



## LAPAROSCOPIC HYSTERECTOMY

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**ABSTRACT... Introduction:** In current era, the trend for minimal invasive surgery is increased due to its established advantages. With the same, there increasing trend for laparoscopic hysterectomy. But it carries certain risks in certain situations. **Objectives:** The study was conducted to see the outcome of laparoscopic hysterectomies. **Study Design:** Retrospective, analytic study. **Study Period:** June 2012 to May, 2015. **Method:** A study was conducted to review the outcome of Laparoscopic hysterectomy over a period of three years from June 2012 to May 2015. Total one hundred cases were included in the study. These patients had hysterectomy either total laparoscopic hysterectomy or laparoscopic assisted vaginal hysterectomy. After preoperative evaluation, hysterectomy was done either total laparoscopic or laparoscopic assisted vaginal hysterectomy. Data was collected regarding patients profile variables, indications for hysterectomy, intraoperative findings, intraoperative time, postoperative recovery findings, analgesia requirements and discharge time from the hospital. **Results:** Results of the study showed that there was no significant increase in complication of urinary tract or bowel injury. Operative time was decreased with time. Most common indication for hysterectomy was fibroid uterus or dysfunctional uterine bleeding. Patient recovery was smooth and post-operative analgesia was much less as compared to the routine. Patient hospital stay was less as compared to the routine procedures for hysterectomy. **Conclusion:** It is concluded from the study that laparoscopic hysterectomy is safe procedure with the clear advantages for the patient. In the study complication rate, operating time was comparable to the already published studies. With proper training it is acceptable alternate to abdominal hysterectomy with clear advantages for the patient.

**Key words:** Laparoscopic Hysterectomy, safety

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### INTRODUCTION

Hysterectomy is one of the most frequently performed procedures in females other than pregnancy related procedures in women. There are different approaches for the hysterectomy in gynecological conditions. The approach /route of hysterectomy depends on multiple factors. The factors are related to patient evaluation, indication for hysterectomy, size of uterus, previous surgical history. But very important factors that can influence the route of surgery are related to the setup, facilities and the surgeon's expertise. By history in 1843, Charles Clay reported first hysterectomy as abdominal hysterectomy. The other route of hysterectomy, vaginal hysterectomy was reported 120 BC by Sornus of Ephesus. For hysterectomy both routes abdominal route

& vaginal route remained unchanged until 1988 till first laparoscopic hysterectomy was reported. In 1988 Herry Reich, in Kingston carried first Laparoscopic Hysterectomy.

Modern endoscopy has changed the approach for the diagnostic as well as the operative procedures. It is established that laparoscopic hysterectomy has clear advantages over abdominal hysterectomy. The advantages are in relation to lesser pain to patient, quicker recovery time.<sup>1,2</sup> Patients need less analgesia in post-operative time. Hospital stay is shorter as compared to abdominal hysterectomy.<sup>3</sup> Although vaginal hysterectomy is the less invasive method of hysterectomy and vaginal route for hysterectomy should be first route of choice for surgery.<sup>4,5</sup> But

vaginal hysterectomy has its technical limitations. It includes size of the uterus, pelvic adhesions, previous surgeries, vaginal access and surgeons expertise.

In spite of clear advantages of laparoscopic hysterectomy, it is still not established regarding the optimal route for performing it. Although with time laparoscopic hysterectomy is gaining its place but procedure is still not common as it should be. In the United States, only 10-15 % of hysterectomies are carried out by Laparoscopy, and most are laparoscopic assisted vaginal hysterectomy. One reason for limiting the procedure is surgeons 'confidence about the procedure and the expertise. Training about the procedure decreases the complications, conversion or change of the route during the procedure. Laparoscopic hysterectomy can be laparoscopic assisted vaginal hysterectomy (LAVH) or total laparoscopic hysterectomy. A study has shown that LAVH and TLH has same operating time but TLH was associated with lesser hospital as compared to LAVH.<sup>6</sup> Advanced gynecological laparoscopic surgery is in its initial phases in Pakistan. A study was conducted regarding the experience of laparoscopic hysterectomy over last three years. The study included one hundred cases of laparoscopic hysterectomy.

