

Histopathological Analysis of Hysterectomy Specimens in Tertiary Care Teaching Hospital

Dr. Komal Chaudhari, Dr. Meena Patel*, Dr. Hansa Goswami*, Patel Hetvi*

Second Year Resident, Assistant Professor*, Professor & Head of Department*, Third year M.B.B.S* Pathology Department, B. J. Medical College, Ahmedabad, Gujarat, India

Author: Dr. Komal Chaudhari, Second Year Resident, B. J. Medical College, Ahmedabad, Gujarat, India
Email id: komalc296[at]gmail.com

Abstract: **Introduction:** Uterus is a major hormone responsive secondary sex organ of female reproductive organ. Hysterectomy is the second most frequently performed major surgical procedure on women all over the world. A histopathological study is imperative for establishing the pathology of the specimen following hysterectomy. **Materials & Methods:** This was an observational study over a period of 6 months from January 2021 to June 2021 in the Department of Pathology at tertiary care teaching hospital. A histopathological analysis of 106 gynecological hysterectomy specimens were diagnosed microscopically after 24 hour formalin fixation, routine tissue processing and staining with H & E stain is included in the present study. **Result:** Total 106 specimens were analyzed; specific histopathological diagnosis was made in all of cases. The most common histopathological finding was Leiomyoma which was seen in 33 % (38) of cases, whereas 30.2 % (25) of cases were of Adenomyosis. **Conclusion:** The present study provides a good insight into incidence and different histopathological patterns of uterus in hysterectomy specimens. Histopathological examination of the hysterectomy specimens can be helpful in guiding towards diagnosis and better management of patient.

Keywords: Leiomyoma, Hysterectomy specimen, Histopathological evaluation

1.Introduction

Uterus is a major hormone responsive secondary sex organ of female reproductive organ.^[1] Uterus is exposed to a wide range of pathological lesions for which hysterectomy is done as a major surgical gynecology procedure.^[1]

The uterus has three layers, which together form the uterine wall. From innermost to outermost, these layers are the endometrium, myometrium, and perimetrium.

Hysterectomy is the second most frequently performed major surgical procedure on women all over the world.^[2] A histopathological study is imperative for establishing the pathology of the specimen following hysterectomy.

2.Aim

- To study the age wise incidence of various uterine lesions.
- To study the histopathological findings in various gynecological conditions.
- To correlate histopathological findings with radiological investigation and clinical examination.

3.Materials & Methods

This was an observational study over a period of 6 months i.e. from January 2021 to June 2021 in the Department of Pathology at tertiary care teaching hospital. A histopathological analysis of 106 gynecological hysterectomy specimens were diagnosed microscopically after 24 hour formalin fixation, routine tissue processing and staining with H & E stain is included in the present study.

4.Result

In this observation study 106 hysterectomy specimens were diagnosed on basis of histopathological examination. Age of patients ranged from 30-73 years. Maximum numbers of hysterectomy specimens were between age group of 31-40 & 41-50 years with mean age of 44.4 (median age-43.5 years).

Total 106 specimens were analyzed; specific histopathological diagnosis was made in all of cases. The most common histopathological finding was Leiomyoma which was seen in 33 % (38) of cases, whereas 30.2 % (25) of cases were of Adenomyosis.

Table 1: Indications for Hysterectomy

Preoperative Indication given for Hysterectomy	No. of Hysterectomy	Percentage (%)
Fibroid	38	35.9
Uterine Prolapse	28	26.4
Adenomyosis	25	23.7
DUB	11	10.4
Colouterine Fistula	1	0.9
Endometrial Polyp	1	0.9
Endometroid cyst	1	0.9
Dermoid cyst	1	0.9
Total	106	100

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Chart 1: Age-wise distribution of Hysterectomy

