



## Spectrum of Histopathological Findings in Hysterectomy Specimens- A Retrospective – 5 Year Study

Authors

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### Abstract

**Background:** Diseases of the female genital tract are extremely common and include complications of pregnancy, infections, tumors, and hormonally induced abnormalities. Hysterectomy is one of the most common surgical procedure performed throughout the world.

**Methods:** Retrospective study of hysterectomy specimens received in the Department of Pathology, Mysore Medical College and Research Institute, from Jan 2011 to Dec 2015.

**Results:** A total of 1935 Hysterectomy specimens were included in the study. It was found that atrophic endometrium, leiomyoma and chronic cervicitis were the most common endometrial, myometrial and cervical pathologies seen in 30.5%, 41% and 90.5% of cases respectively.

**Conclusion:** A wide spectrum of lesions were identified when hysterectomy specimens are subjected to histopathological examination.

**Keywords:** Hysterectomy, Atrophic endometrium, Leiomyoma, Chronic cervicitis.

### Introduction

Uterus is a hollow pear- shaped organ, which is divided into corpus and cervix. The uterine cavity is lined by inner endometrium, surrounded by thick muscular layer, myometrium and a serosal covering.<sup>1</sup>

Uterus, a vital reproductive organ is subjected to variety of benign and malignant disorders.<sup>2</sup> Endometrial carcinoma is the most common gynaecologic malignancy in developed countries.<sup>1</sup> Cervical carcinoma is the third most common cancer in women, with an estimated 530000 new cases in 2008, of which more than half are fatal.<sup>3</sup> Most common complaints presented are per vaginal bleeding, pain abdomen, menstrual

irregularities, mass per abdomen, vaginal discharge, mass per vagina etc.<sup>4</sup>

Many treatment options are available including medical and conservative surgical procedures but hysterectomy is the most preferred method.<sup>5</sup> Hysterectomy is the definitive treatment for most uterine pathologies like hyperplasia, adenomyosis, leiomyoma, polyps, utero-vaginal prolapse, pelvic inflammatory disease, gynaecological cancers and obstetric complications.<sup>6</sup>

### Objective

1. Histopathological evaluation of all lesions of hysterectomy specimens.

## Methods

Retrospective study of hysterectomy specimens received in the Department of Pathology, Mysore Medical College and Research Institute, from Jan 2011 to Dec 2015. Total 1935 Hysterectomy specimens were received over a period of 5 years. Endometrial, myometrial and cervical findings were noted.

## Inclusion criteria

- All hysterectomy specimens

## Exclusion criteria

None

## Results

Total of 1935 cases were studied in the study period. Age of the patients ranged from 19 to 75 years. The various indications for hysterectomy were menstrual irregularities, mass per vagina, ovarian tumor, postmenopausal bleeding and so on.

The endometrium was unremarkable in most of the cases (58.6%). Atrophic endometrium was the commonest endometrial pathology (30.5%), followed by non-atypical hyperplasia (6%). Adenocarcinoma of endometrium constitutes 0.2%. Other endometrial lesions noted were endometritis, decidualised endometrium, invasive mole and pyometra (Table -1)

Myometrium was also histologically normal in majority of cases (44.2%). Leiomyoma was the most common pathology of myometrium (41%) followed by adenomyosis (5.7%). Leiomyosarcoma constitutes 0.1%. Other myometrial lesions were 2 cases of placenta increta, a case of invasive mole, adenocarcinoma endometrium involving myometrium, and stromal nodule. (Table -2)

Chronic cervicitis was found in 90.5% of cases. Other cervical pathologies were cervical dysplasia (3.77%), squamous cell carcinoma cervix (0.25%) and a case of endometrial carcinoma involving cervix. (Table -3)

**Table1** Histopathological lesions of Endometrium

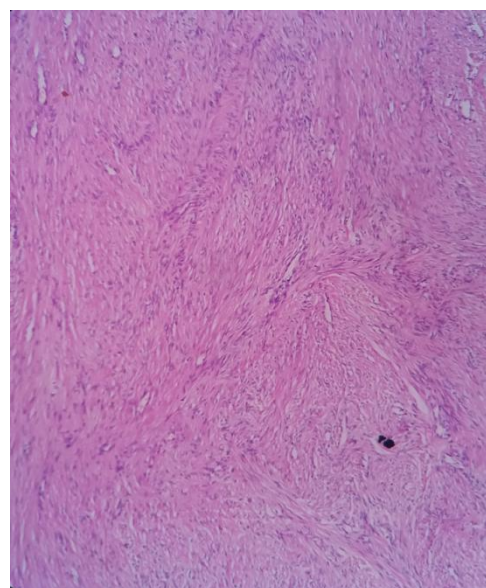
Endometrial lesions	No. of cases	Percentage (%)
Unremarkable	1135	58.65
Atropy	591	30.54
Non-atypical hyperplasia	118	6
Atypical hyperplasia	4	0.20
Polyp	46	2.37
Decidualised	25	1.29
Endometritis	9	0.46
Adenocarcinoma	5	0.25
Invasive mole	1	0.05
Pyometra	1	0.05

