



**ORIGINAL ARTICLE**

**Comparison of Clinical Presentation and Per-operative Findings of Laparoscopic Assisted Vaginal Hysterectomy**

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[Received on: 1 October 2021; Accepted on: 20 December 2021; Published on: 1 January 2022]

**Abstract**

**Background:** Laparoscopically assisted vaginal hysterectomy can be very useful surgery. **Objective:** The purpose of the present study was to evaluate the clinical diagnoses and preoperative findings with their histopathological results due to hysterectomy. **Methodology:** This was a retrospective Observational study carried out Department of Obstetrics and Gynaecology at Sir Salimullah Medical College & Mitford Hospital (SSMC & MH), Dhaka, Bangladesh. Patients requiring of laparoscopic assisted vaginal hysterectomy, admitted in the Department of Obstetrics and Gynaecology, SSMC & MH, Dhaka. The patients having of laparoscopic assisted vaginal hysterectomy were interviewed, clinical examination was done and per operative findings and histopathological reports were recorded accordingly. **Results:** The commonest indication for laparoscopic assisted vaginal hysterectomy in the series is leiomyoma uterus (26%) and dysfunctional uterine bleeding is the second most common (24.0%) indication. Commonest complaint of the patients suffering from dysfunctional uterine bleeding (DUB) was irregular bleeding. Among the 12 cases of clinically diagnosed DUB. About 11 cases had no apparent organic lesion and 10 cases were confirmed by histopathological examination to have no organic lesion. Peroperative findings were similar to clinical diagnosis in 88.0% cases and histopathological findings were similar to clinical diagnosis in 82.0% cases. **Conclusion:** Clinical diagnoses in hysterectomy patients are mostly consisted with the per-operative findings and also with the histopathological findings. [*Journal of Current and Advance Medical Research, January 2022;9(1):26-31*]

**Keywords:** Hysterectomy; clinical presentation; operative findings; laparoscopic

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**Cite this article as:** Shamima MTN, Begum F, Begum S, Rahman AH, Karmaker A, Biswas PP. Comparison of Clinical Presentation and Per-operative Findings of Laparoscopic Assisted Vaginal Hysterectomy. J Curr Adv Med Res 2022;9(1):26-31

**Funding:** This study has been performed without any funding from outside else.

**Conflict of Interest:** There was no conflict of interest to any of the authors.

**Contributions to authors:** All authors involved from protocol preparation up to manuscript writing & revision.

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## Introduction

The first laparoscopy in the world was performed by Gynaecologist Dr. Harry Reich<sup>1</sup>. Then upper pedicles are secured laparoscopically and the uterine vessels are clamped and secured through the vaginal route<sup>2</sup>. Laparoscopic assisted vaginal hysterectomy is a procedure using laparoscopic surgical technique and instrument to remove the uterus with or without tubes and ovaries through the vagina.<sup>3</sup> Indications for LAVH include both benign and malignant conditions. Benign diseases are Pelvic prolapsed, fibroids, endometriosis, chronic pelvic pain or adhesions, heavy vaginal bleeding, pelvic inflammatory diseases, miscellaneous. Malignant diseases are cervical intra epithelial neoplasm (CIN), atypical endometrial hyperplasia, stage I endometrial carcinoma<sup>3</sup>.

The benefits of hysterectomy have been frequently described and include the cessation of abnormal uterine bleeding, relief from monthly menstrual symptoms, and reduction in depression and anxiety levels. High satisfaction rates and improved quality of life scores following hysterectomy are consistently reported<sup>3</sup>. As demonstrated by Carlson & colleagues in the maine Women Health Study, hysterectomy is highly effective for relief of symptoms associated with common non malignant gynaecologic conditions. In this study, symptom relief following hysterectomy is associated with a marked improvement in the quality of life. A study by Clarke and associates yielded similar findings<sup>4</sup>.

