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Original Research Article

## Hysterectomy: retrospective analysis of 476 cases

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### ABSTRACT

**Background:** Diseases of the female genital tract are commonly encountered in clinical practice. Hysterectomy is the definite treatment for many of the pelvic pathologies. The present study is aimed at analysis of age and types of hysterectomy and evaluation of histopathological reports of the hysterectomy specimens.

**Methods:** A total of 476 consecutive hysterectomy were studied over a period of two years from January 2016 to December 2017.

**Results:** The peak age group of hysterectomy was 41-50 years with 221 (46.43%) cases. The commonest type of hysterectomy was abdominal. The most common endometrial pathology was atrophic endometrium, seen in 131 (27.52%) cases. In myometrium, the most common pathology was leiomyoma in 179 (37.61%) cases. Among cervical lesions, chronic cervicitis was the most common finding, seen in 274 (57.56%) cases.

**Conclusions:** The experience with various types of hysterectomies at our institution has been reviewed. A wide spectrum of lesions were observed when histopathology reports of the hysterectomy specimens were analysed.

**Keywords:** Abdominal hysterectomy, Cervix, Endometrium, Hysterectomy, Laparoscopic hysterectomy, Myometrium, Vaginal hysterectomy

### INTRODUCTION

Hysterectomy is the second most commonly performed major surgical procedure in females worldwide next to caesarean section.<sup>1</sup> It is a successful operation in terms of symptoms relief and patient satisfaction, and provides definite cure to many diseases involving the uterus like utero-vaginal prolapse, leiomyoma and adenomyosis. The hysterectomy can be performed via an abdominal or vaginal approach, or with laparoscopic assistance. Currently there is upward trend for vaginal and laparoscopic hysterectomy.<sup>2</sup>

A wide range of lesions were encountered when hysterectomy specimens were subjected to histopathological examination. The aim of the present study was to analyse age distribution, types of

hysterectomy and histopathological reports of the hysterectomy specimens.

### METHODS

The present study was carried out in the department of obstetrics and gynecology, Pt. B. D. Sharma PGIMS, Rohtak, Haryana. The study comprised of 476 consecutive hysterectomy procedures carried out over a period of 2 years from January 2016 to December 2017.

The study included hysterectomies for uterine and cervical indications. All the women who had hysterectomy for obstetric, ovarian and tubal conditions were excluded from the study. The available records of the patients were reviewed. Age, type of hysterectomy and final histopathological reports were analyzed.

**Statistical analysis**

Statistical analysis was carried out by using SPSS v. 20.0. Descriptive statistics such as mean, number, percentage were observed.

**RESULTS**

A total of 476 hysterectomy procedures were studied retrospectively. The age ranged from 23 to 85 years. The mean age was 48.23 years. The most common age group which underwent hysterectomy was 41-50 years with 221 (46.43%) cases followed by 94 (19.75%) cases in 51-60 years age group. The commonest type of hysterectomy was abdominal with 242 (50.84%) cases followed by vaginal hysterectomy in 216 (45.38%) cases.

**Table 1: Age wise distribution of hysterectomy cases.**

Age	No. of cases	Percentage
11-20	0	0.00%
21-30	23	4.83%
31-40	89	18.70%
41-50	221	46.43%
51-60	94	19.75%
61-70	45	9.45%
≥71	4	0.84%
Total	476	

**Table 2: Distribution according to type of hysterectomy.**

Type of hysterectomy	No. of cases	Percentage
Abdominal		
Total abdominal hysterectomy (TAH)	221	46.43%
Wertheim's hysterectomy	14	2.94%
Extended hysterectomy	7	1.47%
Total	242	50.84%
Vaginal hysterectomy (VH)	216	45.38%
Laparoscope assisted		
Total laparoscopic hysterectomy (TLH)	10	2.10%
Laparoscopically assisted vaginal hysterectomy (LAVH)	8	1.68%
Total	18	3.78%

Among endometrial lesions, atrophic endometrium was the most common pathology seen in 131 (27.52%) cases. Other endometrial pathologies observed were non-atypical hyperplasia, endometrial polyp, endometritis, adenocarcinoma and squamous cell carcinoma of the cervix extending into the endometrium. Leiomyoma was the most common myometrial pathology with 179 (37.61%) cases followed by adenomyosis in 41 (8.61%) cases. Other myometrial pathologies were leiomyoma

associated with adenomyosis, adenocarcinoma of the endometrium invading into the myometrium and myometritis. Among cervical lesions, chronic cervicitis was the most common pathology seen in 274 (57.56%) cases, followed by squamous cell carcinoma, endometrial carcinoma invading into the cervix, dysplasia and leiomyoma. The results of the study are summarised in Tables 1-5.