## MATERIALS & METHODS

### Inclusion Criteria

In study one hundred cases of laparoscopic hysterectomy done from June 2012 to May 2015 were included. These cases of laparoscopic hysterectomy were done at Hameed Latif hospital, Lahore. Data of all patients was reviewed in detail. It included age of patient, indication for hysterectomy, uterine size, additional pelvic pathology, previous pelvic surgeries, comorbidity, BMI of patient. The complications were divided in to early complications within 24 hours or delayed complication occurring after 24 hours. The surgical complications were defined according to e VALuate study.<sup>5</sup> The complications were defined as:

### Major complications

- Hemorrhage requiring reopen or blood transfusion
- Hematoma requiring surgical drainage or blood transfusion
- Urinary tract injury ( ureter or urinary bladder)
- Bowel injury
- Major anesthesia problem
- Major anesthesia complication

### Minor complications

- Raised temperature > 38 C on two occasions six hours apart excluding first 24 hours
- Any sign of infection
- Minor hematoma not requiring drainage
- Minor anesthesia problems

### Surgical Procedure

After pre-operative evaluation, counseling & consent surgery was planned. Additional counseling was done regarding the conversion of route of hysterectomy during the procedure. All patients received preoperative antibiotics cover. For hysterectomy, in operation theatre under general anesthesia patient were placed in modified semi lithotomy position. With knees flexed. Urinary bladder was catheterized. Vaginal manipulator was put in the uterus for its mobility. Intraumbilical incision was given to create the pneumoperitoneum by veres needle. Intra-abdominal pressure was maintained at 15 mm Hg. Ports were inserted. One central port of 10 mm was inserted intraumbilical. Patient was put in Trendelenburg and other two side port of 5 mm on right lower quadrant were inserted. Pelvic anatomy was identified. The energy sources used were bipolar cautery, monopolar cautery and ligasure. Uterine anatomy was defined. The decision was made either to remove the ovaries or not. The round ligament was desiccated with bipolar cautery and was cut. The infundopelvic ligament was desiccated. It was transected. The vesico uterine pouch was identified. It was incised by scissors and cautery. Uterus was manipulated by the manipulator. Vaginal fornices were identified. Incision was made in fornices. Uteroscaral ligament and cardinal ligaments were

incised. Uterus was separated and was delivered through vagina. Vaginal cuff was closed by the vicryl No. 1 . Hemostasis was checked. Operative time was noted for every case. Average blood loss was measured.

Patients were given post-operative care. Post-operative analgesia was noted. They were discharged home after 24 hours to 48 hours after assessment & were followed after one week & four weeks follow up.

## RESULTS

Results of study showed that the age of the women for hysterectomy was 48 years with standard deviation of + /- 10 years (Table I). The weight of patient ranged from 45 kg to 110 kg. But most of the patients were between 60 to 75 Kg (Table II). Out of hundred patients 30 patients had previous history of surgery (22 patients with previous LSCS and 3 previous history of myomectomy and 5 patients had history of laparotomy. The indications for hysterectomy are shown Table II. Main indication was regarding the operating time, it ranged from 80 minutes to 180 min with average time of about 100 minutes in most cases. The time duration of more than 100 minutes was noted in cases with previous surgery or larger size uterus. Uterine size ranged from 10 week size to 18 week size. The mean hospital stay excluding the preoperative period was 1.5 +/- 0.5 day. One patient had urinary bladder trauma & it was recognized intra operatively and was managed at same time. No patient had bowel injury or ureteric injury. Five patient had conversion to laparotomy, one because of adhesions & four patients because of size of uterus. Out of hundred patients 60 patients were discharged one day after surgery. Regarding the major complications only one patient had post-operative hematoma requiring drainage. Among the minor complications, the most common was related to urinary system. Vaginal vault spotting was noted in 15 patient which was settled in 2 to 3 days by conservative treatment.

Age (Years)	No.	%age
38 - 42	15	15%
43-48	40	40%
49 – 52	32	32%
53- 58	13	13%

**Table-I. Age of Patients**

Weight (Kg)	No	%age
45-60	12	12%
61- 75	54	54%
76- 90	20	20%
91- 110	14	14%

**Table-II.**

Indications	No	%age
Fibroids	12	12 %
Adenomyosis	30	30 %
Endometrial hyperplasia	22	22%
Dysfunctional uterine bleeding	15	15 %
Chronic pelvic pain	05	05 %
Adenexal pathology	06	06 %
Recurrent post-menopausal bleeding	04	04 %
CIN	01	01%

**Table-III. Indications for Laparoscopic Hysterectomy**

Complications	No.	% age
<b>Major complications</b>		
• Hemorrhage	01	01
• Hematoma	01	01
• Conversion to Laparotomy	05	05
• Injury to Urinary bladder	01	01
<b>Minor complications</b>		
• Minor hemorrhage	04	04
• Urinary infections	10	10
• Vaginal vault spotting	15	15

**Table-IV. Operative complications**

## DISCUSSION

The study shows the results of one hundred hysterectomies done laparoscopically. The data of the study related to socio demographics, indications for surgery, patient body weight, indications for hysterectomy are same as mentioned already in previous studies.<sup>3,8,9</sup> During learning period, experience of the surgeon is very important factor to affect the learning curve.