Advantage of LAVH include decreased length of hospital stay, decreased postoperative analgesia, decreased convalescence period, fewer post operative infection and fewer adhesions<sup>5</sup>. Per-operative complication like hemorrhage, injury to adjacent structures bowel and urinary tract injury and anesthetic hazards has reduced by careful pre-operative selection of patients and if surgeons are well trained and skilled in the use of the instrumentation used in this procedures, advanced anesthesia. Lowest complication rate for the LAVH of 3.6% cases<sup>6</sup>.

Therefore, hysterectomy should not be done as a prophylaxis against abnormal cervical cytology or to facilitate hormone replacement therapy to avoid endometrial hyperplasia. Even for menorrhagia removal of the uterus should not be performed as a first hand management without trail of medical treatment<sup>7</sup>. The aim of this study was to evaluate the common indications, presenting symptoms, clinical and diagnostic findings and to compare these with per operative morphological and post

operative histopathological findings of the hysterectomies uteri.

## Methodology

This was a retrospective observational study carried out in the department of obstetrics & Gynaecology at Sir Salimullah Medical College & Hospital during the period of January to June 2009 for a period of one year. Patients admitted in the Department of Obstetrics and Gynaecology at SSMC & MH, Dhaka, Bangladesh with being gynaecological diseases requiring laparoscopic assisted vaginal hysterectomy. Fifty cases were randomly selected using simple random sampling method through lottery without replacement. Patients were requested to give informed consent and only the patients who gave the consent were interviewed. A performed questionnaire sheet was used to record information. A part of the data collection sheet was filled by interviewing the patients. Further information was obtained by clinical examination, by recording per operative findings and relevant investigations and histopathological reports were recorded accordingly. Though some of the clinical diagnoses were not confirmed at operation or differed from the final diagnosis after confirmation by histopathological examination, they were taken as primary indication for which LAVH was undertaken. Finally, the clinical diagnosis, preoperative findings and the histopathological findings were correlated. Collected data were compiled appropriate calculations were done and finally the results were tabulated. Data were analyzed using statistical package for social science (SPSS) for windows version 16.0.

## Results

Table 1 shows highest among the age group of 41 to 50 years which is 50% and followed by 44.0% in age group of 31 to 40 years and 6.0% in age group of more than 50 years and average age is 45.3 years.

About 72.0% patients had parity between 1 to 4, 24.0% patients had less than 5 children and only 4.0% patients were nulliparous.

**Table 1: Baseline Characteristics Distribution of Patients Undergoing Laparoscopic Assisted Vaginal Hysterectomy (n=50)**

Variables	Frequency	Percent
<b>Age Group</b>		
• 31 to 40 Years	22	44

• 41 to 50 Years	25	50
• More than 50 Years	3	6
<b>Parity</b>		
• Nulliparous	2	4
• 1 to 4	36	72
• More than 5	12	24

The common indication was leiomyoma uterus (34%) then DUB (24%), PID (10%) and ovarian tumour (8%) (Table 2).

**Table 2: Indications of Laparoscopic Assisted Vaginal Hysterectomy Based on Clinical Diagnosis (n=50)**

Indications	Frequency	Percent
Leiomyoma uterus	16	34.0
DUB	12	24.0
PID	5	10.0
Ovarian tumour	4	8.0
Endometriosis	3	6.0
Chronic Cervicitis	3	6.0
Cervical polyp	2	4.0
Adenomyosis	2	4.0
CIN	2	4.0
Postmenopausal Bleeding	1	2.0

Dysfunctional uterine bleeding=DUB; Pelvic inflammatory disease=PID; Cervical intraepithelial neoplasia=CIN

In this study in leiomyoma uterus, 87.5% cases were peroperative findings suggestive of leiomyoma and 75.0% were histopathological confirmation of leiomyoma. In dysfunctional uterine bleeding, 91.7% were peroperative findings no organic lesion and 83.3% were histopathological confirmation of absence of any organic pathology. In pelvic inflammatory disease, 80.0% were peroperative findings suggestive of PID and 80.0% were histopathological suggestive of PID. In endometriosis, 66.7% peroperative findings suggestive of endometriosis and 66.7% histopathological confirmation of endometriosis (Table 3).