**Table 2** Histopathological lesions of Myometrium

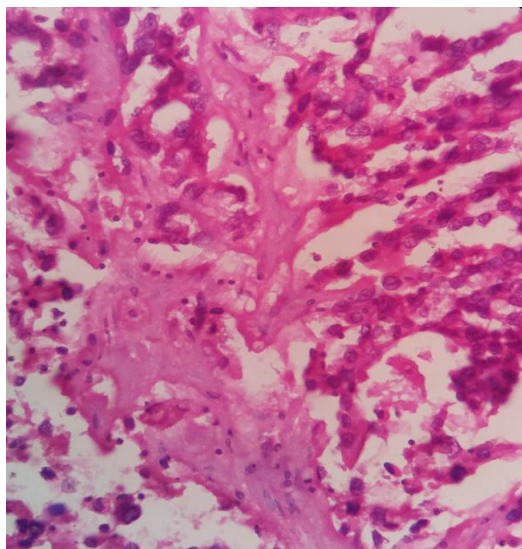
Myometrial lesions	No. of cases	Percentage (%)
Unremarkable	857	44.28
Leiomyoma	795	41.08
Adenomyosis	166	8.57
Leiomyoma with Adenomyosis	111	5.73
Placenta increta	2	0.10
Endometrial adenocarcinoma involving myometrium	1	0.05
Leiomyosarcoma	2	0.10
Invasive mole	1	0.05
Stromal nodule	1	0.05

**Table 3** Histopathological lesions of Cervix

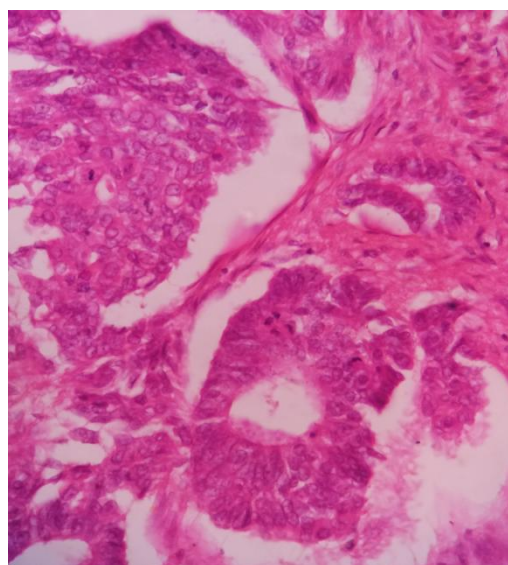
Cervical lesions	No. of cases	Percentage (%)
Unremarkable	103	5.32
Chronic cervicitis	1753	90.59
Dysplasia	73	3.77
Squamous cell carcinoma	5	0.25
Endometrial carcinoma involving cervix	1	0.05



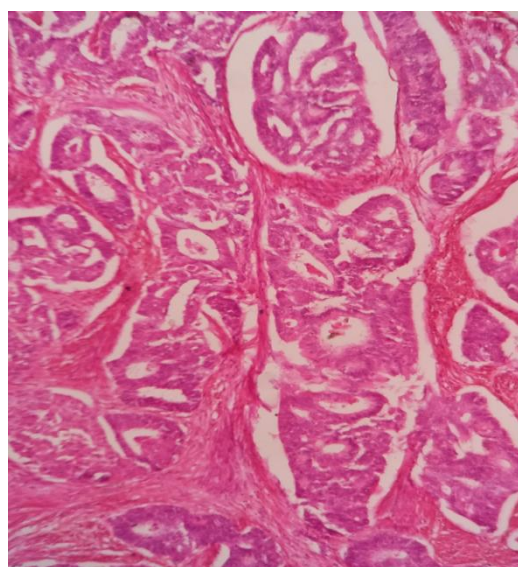
**Leiomyoma**



**Leiomyosarcoma (Epitheloid Variant)**



**(High Power)**



**(Low Power)**

**Adenocarcinoma-Endometrium**

### Discussion

Hysterectomy is the most commonly performed major gynaecological surgery throughout the world. It is a successful operation in terms of symptom relief and patient satisfaction and provides definitive cure to many diseases involving uterus like like leiomyoma, hyperplasia, adenomyosis, polyps, utero-vaginal prolapse etc..<sup>7</sup> This study was conducted to analyze the patterns of lesions in hysterectomy specimens in our institution.

