

## Clinico-Pathological Study of 100 Hysterectomies

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### Abstract

**Background:** Uterus is a very vital reproductive organ and is subjected to many benign and malignant diseases. Hysterectomy is one of the most frequently performed procedures all over the world. This is a retrospective study to evaluate the sensitivity between the indications, demographic features, clinical presentations, intra operative findings and histopathological diagnosis of patients who underwent hysterectomy.

**Methods:** This study was conducted in the Shraddha hospital, Chiplun, Maharashtra, India. 100 patients were selected randomly. Data was recorded and analyzed from the case record of each patient, which was obtained from the medical record department of the hospital.

**Results:** Abdominal hysterectomy was performed in 84% cases while vaginal hysterectomy accounted for 16% cases. The mean age for hysterectomy was 45 years with a range from 31 to 70 years. (Table no 1) Patients mostly presented with menstrual complaints i.e. menorrhagia and dysmenorrhoea (62%) followed by prolapse uterus (16%). (Table no 2) The principle indication of elective hysterectomy was leiomyoma and was present in 37% patients, followed by dysfunctional uterine bleeding (DUB) in 28% patients and prolapse uterus in 16%. (Table no 3) Maximum numbers of cases of leiomyoma and DUB were found in age group of 41-50 yrs. Post-operatively nausea and vomiting was experienced by 31.5% of patients, whereas 22.8% of the patients had urinary tract infection. No major post operative complications were observed.

### Conclusion

The number of abdominal hysterectomy was more than vaginal hysterectomy. Most common presenting feature was menstrual related symptom followed by prolapsed. The main indication for elective hysterectomy was leiomyoma, prolapsed and DUB.

**Keywords:** Hysterectomy; Menorrhagia; DUB; Leiomyoma; Prolapse.

### Introduction

Hysterectomy word is derived from a Greek word, hystera means "womb" and ektomia means "cutting out of". It is one of the most frequently performed procedures all over the world. Uterus is a vital reproductive organ which is subjected to many benign and malignant diseases.<sup>1</sup> International Hysterectomy rates vary, with the highest rates in the United States and the lowest rates in Norway and Sweden. A lower rate (4- 6%) has been reported from India.<sup>2</sup> High tolerance threshold of Indian women, low level of medical facility, illiteracy, poverty and cultural trends have been proposed as the reasons for this low rate.<sup>3</sup> The incidence of hysterectomy varies from place to place depending upon the clinical and clinician factors. The Indian incidence is 6% to 8% and rising, whereas in developed countries it is (10-20%).<sup>4</sup>

In 1507, Berengarius of Bologna preformed the first hysterectomy by vaginal route, though credit was given to Langen, in 1813. Clay in 1844, performed the first total abdominal hysterectomy with bilateral salphingo-oophorectomy.<sup>5</sup> There has been a remarkable improvement in conservative management of uterine lesions; still hysterectomy is the preferred procedure in the treatment for pelvic pathologies like leiomyoma, adenomyosis, pelvic inflammatory disease and malignant disorders.<sup>6</sup> Also the increase in hysterectomies may be due to prophylaxis against uterine cancer, in cases of mild genital prolapse and premenopausal menorrhagia.<sup>7</sup>

In hysterectomies performed, the clinical and intra operative findings often do not correlate with the histopathological diagnosis. This is a retrospective study to correlate and evaluate the sensitivity between the indications, demographic features, and clinical presentations and intra operative findings and histopathological diagnosis in patients who underwent hysterectomy.<sup>8</sup>

### Aims and Objectives

1. To investigate the clinical indications of hysterectomy and choice of surgical approach.
2. To correlate the findings with the histopathological reports of the specimen.

### Methodology

This was a retrospective study carried out in the Shradha hospital, Chiplun, Maharashtra, India. A total of 100 patients were selected randomly on the basis of their clinical history, physical examination, aided by other investigations like diagnostic curettage, PAP smear, cervical biopsies, ultrasonography etc. Routine blood investigations and preoperative preparations were done. The type of surgeries performed were either abdominal or vaginal, depending upon the type of lesion the patient had, age of the patient and also the choice of the operating surgeon. All the specimens obtained were subjected to histopathological examination and their diagnosis was obtained. All the data like the age, parity, clinical presentation, clinical findings, ultrasonography findings, indication of surgery, type of hysterectomy and the intraoperative findings along with the histopathological findings were collected. Follow up was taken at one month post operatively.