**Table 3: Comparison of Clinical Diagnosis with Preoperative Findings and Histopathological Reports of Indication of Laparoscopic (n=16)**

Diagnosis	Frequency	Percent
<b>Leiomyoma Uterus (n=16)</b>		
• Peroperative findings suggestive of leiomyoma	14	87.5
• Histopathological confirmation of leiomyoma	12	75.0

<b>Dysfunctional Uterine Bleeding (n=12)</b>		
• Peroperative findings no organic lesion	11	91.7
• Histopathological confirmation of absence of any organic pathology	10	83.3
• Histopathological confirmation as Leiomyoma	1	8.3
• Histopathological Confirmation As Adenomyosis	1	8.3
<b>Pelvic Inflammatory Disease (n=5)</b>		
• Per operative findings suggestive of PID	4	80.0
• Histopathological confirmation of PID	4	80.0
<b>Endometriosis (n=3)</b>		
• Peroperative findings suggestive of endometriosis	2	66.7
• Histopathological Confirmation of endometriosis	2	66.7

**Table 4: Comparison between Clinical Diagnosis, Preoperative Findings and Histopathological Findings of Patients Undergoing Laparoscopic Assisted Vaginal Hysterectomy in Different Cases (n=50)**

Indications	Clinical Diagnosis	Per-Operative Findings	Histopathological Findings
Leiomyoma Uterus	16	14	12
DUB	12	11	10
PID	5	4	4
Ovarian tumour	4	4	4
Endometriosis	3	2	2
Chronic cervicitis	3	3	3
Cervical polyp	2	2	2
Adenomyosis	2	2	2
CIN	2	2	2
Post-Menopausal Bleeding	1	0	0

Dysfunctional uterine bleeding=DUB; Pelvic inflammatory disease=PID; Cervical intraepithelial neoplasia=CIN; Histopathological=Histopath

In leiomyoma uterus, 16 cases clinical diagnosis, 14 cases peroperative findings and 12 cases histopath findings. In DUB, 12 cases clinical diagnosis, 11 cases peroperative findings and 10 cases histopath findings. In PID, 5 cases clinical diagnosis, 4 cases

peroperative findings and 4 cases histopath findings (Table 4).

In this study majority (75.0%) were serous cyst adenoma and 25.0% were mucinous cyst adenoma. The difference was statistically significant (<0.05) (Table 5).

**Table 5: Types of Ovarian Tumour in Histopathological Report (n=4)**

Histopathological	Frequency	Percent
Serous cyst adenoma	3	75.0
Mucinous cyst adenoma	1	25.0

The common indication was leiomyoma uterus (28%) followed by DUB (26.0%), PID (12.0%) and ovarian tumour (8.0%) in peroperative findings (Table 6).

In this study 16 cases clinical diagnosis of leiomyoma and 13 cases final diagnosis. In DUB, 12 cases clinical diagnosis and 12 cases final

diagnosis. In PID, 5 cases clinical diagnosis and 6 cases final diagnosis. In ovarian tumour, 4 cases clinical diagnosis of ovarian tumour and 4 cases final diagnosis (Table 7).

**Table 6: Overall Per-Operative Findings of Patients Undergoing Laparoscopic Assisted Vaginal Hysterectomy (n=50)**

Indication	Frequency	Percent
Leiomyoma uterus	14	28.0
DUB	13	26.0
PID	6	12.0
Ovarian tumor	4	8.0
Endometriosis	3	6.0
Chronic cervicitis	3	6.0
Cervical polyp	2	4.0
Adenomyosis	2	4.0
CIN	2	4.0
Endometrial polyp	1	2.0

Dysfunctional uterine bleeding=DUB; Pelvic inflammatory disease=PID; Cervical intraepithelial neoplasia=CIN

