



## Prevalence of Adenomyosis in Hysterectomy Specimen in Jammu Region and its Clinical Correlations in a Tertiary Care Hospital

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### Abstract

**Background:** Adenomyosis is characterized by the detection of endometrial glands and stroma within the myometrium about one and a half low power field away from endomyometrial junction. There are also smooth muscle changes associated with the main findings, although they are less obvious and difficult to quantify on routine histological examination

**Materials and Methods:** Case records of the patients who had undergone hysterectomy in Govt. Medical College Jammu from January 2017 to December 2018 were reviewed and number of cases diagnosed as Adenomyosis were recorded.

Out of 1356 patients who underwent hysterectomy, 176 patients were found to have Adenomyosis. Majority were between age group of 31 to 50 years.

**Results:** Adenomyosis was present in 176 patients out of 1356 hysterectomies during a study period of 2 years. The comorbid conditions were seen in 80 patients. Majority of age group was between 31 to 50 years.

Comorbid conditions included

- Menorrhagia
- Dysmenorrhea
- Intermenstual pelvic pain
- Post menopausal bleeding
- Dyspareunia.

**Keywords:** Adenomyosis, dysmenorrhea, hysterectomy, multipara.

### Introduction

Adenomyosis is a benign gynaecological disorder characterized by invasion of endometrial glands and stroma (deeply and haphazardly) within the uterine myometrium.<sup>1</sup>

It may be associated with hyperplasia and or hypertrophy of adjacent myometrium.<sup>2</sup>

It may present itself in various disguises ranging from simple thickening of endomyometrial junction to nodular or diffuse lesions involving

the entire uterine wall. Today the term Adenomyosis should be restricted to the presence of glandular and stromal extensions of more than 2.5mm below the endomyometrial junction on low power field.<sup>3</sup>

Frequency of Adenomyosis increases with age, Peaks at 40 – 50 years and levels off after menopause. Increase in frequency is also associated with multiparity.<sup>4</sup>

Risk of Adenomyosis is increased in patients with history of smoking, menstrual irregularities, dilatation and curettage.<sup>3</sup>

#### **Comorbid conditions**

Clinically Adenomyosis is asymptomatic in 1/3 to 1/2 of the cases. The symptomatic patients present with dysmenorrhoea, intermenstrual pelvic pain, rarely dyspareunia, menorrhagia, and metrorrhagia. Chronic symptoms as dysmenorrhea and menorrhagia correlate with the depth of myometrial involvement and age.<sup>5</sup>

Many pathological lesions are associated with adenomyosis. These include endometriosis, endometrial hyperplasia, carcinoma and ovarian cyst, leiomyoma suggesting a common underlying disorder. — hyperestrogenism.<sup>2,5</sup>

Termination of pregnancy might affect the pathogenesis of Adenomyosis and may influence the myometrial depth and number of foci.<sup>6</sup>

Adenomyosis is more common in cancer patients taking tamoxifen.<sup>7</sup>

The purpose of study is to characterize the prevalence of Adenomyosis in hysterectomy specimen and correlate the symptoms of uterine Adenomyosis with histological features and associated comorbidities.<sup>8,9</sup>

#### **Materials and Methods**

The present study is a retrospective study conducted in the Department of Pathology, government Medical college Jammu for a period of 2 years from January 2017 to December 2018. The study samples consisted of women who had undergone hysterectomy and diagnosed to have Adenomyosis and Adenomyosis associated comorbid conditions of uterus and ovary on histopathological examination.

All pre and post menopausal women were included in the study.

Case histories of the patients were reviewed and clinical data pertaining to age, gravida, parity, menstrual history, obstetric history, intermittent bleeding, dysmenorrhea, dyspareunia were noted.

Record of previous dilatation and curettage was taken.

#### **Results**

A total of 1356 patients underwent hysterectomy and records were reviewed at Government Medical college Jammu during the study period.

#### **Inclusion Criteria**

- Presence of endometrial glands and stroma at a distance of more than 1 low power field in the myometrium when measured from the lower border of the endomyometrial junction. (figure 1).
- Presence of cystically dilated glands and intraluminal bleeding residue in the glands.

Adenomyosis was present in 14.96% (202) patients

Youngest patient who underwent hysterectomy was 24 years old and the oldest patient in our study was 78 years old. Mean age of the patients who underwent hysterectomy was 49.5 years.

