclusion Criteria

1. Inadequate and autolyzed specimens
2. specimens received after the study period
3. coagulopathies
4. dilatation and curettage specimens and
5. cervical biopsies.

RESULTS

Table1: Frequency of occurrence of hysterectomy specimens among all histopathology specimens

Sr. No.	Specimen category	Number of specimens	Percentage (%)
1	Total number of specimens of all sites	2983	100.00
2	Total number of hysterectomy specimens	363	12.17

Total specimens received during the study period were 2983, out of which 363 were hysterectomy specimens.

Table 2: Clinical presentation of all cases (n=363)

Clinical presentation	Number of cases	Percentage (%)
PV bleeding	40	11.02
SCOV	62	17.08
HMB	34	9.37
Pain in abdomen	51	14.05
AUB	112	30.85
Dysmenorrhea	10	2.75
Post-menopausal bleeding	2	0.55
Menorrhagia	40	11.02
DUB	11	3.03
Amenorrhea	1	0.28
Total	363	100.00

PV: Per vaginal; SCOV: Something coming out of vagina; AUB: Abnormal uterine bleeding; DUB: Dysfunctional uterine bleeding; HMB: Heavy menstrual bleeding.

The most common clinical presentation was abnormal uterine bleeding (112 cases), followed by something coming out of vagina (62 cases), pain in abdomen (51 cases), PV bleeding (40 cases) and menorrhagia (40 cases).

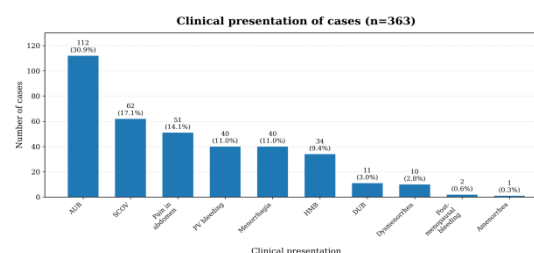


Figure 1: Bar chart showing clinical presentation of all cases

Table 3: Histopathological diagnosis of endometrium (n=363)

Histopathological diagnosis	Number of cases	Percentage (%)
Proliferative phase	97	26.72
Secretory phase	141	38.84
Atrophic endometrium	53	14.60
Hormonal imbalance	27	7.44
Chronic endometritis	20	5.51
Endometrial polyp	11	3.03
Placenta accrete	3	0.82
Simple hyperplasia without atypia	9	2.48
Atypical hyperplasia	1	0.28
Decidual reaction	1	0.28
Total	363	100.00

Secretory phase was the most common endometrial finding with 141 cases (38.84%), followed by proliferative phase with 97 cases (26.72%).

Table 4: Histopathological diagnosis of myometrial lesions (n=363)

Type of lesion	Number of lesions	Percentage (%)
Leiomyoma	186	51.24
Adenomyosis	126	34.71
Adenomyoma	17	4.68
Leiomyomatous polyp	6	1.65
Unremarkable	28	7.71
Total	363	100.00

Leiomyoma was the most common myometrial lesion with 186 cases (51.24%), followed by adenomyosis with 126 cases (34.72%).

Table 5: Histopathological diagnosis of lesions of cervix (n=363)

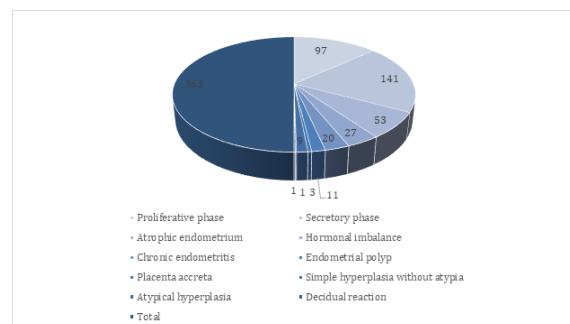
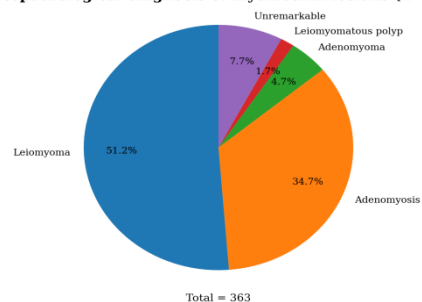
Histopathological diagnosis	Number of lesions	Percentage (%)
Chronic non-specific cervicitis	303	83.47
Squamous metaplasia	40	11.02
Mild dysplasia	15	4.13
Moderate dysplasia	3	0.83
Severe dysplasia	1	0.28
Endocervical polyp	1	0.28
Total	363	100.00

Chronic non-specific cervicitis was the most common cervical lesion with 303 cases (83.47%), followed by squamous metaplasia with 40 cases (11.02%).