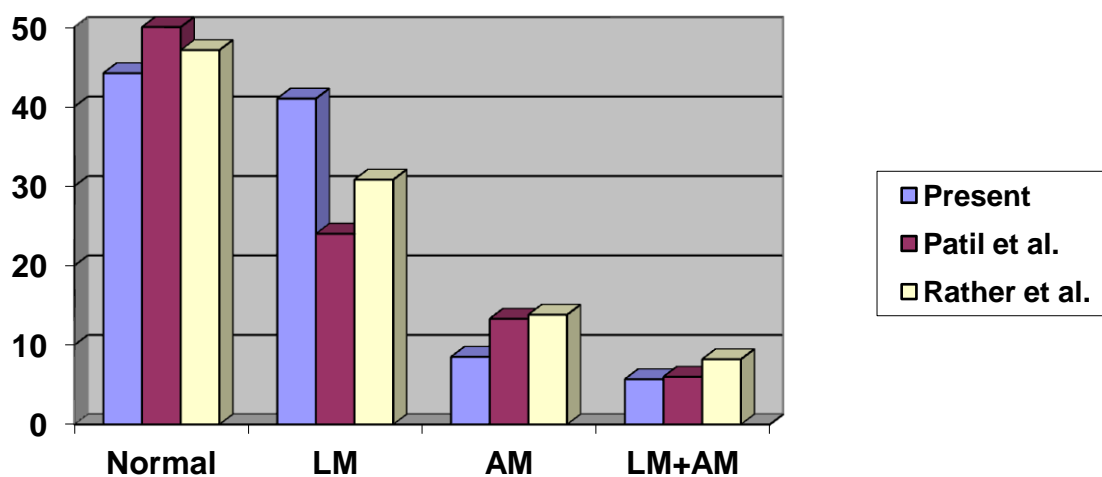
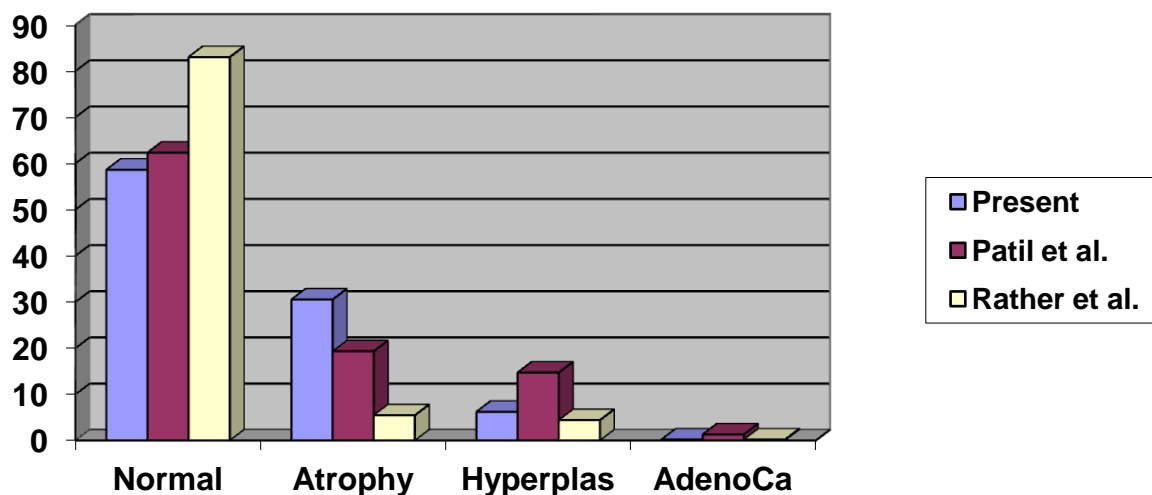
In a study by Sajjad M et al. the common histopathological lesion was leiomyoma 41%, followed by adenomyosis 32% and endometrial polyps 09%, whereas malignant tumors were endometrial adenocarcinoma 1.87%, endometrial stromal sarcoma, leiomyosarcoma and carcinosarcoma 0.6%<sup>8</sup>