Majority of the patients with Adenomyosis were in the age group of 31 to 50 years, 176 patients (87.12%). Among these patients 58 (28.71%) patients were in the age group of 31 to 40 years and 118 patients (58.41%) were in the age group of 41 to 51 years.

There were 24 patients in the age group of 51 to 80 years.

Only 2 patients (0.99%) were in the age group of 21 to 30 years and 24 (11.18%) patients were in the age group of 51 to 80 years and 24 patients were in the age group of 51 to 80 years.

#### **Co Morbid Conditions**

Out of 202 Patients, 80 Patients had one or more comorbid conditions.

70 Patients were associated with a single comorbid condition. Among these, 54 Patients had associated leiomyoma of the uterus.

10 Patients had endometrial hyperplasia without atypia.

4 Patients had Serous cystadenoma of both the ovaries.

2 Patients had associated Serous cystadenoma of one ovary.

6 Patients were associated with multiple comorbid conditions.

3 Patients had leiomyoma uterus and endometrial hyperplasia with atypia.

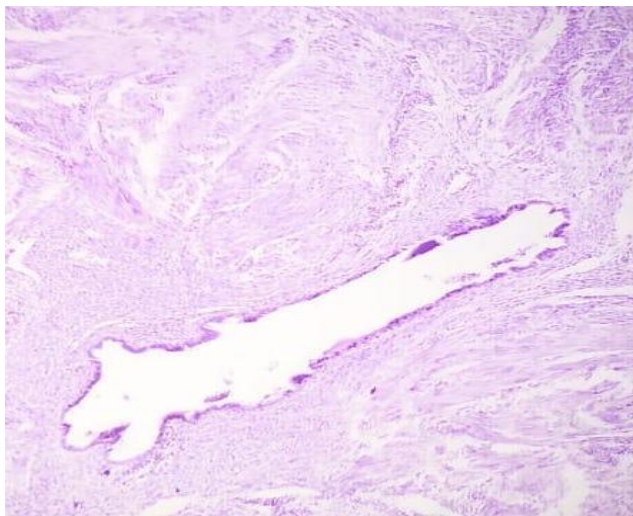
2 Patients had leiomyoma of uterus along with endometriosis of ovary.

1 Patient had leiomyoma and Adenomatous polyp of uterus.

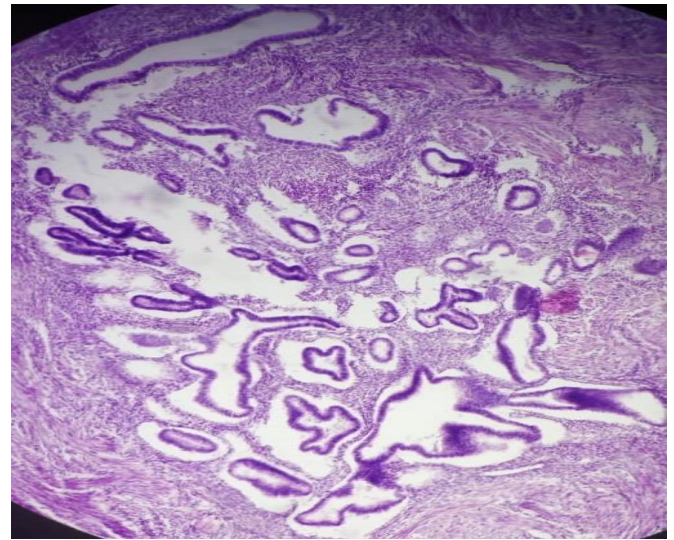
Risk of Adenomyosis was higher in women with complaints of heavy menstrual flow than in women who had normal menstrual flow and in patients who did not undergo dilatation and curettage. Similarly patients with complaints of intermenstrual pelvic pain and dysmenorrhea had increased risk of Adenomyosis.

Most of the patients were multiparous and majority of the patients were of parity 2 and 3.

Therefore Adenomyosis was more common among multiparous female.



**Figure 1** Photomicrograph showing endometrium with cystically dilated gland surrounded by hypertrophic smooth muscle bundles in myometrium, (H and E stain X 4).