**Table 3: Histopathological lesions of endometrium.**

Endometrial lesions	No. of cases	Percentage
Unremarkable	322	67.65%
Endometrial atrophy	131	27.52%
Non-atypical hyperplasia	4	0.84%
Polyp	4	0.84%
Endometritis	2	0.42%
Adenocarcinoma	11	2.31%
Squamous cell carcinoma of the cervix extending into the endometrium	2	0.42%

**Table 4: Histopathological lesions of myometrium.**

Myometrial lesions	No. of cases	Percentage
Unremarkable	210	44.12%
Leiomyoma	179	37.61%
Adenomyosis	41	8.61%
Leiomyoma with adenomyosis	33	6.93%
Endometrial adenocarcinoma invading into myometrium	11	2.31%
Myometritis	2	0.42%

**Table 5: Histopathological lesions of cervix.**

Cervical lesions	No. of cases	Percentage
Unremarkable	189	39.71
Chronic cervicitis	274	57.56
Dysplasia	1	0.21
Squamous cell carcinoma	10	2.10
Endometrial carcinoma involving cervix	1	0.21
Leiomyoma	1	0.21

**DISCUSSION**

Uterus, a vital reproductive organ is subjected to variety of benign and malignant diseases. There has been a considerable improvement in the medical and conservative surgical procedures for uterine lesions but still hysterectomy may be required. The Indian incidence of hysterectomy is 6-8% and rising.<sup>3</sup> The increase in hysterectomies may be due to prophylaxis against uterine malignancy, in cases of mild genital prolapse and premenopausal menorrhagia.<sup>4</sup> According to Dicker, hysterectomy is indicated when the risk of preserving the

uterus is greater than the risk of its removal or when medical treatment is not successful in relieving the disabling symptoms.<sup>5</sup>

In this study out of 476 hysterectomies, abdominal route was used in 242 (50.84%) cases, vaginal route in 216 (45.38%) while laparoscopic assistance was used in 18 (3.78%) cases. The ratio of abdominal to vaginal hysterectomy in the present study was 1.12:1. Studies reported by Ajmera et al and Kovac SR showed the ratio as 1.4:1 and 3:1 abdominal to vaginal hysterectomy respectively.<sup>6,7</sup> The use of abdominal route though the highest is on the decline, reasons for increasing use of vaginal and laparoscopic hysterectomies include avoidance of large wounds on the abdominal wall, shorter period of hospitalization and lesser complications.<sup>8</sup>

In the present study, maximum number of patients i.e. 221 (46.43%) were seen in the age group of 41-50 years. In an analysis of 1000 consecutive operations by Watt et al<sup>9</sup>, maximum percentage of cases i.e. 45.2% were also distributed in the age group of 41-50 years. Other studies done by Rather et al, Ramchandran et al, and Dhulia et al, had similar findings.<sup>10-12</sup>

In this study, endometrium was unremarkable in 322 (67.65%) cases. Studies done by Vani et al and Rather et al had distribution of unremarkable endometrium being 58.6% and 83% respectively.<sup>10,13</sup> Atrophic endometrium was the most common endometrial pathology in the present study, noted in 131 (27.52%) cases. This finding was comparable with the study done by Patel et al, which showed 29% cases of atrophic endometrium.<sup>14</sup> Eleven (2.31%) cases of endometrial carcinoma were encountered in the present study. This finding is close to that reported by Ankur et al.<sup>15</sup>

In the present study, myometrium was histologically normal in 210 (44.12%) cases and leiomyoma was the most common myometrial pathology, detected in 179 (37.61%) cases. These findings were comparable to that reported by Vani et al, they reported histologically normal myometrium in 44.28% and leiomyoma in 41.08% cases.<sup>13</sup> Adenomyosis was the second most common myometrial pathology in the present study, observed in 41 (8.61%) cases. Adenomyosis is rarely diagnosed preoperatively and is usually diagnosed after hysterectomy by histopathological examination.<sup>16</sup> Thirty-three (6.93%) cases in this study revealed the presence of both leiomyoma and adenomyosis.

Chronic cervicitis is an extremely common condition in adult females, at least at the microscopic level. It was the commonest cervical pathology in this study, detected in 274 (57.56%) cases. Patel et al and Rather et al reported chronic cervicitis in 28.1% and 89.3% cases respectively.<sup>10,14</sup> Ten (2.10%) cases of squamous cell carcinoma of the cervix were detected in this study. This finding is comparable to that reported by Patel et al.<sup>14</sup>

## CONCLUSION

Conservative treatment of uterine lesions has been improved remarkably; still hysterectomy may be required. The choice of a particular type of hysterectomy depends on preoperative findings, the technical possibility of the setting, and the experience of the surgeon. The ultimate goal should be to choose the safest but at the same time least invasive surgical procedure. Histopathological examination of the hysterectomy specimens shows a wide range of lesions. 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 with a variety of other lesions. Histopathology not only confirms preoperative diagnosis but may also show pure incidental finding. Thus, it is mandatory to do a detailed histopathological examination of every hysterectomy specimen so as to ensure a better postoperative management.

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