Table 6: Age-wise distribution of hysterectomy cases (n=363)

Age group (years)	Number of cases	Percentage (%)
21-30	6	1.65
31-40	95	26.17
41-50	187	51.52
51-60	43	11.85
61-70	21	5.79
71-80	11	3.03
Total	363	100.00

The most common age group was 41-50 years with 187 cases (51.52%), followed by 31-40 years with 95 cases (26.17%).

**Figure 2: Bar chart showing histopathological diagnosis of endometrium****Histopathological diagnosis of myometrial lesions (n=363)****Figure 3: Pie chart showing histopathological diagnosis of myometrial lesions**

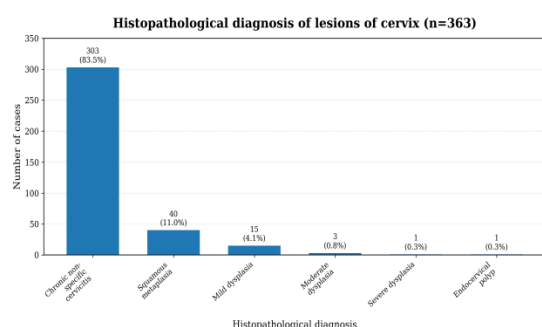


Figure 4: Bar chart showing histopathological diagnosis of lesions of cervix

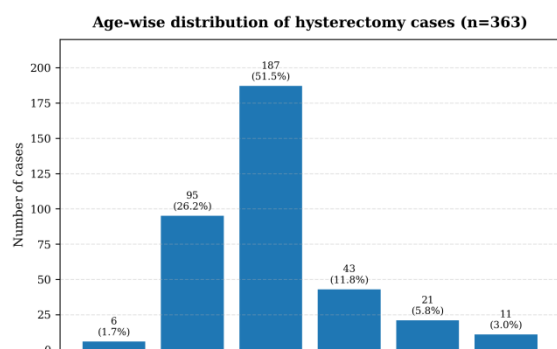


Figure :5 Histogram showing age-wise distribution of hysterectomy cases

DISCUSSION

The present study comprises the histopathology of 363 hysterectomy specimens, studied in the department of pathology for the period of 18 months. In the present study, the most common clinical presentation was per vaginal bleeding in 163 (44.90%) cases which is comparable with a study done by Kartikeyan et al (2015),^[12] which had 56/90 (62.22 %). In present study most common cyclical presentation is secretory phase consisting of 38.84% cases which is comparable with study done by Panchal et al (2017),^[13] which had 31.74% cases having secretory phase as most common cyclical phase. Most common myometrial lesions in present study were leiomyoma and adenomyosis which are similar to study done by Rather et al,^[14] Jha et al,^[7] and Ranabhat et al,^[15] which had leiomyoma and adenomyosis as most common myometrial lesions. The most common lesion in cervix in present study is chronic non-specific cervicitis consisting of 83.47% cases which is comparable with study done by Ajmera et al,^[16] which had 84.89% cases, K Sathiyamurthy et al,^[17] which had 80.2% cases, Jigna Upadhyay et al,^[18] which had 82.95% cases and Baidya Nath Thakur,^[19] which had 77.43% of cases of chronic non-specific cervicitis. Most common age group in present study is 41 – 50 years consisting of 60.54% cases which is comparable with study done by Rather et al,^[14] consisting of 42.27% cases and Ranabhat et al,^[15] consisting of 43.12 % cases.

CONCLUSION

Histopathological evaluation of hysterectomy specimens is essential for confirming the final diagnosis and detecting incidental lesions. In the present study, non-neoplastic lesions were more common than neoplastic lesions. The commonest age group affected was 41-50 years.

Leiomyoma was the most common myometrial lesion, secretory phase was the most common endometrial finding and chronic non-specific cervicitis was the most common cervical lesion. Routine histopathological examination helps in appropriate clinical management and detection of premalignant and malignant changes.

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