**Table 7: Comparison of Clinical and Final Diagnosis after Histopathological Examination (n=50)**

Indications	Clinical Diagnosis	Final Diagnosis	P value
Leiomyoma Uterus	16	13	0.508
DUB	12	12	0.100
PID	5	6	0.741
Ovarian Tumor	4	4	0.100
Endometriosis	3	3	0.100
Chronic Cervicitis	3	3	0.100
Cervical Polyp	2	2	0.100
Adenomyosis	2	4	0.709
CIN	2	2	0.100
Postmenopausal Bleeding	1	0	-
Endometrial Polyp	0	1	-

Dysfunctional uterine bleeding=DUB; Pelvic inflammatory disease=PID; Cervical intraepithelial neoplasia=CIN;

## Discussion

In the present study an attempt has been made to evaluate to what extent the clinical diagnoses are consistent with the per-operative findings and the final diagnoses by histopathological examination of the specimens. It was found that in a number of cases, the per-operative and histopathological findings were different and the final diagnosis differed from the clinical diagnosis.

In a study by Moon et al<sup>8</sup> the relationship between the preoperative diagnosis and pathological diagnosis were correlated. About 71.0% of the

hysterectomies performed on the basis of preoperative diagnosis correlated with the histopathological findings. In the present series per operative findings were similar to clinical diagnosis in 88.0% cases and histopathological findings were similar to clinical diagnosis in 82.0% cases. The difference between the two series may be due to increased awareness and literacy among women and the modern diagnostic facilities available.

In the present series the incidence of laparoscopic assisted vaginal hysterectomy is highest among the age group of 41 to 50 years which is 50% and followed by 44.0% in age group of 31 to 40 years

and 6.0% in age group of more than 50 years and average age is 45.3 years. These findings consistent with Jahan et al<sup>9</sup> they found the average age was 45.1 years. Another study Neelgund et al<sup>10</sup> reported highest age group were 41 to 50 years.

Regarding parity distribution of the patients undergoing hysterectomy in the present series, 96.0% patients were parous. About 72.0% patients had parity between 1 to 4, 24.0% patients had less than 5 children and only 4.0% patients were nulliparous. Patients undergoing hysterectomy are found to be mostly parous in several other studies<sup>11-12</sup>. In this series, 50.0% patients presented with menorrhagia. Dysmenorrhoea was the chief complain in 32% patients. The result is similar to several other studies. This is similar to the study of Khaniki et al<sup>13</sup>, where abnormal uterine bleeding was the chief complaint 62.2%, abdominal pain 13.3% and uterine prolapse 7.4% cases. Shergill<sup>14</sup> reported, menorrhagia as the chief complaint in women undergoing hysterectomy 66.0% cases. The incidence of uterovaginal prolapse in the study of Neena et al<sup>15</sup> is 18% cases. The other cases in our study presented with the complaints of discharge per vaginum (11.6%), pain abdomen (11.0%) and postmenopausal bleeding (1.1%). The commonest indication for laparoscopic assisted vaginal hysterectomy in the series is leiomyoma uterus (26%) and dysfunctional uterine bleeding is the second most common (24.0%) indication and then follow the other conditions, like pelvic inflammatory disease, endometriosis, ovarian tumour, chronic cervicitis, adenomyosis, etc. The incidence of the commonest indications was compared to other studies<sup>12-13</sup>. Isaoglu et al<sup>16</sup> reported, leiomyoma as an indication of hysterectomy at 28.19%, whereas Dincgez et al<sup>17</sup> quoted leiomyoma to be the indication for hysterectomy at 32.8% cases. Shergill<sup>14</sup> reported leiomyoma as the commonest indication for hysterectomy 34.0% followed by abnormal uterine bleeding 26.0% cases.

According to the study of Jha et al<sup>18</sup>, leiomyoma is the indication for hysterectomy is 24.9%, benign ovarian tumor is 14.9% and AUB is 7.7% cases whereas Clarke et al<sup>19</sup> reported the commonest indication to be AUB 58.0% cases followed by leiomyoma 23.2% cases. According to Neena et al<sup>15</sup> adenomyosis is an indication for hysterectomy is 10.0% and utero-vaginal prolapse 18.0% cases. Aksuf et al<sup>20</sup> reported leiomyoma is the commonest indication for hysterectomy 38.5% followed by uterine prolapse 11.9% cases. In the study of Tan et al<sup>21</sup> the indications were leiomyoma (56.2%),

adenomyosis (12.2%), benign ovarian tumor (9.2%) and genital prolapse (7.7%).