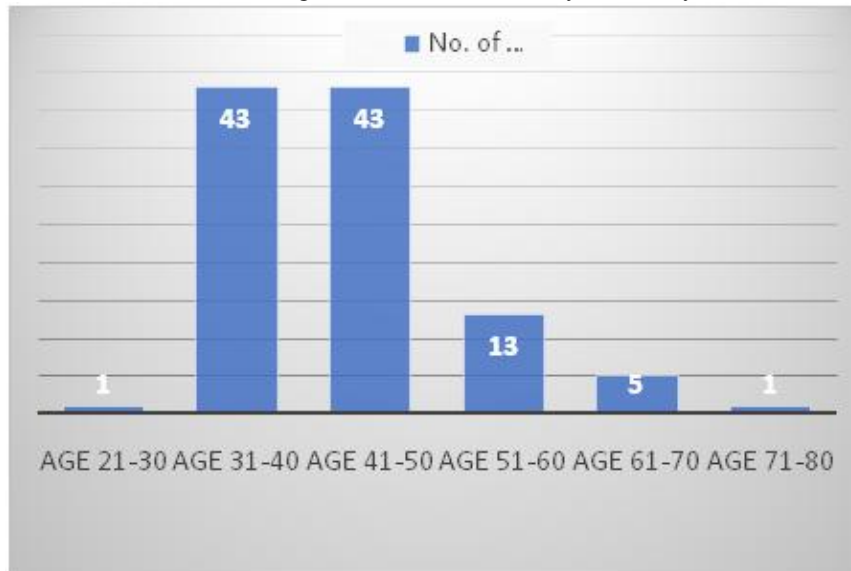


Table 2: Endometrial changes in specimens

Endometrial changes	No. of cases	Percentage (%)
Proliferative Phase	57	53.8
Atrophic/Cystic Atrophy	20	18.9
Secretory Phase	18	17
Non-Atypical Hyperplasia	5	4.7
Endometrial Polyp	5	4.7
Endometrial Stromal Sarcoma	1	0.9
Total	106	100

Table 3: Myometrial Findings in specimens

Myometrial Findings	No. of cases	Percentage (%)
Leiomyoma	35	33
Adenomyosis	32	30.2
Unremarkable	28	26.4
Adenomyosis+Leiomyoma	7	6.7
Monckeberg's medial sclerosis	2	1.9
Leiomyosarcoma	1	0.9
Non specific Inflammation & Foreign body giant cell	1	0.9
Total	106	100

Table 4: Cervical Findings of Specimens

Cervical Findings	No. of cases	Percentage (%)
Chronic Cervicitis	62	58.5
Chronic Cervicitis + Nabothian cyst	17	16.1
Chronic Cervicitis + Squamous Metaplasia	16	15.1
Chronic Papillary Endocervitis	4	3.8
Chronic Inflammatory Polyp	1	0.9
Cervical Leiomyoma	1	0.9
LSIL (CIN-1)	1	0.9
Unremarkable	4	3.8
Total	106	100

Table 5: Correlation of Preoperative Clinical Diagnosis with Histopathological Diagnosis

Pathological Lesion	No. of cases confirmed by HPE	Preoperative Provisional Diagnosed accurately	% of provisional diagnosis / Total cases confirmed by HPE (%)
Leiomyoma	42	35	83.3
Adenomyosis	39	24	61.5
Uterine Prolapse	28	28	100
Colouterine Fistula	1	1	100
Leiomyosarcoma	1	0	0
Endometrial Polyp	5	1	20
Entometrial Stromal Sarcoma	1	0	0
Endometroid cyst	1	1	100

5. Discussion

In the present study mean age was 44.4 years which is similar to study by Gupta et al.^[3] where mean was 45.6. The most common presenting symptom was menorrhagia in about 47.2 % cases.