### Results

Total of 100 patients were analysed and the obtained data was collected in a tabular form. The results were as follows:

**Table 1:** Distribution according to the age group:

Age (in years)	Number of patients
31 to 40	08
41 to 50	71
51 to 60	15
61 to 70	06
Total	100

In our study it was found that maximum number of patients were in the age group of 41-50 years, followed by 15 patients in the age group 51-60, whereas only 8 patients were lying in the age group of 31-40 years and only 6 patients were belonging to the age group of 61-70 years. (Table no 1)

**Table 2:** Distribution according to the presenting complaint.

Presenting Complaint	Number of Patients
Mass descending per vaginum	16
Menorrhagia and dysmenorrhea	62
Discharge per vagina	02
Postmenopausal PV bleeding	04
Lump in abdomen	02
Pain in abdomen	12
Urinary complaints	02
Total	100

We observed that the most common complaint that patients came with was menorrhagia and dysmenorrhea which was 62%, followed by mass descending per vaginum which was 16% and pain in the abdomen which was in 12 % of the patients. The patients also came with complaints like PV discharge (2%), postmenopausal PV bleeding (4%), lump in the abdomen (2%) and urinary complaints (2%). (Table no 2)

**Table 3:** Distribution according to the clinical diagnosis.

Clinical Diagnosis	Number of Patients
Leiomyoma	37
DUB	28
Prolapse	16
PID	03
Adenomyosis	09
Ovarian cyst	03
Chronic cervicitis	03
CIN	01
Total	100

Our clinical diagnosis was leiomyoma in 37% of patients, dysfunctional uterine bleeding in 28% of the patients, prolapse in 16 % of patients, adenomyosis in 9% of patients, followed by PID (3%), ovarian cyst (3%), chronic cervicitis (3%) and CIN in only 1% of patients. (Table no 3)

**Table 4:** Distribution according to the type of Hysterectomy.

Type of Hysterectomy	Number of Patients
VH + PFR	16
TAH	08
TAH + BSO	76
Total	100

We performed total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH with BSO) in 76 % of patients and vaginal hysterectomy with pelvic floor repair (VH with PFR) in 16% of patients and only TAH in 8 % of patients, depending upon their clinical diagnosis and operative convenience. (Table no 4)

**Table 5:** Distribution according to the histopathology report.

Histopathological Diagnosis	Number of Patients
Leiomyoma	37
Adenomyosis	06
Endometrial hyperplasia	22
Benign ovarian tumour	04
CIN	01
Chronic cervicitis	03
Atrophic endometrium	11
Proliferative endometrium	16
Total	100

The histopathological report was suggestive of leiomyoma in 37% of patients, endometrial hyperplasia in 22 % of patients, proliferative endometrium in 16 % of patients and atrophic endometrium in 11 % of patients. We also found reports suggestive of adenomyosis in 6 % patients, benign ovarian tumour in 1% of patients, chronic cervicitis in 3% patients and CIN in 1% of patients. (Table no 5)

**Table 6:** Distribution according to postoperative morbidity and complications.

Postoperative Complication	Number of Patients	%
Fever	07	12.2
Wound infection	04	7.0
UTI	13	22.8
Abdominal distension	09	15.7
Paralytic ileus	01	1.75
Secondary haemorrhage	00	0
Nausea, vomiting	18	31.5
Diarrhea	05	8.7

Post-operatively nausea and vomiting was experienced by 31.5% of patients, whereas 22.8% of the patients had urinary tract infections. 15.7

% of patients had abdominal distension, 12.2 % of patients had presence of fever and 7 % patients had wound infection . (Table no 6)

## Discussion

The number of abdominal hysterectomy was 245 (64.6%) and vaginal hysterectomy was 134 (35.3%) in a study conducted by Dharmendra Singh and Leena Verma in Jodhpur.<sup>9</sup> Gyam A has reported a 77.3% incidence of hysterectomies by abdominal route.<sup>10</sup> In a study by Chryssiopoulos et al, the abdominal route of hysterectomy was 85.33% and the vaginal route was 14.67%, which is comparable to our study.<sup>11</sup> An incidence of 81.7% is being reported from Gombe, Nigeria.<sup>12</sup> The abdominal route for hysterectomy was also the preferred route in a study in Istanbul 82.7%.<sup>13</sup> We performed total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH with BSO) in 76 % of patients and vaginal hysterectomy with pelvic floor repair (VH with PFR) in 16% of patients and only TAH in 8 % of patients, depending upon their clinical diagnosis and operative convenience. (Table no 4)

According to Chryssikopoulos A et al 74.8% of the patients undergoing abdominal hysterectomy were aged 36 to 55 years, mean 44.2, whereas the patients undergoing vaginal hysterectomy were aged 56 to 75 years mean 44.3.<sup>11</sup> In our study it was found that maximum number of patients were lying in the age group of 41-50 years, followed by 15 patients in the age group 51-60, whereas only 8 patients were lying in the age group of 31- 40 years and only 6 patients were belonging to the age group of 61-70 years. (Table no 1) All patients undergoing vaginal hysterectomy were in the age group of 51-70 years.