**Figure 2** Photomicrograph is showing many endometrial glands and stroma lying deep in myometrium, (H and E x 4)

### Discussion

Although true prevalence of Adenomyosis is unknown among the various proposed etiological factors that cause Adenomyosis include Hyperoestrogenic state, genetic factors, increased intrauterine pressure of pregnancy in parous females and prior uterine surgery.

Among 1350 patients who had undergone hysterectomy Adenomyosis was seen in 202 patients 15.96%.

Similar prevalence was reported in the study conducted by Sharquill et al (26%)<sup>10</sup>, Sheikh 20.6%<sup>11</sup>.

In a study conducted by Siddegowda et al<sup>12</sup> there were 136 patients in age group of 31 to 50 years (89.47 %) showed Adenomyosis.

In our study there were 176 patients in age group of 31 to 50 years 87.12% showed Adenomyosis.

Similar prevalence of Adenomyosis for the age group of 31 to 50 years was reported in studies conducted by Siddegowda<sup>12</sup> et al in which 136 patients in age group of 31 to 50 years (89.47%)

In our study there were 176 patients between 31 to 50 years of age (87.1%)

In our study there were 2(0.99%) patients in the age group of 21 to 30 years. Similar prevalence was observed in a study conducted by Siddegowda.<sup>12</sup>

In our study there was one patient (0.49%) between the age group of 71 to 80 years.

Similarly one patient 0.63% was having Adenomyosis between the age group of 71 to 80 years. In a study conducted by Siddhegowda<sup>12</sup>.

In our study there were 5 (2.47%) patients between the age group of 61 to 70 years.

In study conducted by Siddhegowda<sup>12</sup> there were 5 patients (3.16%) in the age group of 61 to 70 years.

In our study there were 18 patients (8.91%) having adenomyosis and in study conducted by Siddhegowda<sup>12</sup> there were 11 (6.96%) patients having Adenomyosis

In our study 114 (56%) patients suffered from menorrhagia.

100 patients (40.9%) patients suffered from dysmenorrhoea.

22 suffered from uterovaginal prolapse.

6 patients suffered from post menopausal bleeding.

In the study conducted by Siddhegowda et al<sup>12</sup> there were 11 patients (69.60%) patients suffering from menorrhagia

105 patients (66.45%) suffering from dysmenorrhoea.

26 patients (16.45%) suffering from uterovaginal prolapse.

7 patients (4.43%) suffering from post menopausal bleeding.

In the study conducted by Kheisat et al<sup>13</sup>

There were 64% patients suffering from dysmenorrhoea.

3.92% patients suffering from post menopausal bleeding.

In the study conducted by Arunachalam et al<sup>2</sup>

There were 70.4% patients suffering from menorrhagia

There were 18.45 patients suffering from uterovaginal prolapse.

2.8% patients suffering from post menopausal bleeding.

In our study 93% patients with Adenomyosis were multiparous (table no.3)

Similarly Siddhegowda et al<sup>12</sup> observation showed 94.29% multiparous patients with Adenomyosis.

Similarly study by Kheisat et al<sup>13</sup> showed 96% parity of more than 3.

Similar findings were observed by Arunachalam et al<sup>2</sup>

This fact favoured the hypothesis that increased intra uterine pressure and invasive nature of trophoblasts in pregnancy probably facilitated implantation of endometrial tissue into the myometrium.

The preoperative clinical diagnosis of Adenomyosis based on clinical signs and symptoms is very low.

In an observation by Reinhold<sup>3</sup> the preoperative clinical diagnosis of adenomyosis was present in 26% patients and study by Arunachalam<sup>2</sup> showed adenomyosis in 21.2% patients.

Similarly in a study by Siddhegowda<sup>12</sup> preoperative clinical diagnosis of Adenomyosis was observed in 18.40% patients.

In our study preoperative clinical diagnosis was present in 19.20%.

### Conclusion

The prevalence of Adenomyosis in hysterectomy patients was found to be in 14.96% patients in our study.

It was most common seen in patients of age group of 31 to 50 years.

Also very common in multiparous females with parity of more than 2.

The presenting symptoms of Adenomyosis include menorrhagia, dysmenorrhoea, metorrhagia, intermenstual pelvis pain, postmenopausal bleeding and dyspareunia.

Therefore clinical diagnosis of Adenomyosis should be considered in patients presenting with these symptoms without any definitive evidence of uterine prolapse, uterine fibroid or ovarian mass.

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