In the present study Leiomyoma (35.9 %) was found to be most common indication for hysterectomy which was similar to Qamar ur nisa et al^[4] 33 %, Radha Rastogi et al^[5] 34.5 %, Shergill SK^[6] et al 34 % but more than Ramachandran^[7] et al 30.7 % and less than Sarfraz^[8] et al 69 %. In studies by Qamar ur nisa et al^[4] and Shergill SK et al^[6] also commonest indication was Fibroid. Most common indication was prolapse in study by Ramachandran et al^[7] (31.6 %) & Radha Rastogi et al (39 %)^[5] which was followed by Fibroid.

Patients with prolapse had undergone hysterectomy for relieving of symptoms rather than for any histopathological lesion, except in 5 cases in which 4 case had concurrent adenomyosis and 1 other case with concurrent leiomyoma.

Endometrial Hyperplasia in 4.7 % in present study which is less than in studies by Qamar ur nisa et al^[4] (6.9 %) and Ramachandran et al^[7] (9 %). A rare case of High grade Endometrial Stromal Sarcoma with areas of low grade stromal sarcoma and extensive areas of necrosis was encountered in one of the hysterectomy specimen.

A peculiar case of low grade Leiomyosarcoma was diagnosed in a 33 year old female, as peak incidence of Leiomyosarcoma occurs between age group of 40-60 years. In the present study, 104 cases had undergone pelvis ultrasonography (USG), 1 case had undergone CT scan and a case had undergone MRI.

In the present study, there was 83.3 % clinopathological correlation in case of Leiomyoma. 23 cases of adenomyosis was preoperatively diagnosed by USG pelvis and 1 cases by MRI. A total of 39 adenomyosis lesion was diagnosed by histopathology. There was 100 % confirmed preoperative diagnosis of uterine prolapse. CT scan was performed in a case of colouterine fistula which was further confirmed by histopathological examination. Cases

of Endometrial Stromal Sarcoma and Leiomyosarcoma were diagnosed histopathologically and not preoperatively.

In this study, 84.7 % preoperative diagnosis was confirmed in by histopathology which is similar to study by Ramachandran et al^[7] (88.8 %). The present study provides a good insight into incidence and different histopathological patterns of uterus in hysterectomy specimens.

Few lesions were encountered as incidental findings. Histopathological examination of the hysterectomy specimens can be helpful in guiding towards diagnosis and better management of patient.

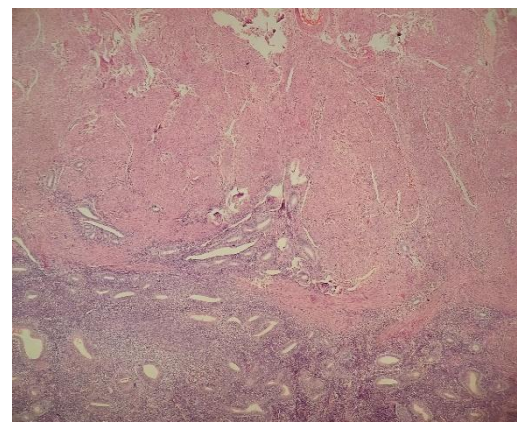


Figure 1: Adenomyosis (20x)

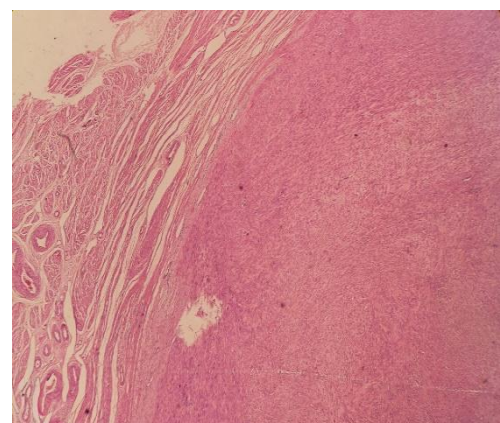


Figure 2: Leiomyoma (20x)

6. Conclusion

The present study provides a good insight into incidence and different histopathological patterns of uterus in hysterectomy specimens. Histopathological examination of the hysterectomy specimens can be helpful in guiding towards diagnosis and better management of patient.

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