In a study by Rather GR et al. it was found that endometrium was histologically unremarkable in 83%, atrophic endometrium was the most common endometrial pathology 5.4% followed by endometrial hyperplasia and malignant tumors comprised only 0.72%. Myometrium was unremarkable in 47.3%, leiomyoma 30.8%, followed by adenomyosis 13.8%, both leiomyoma and adenomyosis 8.02%. In cervix, chronic cervicitis was the most common pathology 89.3%.<sup>9</sup>

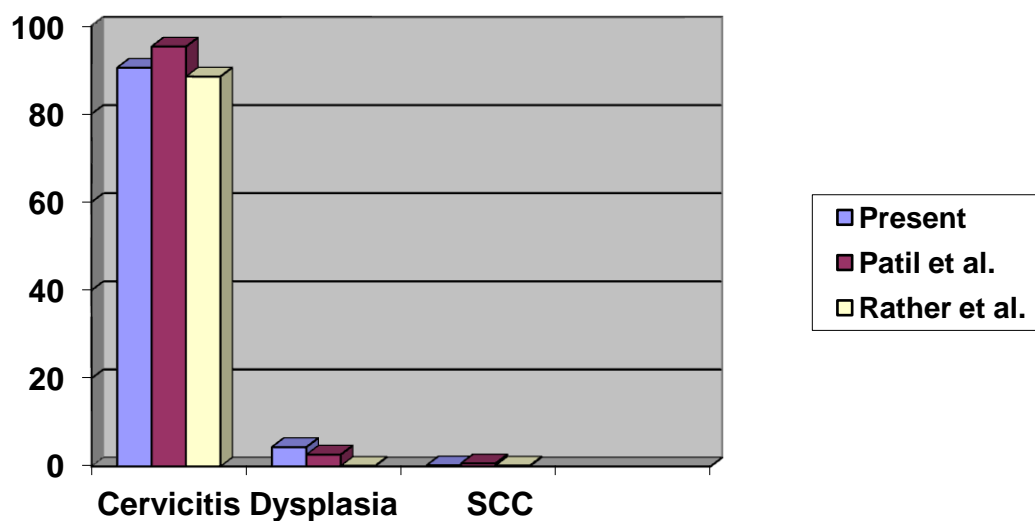
In a study by Domdlae V et al. atrophic endometrium was seen in 16.6% of cases followed by endometrial hyperplasia. Malignancy comprised 0.72%. Myometrium was unremarkable in 56.8% of cases. Leiomyoma was seen in 25.5% followed by adenomyosis (12.8%). In cervix chronic cervicitis was the most common pathology 36.6%<sup>10</sup>

Study by Patil HA et al. also found atrophic endometrium (19.3%) as the common pathology of endometrium followed by hyperplasia(14.7%). Among the myometrial lesions leiomyoma was seen in 24% of cases, adenomyosis (13.3%), leiomyoma with adenomyosis (6%), leiomyosarcoma (0.7%). Chronic cervicitis in 95.3%, dysplasia in 2.7%, SCC in 0.7%, metastasis of adenocarcinoma in 0.7% of cases.<sup>11</sup>



**Endometrial Lesions**

**Myometrial Lesions**  
(LM- leiomyoma, AM- adenomyosis)

**Cervical Lesions**

Similar to the above studies in our study we found that atrophic endometrium the most common pathology of endometrium followed by hyperplasia and polyp. Of five adenocarcinoma cases, all are endometrioid carcinomas, out of which one was the villoglandular type with mucinous differentiation.

In 2008, there were 288 000 newly diagnosed uterine corpus cancers worldwide of which about 70-80% were of the endometrioid type. Postmenopausal women with higher total concentrations of oestrogens are at increased endometrial carcinoma risk as are women with polycystic ovary syndrome or oestrogen producing ovarian tumors. Villoglandular pattern is one of the less frequent pattern of endometrioid carcinoma.<sup>12</sup>

In the present study, among the myometrial lesions leiomyoma was the commonest pathology followed by adenomyosis. Two cases of leiomyosarcoma, a case of endometrial adenocarcinoma involving myometrium and cervix and a case of invasive mole were also noted. Chronic cervicitis was the commonest cervical pathology found.

Leiomyomas are the most common uterine tumour and usually affect women in their fourth and fifth decades. Leiomyosarcoma is the most common uterine sarcoma accounting for 1-2% of all uterine malignancies.

### Conclusion

The present study provides a fair insight into the spectrum of histopathological findings in hysterectomy specimens. Atrophic endometrium, leiomyoma and chronic cervicitis were the commonest pathologies of endometrium, myometrium and cervix respectively.

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