Sixteen cases were clinically diagnosed as leiomyoma uterus. Most of the patient presented with menorrhagia with or without other complaints like abdominal lump, dysmenorrhoea and low backache. Out of the clinically diagnosed 16 cases, peroperative finding was suggestive of leiomyoma uterus in 14 cases finally 12 cases were confirmed as leiomyoma uterus histopathological among the cases which differed in final diagnoses 2 cases were proved to be of DUB, 1 cases were PID and 1 cases were adenomyosis another one case which was clinically diagnosed as DUB was later confirmed as leiomyoma uterus by histopathological examination. Therefore, leiomyoma uterus was final diagnosis in 13 cases.

Commonest complaint of the patients suffering from dysfunctional uterine bleeding (DUB) was irregular bleeding. Among the 12 cases of clinically diagnosed DUB. About 11 cases had no apparent organic lesion and 10 cases were confirmed by histopathological examination to have no organic lesion. One was confirmed as leiomyoma and another one was confirmed as adenomyosis. Two cases of clinically diagnosed leiomyoma uterus were later proved to be DUB as they had no pathology. Therefore, DUB was final diagnosis in 12 cases.

Hysterectomy done for pelvic inflammatory disease (PID) shows wide variation in different studies. The incidence of PID is 2.8% cases in the series by Neelgund and Hiremath<sup>10</sup> and 2.9% in the series by Garg et al<sup>12</sup>. Moon et al<sup>8</sup> showed the highest incidence of 7.20%. In the series it is 12.0% cases. Initially 5 cases were clinically diagnosed as pelvic inflammatory disease (PID) and out of these 4 cases were confirmed by histopathological examination. One cases of leiomyoma uterus and one case of endometriosis were proved by histopathology to be PID. Therefore, PID was final diagnosis in 6 cases (12%) the higher incidence of PID in this study is probably due to inadequate medical treatment of the patients. Commonest complaints of the patients PID was dysmenorrhoea with dyspareunia.

In the patients of endometriosis, the most frequently found complaints were pain in lower abdomen, dysmenorrhoea and dyspareunia. Out of the 3 clinically diagnosed endometriosis patients, 2 cases were proved to be the same by histopathological examination. One case of clinically diagnosed PID was later on confirmed to be endometriosis on

histopathological examination. So endometriosis was final diagnosis in 3 cases.

All 4 cases diagnosed clinically as ovarian tumour were confirmed to be the same. Commonest chief presenting complaint was a lump in the abdomen. On histopathological examination, type of ovarian tumour was determined and serous cystadenoma was the commonest one. All 3 cases of clinically of clinically diagnosed chronic cervicitis were confirmed to be the same. So chronic cervicitis was the final diagnosis in total 3 cases, Commonest chief – presenting complaints was excessive vaginal discharge followed by low back pain. Cervical intraepithelial neoplasia (CIN) was clinically diagnosed in 2 cases and was later on confirmed by histopathological examination. Common presenting complaints were vaginal discharge and postcoital bleeding.

## Conclusion

The common indication for LAVH in this study was leiomyoma uterus, dysfunctional uterine bleeding (DUB) and pelvic inflammatory disease (PID). Other less common indications include adenomyosis, endometriosis, ovarian tumor, chronic cervicitis, cervical polyp, cervical intraepithelial neopiasia (CIN) and endometrial polyp. Though in our country we have many set backs like economical constraints, illiteracy and lack of health consciousness of the patients. If the patients are given enough time for giving a completed history, are examined carefully and the investigation reports are evaluated meticulously, then the clinical diagnoses of the conditions requiring hysterectomy can be correctly done in most of the cases. This will of course help to avoid unnecessary operations and thus will reduce post-operative morbidities of the patients.

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