In the study of Mahmoud Khaniki et al, where abnormal uterine bleeding was the chief complaint 62.2%, abdominal pain 13.3% and uterine prolapse 7.4%.<sup>14</sup> Shergill SK reported, menorrhagia as the chief complaint in women undergoing hysterectomy 66%.<sup>15</sup> The incidence of uterovaginal prolapse in the study of Neena Y et al is 18%.<sup>16</sup> We observed that the most common complaint that the patients came with was menorrhagia and dysmenorrhea which was 62%, followed by mass descending per vaginum which was 16% and pain in the abdomen which was in 12 % of the patients. The patients also came with complaints like PV discharge (2%) , postmenopausal PV bleeding (4%) , lump in the abdomen (2%) and urinary complaints (2%). (Table no 2)

Leiomyoma was the main indication for hysterectomy in our study 28.8%, which is similar

to the studies of Ajmera et al, Gupta et al, Khan R et al.<sup>17,18,19</sup> Isaoglu et al reported, leiomyoma as an indication of hysterectomy at 28.19%, whereas Dincgez et al quoted leiomyoma to be the indication for hysterectomy at 32.77%.<sup>20</sup> Shergill SK reported leiomyoma as the commonest indication for hysterectomy 34% followed by abnormal uterine bleeding 26%.<sup>15</sup> According to the study of Jha et al, leiomyoma is the indication for hysterectomy is 24.9%, benign ovarian tumor is 14.9% and AUB is 7.7%.<sup>21</sup> Whereas Clarke et al reported the commonest indication to be AUB 58% followed by leiomyoma 23.2%.<sup>22</sup> According to Neena et al, adenomyosis is an indication for hysterectomy is 10% and utero-vaginal prolapse 18%.<sup>16</sup> Aksu F et al reported, leiomyoma is the commonest indication for hysterectomy 38.49% followed by uterine prolapse 11.9%.<sup>13</sup> In the study of Tan XJ et al the indications were, leiomyoma 56.2%, adenomyosis 12.2%, benign ovarian tumor 9.2% and genital prolapse 7.7%.<sup>23</sup> Our clinical diagnosis was leiomyoma in 37% of patients, dysfunctional uterine bleeding in 28% of the patients, prolapse in 16 % of patients, adenomyosis in 9% of patients, followed by PID (3%), ovarian cyst (3%), chronic cervicitis (3%) and CIN in only 1% of patients. (Table no 3)

In a study by Sobande AA, leiomyoma was the commonest histopathological diagnosis 25.8% of the hysterectomy specimens followed by adenomyosis 22.7%.<sup>24</sup> According to Bhide et al the histopathology incidence of leiomyoma is 19%.<sup>25</sup> Similar reports were published by Sarfraz T and Praveen S.<sup>26,27</sup> Whereas Jamal S, Braai S, reported leiomyoma at 35.7% and adenomyosis 30%.<sup>28</sup> Isaoglu reported adenomyosis to be found in 30.23% of the cases.<sup>12</sup> According to Abdulla LS leiomyoma is the commonest histopathology followed by adenomyosis.<sup>9</sup> Leiomyoma and adenomyosis were present together in 6.4% of our study which is similar to the study of Sarfarz, Sakria and Talukder.<sup>29</sup> In a study conducted by Neelgund and Hiremath in Puducherry, leiomyoma was the predominant histopathological diagnosis.<sup>31</sup> Lee NC in his study had 80% pre-operative diagnosis correlated to histopathology diagnosis, of which endometrial hyperplasia was 95% and CIN 89%.<sup>30</sup> In our study, the histopathological report was suggestive of leiomyoma in 37% of patients, endometrial hyperplasia in 22 % of patients, proliferative endometrium in 16 % of patients and atrophic endometrium in 11 % of patients. We also found reports suggestive of adenomyosis in 6 % patients, benign ovarian tumour in 1% of patients, chronic cervicitis in 3% patients and CIN in 1% of patients. (Table no 5)

## Conclusion

There has been a remarkable improvement in conservative management of uterine lesions; still hysterectomy is the preferred procedure in the treatment for pelvic pathologies like leiomyoma, adenomyosis, pelvic inflammatory disease, malignant disorders, and genital prolapse. Majority of the hysterectomy procedures are performed via the abdominal approach. The maximum incidence of hysterectomy is in the age group of 41 to 50. Leiomyoma was the main indication for hysterectomy. In the histopathological diagnosis, leiomyoma is predominant followed by endometrial hyperplasia. The pre-operative diagnosis specificity to pathological correlation in leiomyoma is 99%.

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