A study conducted in 1994 has shown that risk of Laparoscopic hysterectomy are same as the abdominal hysterectomy and vaginal hysterectomy in skilled hands.<sup>10</sup> It is similar to one other study that had showed the safety of laparoscopic hysterectomy equal to abdominal hysterectomy.<sup>11</sup> In our study the results related to the complications are comparable to these already published studies. But one study shows that there is small increased risk of complication rate with laparoscopic hysterectomy.<sup>12,13,14</sup> There was no increase in complication due to laparoscopic route for hysterectomy in our study. Another study has shown that after thirty hysterectomies done laparoscopically the rate of complications is equivalent to that using the other approaches. With expertise the average duration of hysterectomy is comparable with the other routes for hysterectomy. TLH has less duration of stay in hospital as compared to the LAVH especially in obese patients.<sup>15</sup> Regarding the analgesia requirement, early recovery & back to work, shorter hospital stay the results of our study are comparable to already published study.<sup>3</sup> But the same study showed higher rate of complications (hemorrhage & urinary tract injuries), but these results were attributed to the skills of the surgeons. Time duration of surgery and prolonged anesthesia is one concern related to the laparoscopic hysterectomy already mentioned in different studies.<sup>15, 3,7, 8.</sup> But in our study it was found that the duration of surgery was longer in initial cases and duration of surgery was decreased with the expertise & knowing the technique. The incidence of conversion of the laparoscopic hysterectomy to abdominal hysterectomy is different in different studies. In one study it is very low 0.6 %.<sup>24</sup> But in our study it was 5 % close to other published study.<sup>16</sup>

## CONCLUSION

Laparoscopic hysterectomy is safe procedure in trained hands. The complication are not increased. The patient has certain clear advantages like less pain, less hospital stay, early discharge from hospital, early return to work. The surgical time is decreased with learning in systematic way.

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## REFERENCES

1. Olsson JH, Ellstrom M, Hahlin M. **A randomized prospective trial comparing laparoscopic and abdominal hysterectomy.** Br J Obstet Gynaecol 1996;103: 345–50.
2. Cheung VYT, Rosenthal DM. **Laparoscopic versus abdominal supracervical hysterectomy.** J Am Assoc Gynecol Laparosc 2002;9(Suppl):S68.
3. Garry R, Fountain J, Mason S, Napp V, Brown J, Hawe J, et al. **The eVALuate study: two parallel randomized trials, one comparing laparoscopic with abdominal hysterectomy, the other comparing laparoscopic with vaginal hysterectomy.** BMJ 2004; 328:129–36.
4. Lefebvre G, Allaire C, Jeffrey J, Vilos G. **SOGC Clinical Practice Guidelines No. 109. Hysterectomy.** J Obstet Gynaecol Can 2002;24:37–48.
5. Garry R. **The future of hysterectomy.** BJOG 2005;112:133–9.
6. Cheung VYT, Rosenthal DM. **TLH versus LAVH.** J Am Assoc Gynecol Laparosc 2002;9(Suppl):S8.
7. Seracchioli R, Venturoli S, Vianello F, Govoni F, Cantarelli M, Gualerzi B. **Total laparoscopic hysterectomy compared with abdominal hysterectomy in the presence of a large uterus.** J Am Assoc Gynecol Laparosc 2002;9:333–8.
8. Mueller A, Oppelt P, Ackermann S, Binder H, Beckmann MW. **The Hohl instrument for optimizing total laparoscopic hysterectomy procedures.** J Minim Invasive Gynecol 2005;12:432–5.
9. Liu C, Reich H. **Complications of total laparoscopic hysterectomy in 518 cases.** Gynaecol Endosc 1994;3:203–8.
10. Ribeiro SC, Ribeiro RM, Santos NC, Pinotti JA. **A randomized study of total abdominal, vaginal and laparoscopic hysterectomy.** Int J Gynaecol Obstet 2003;83:37–43.
11. Maresh MJA, Metcalfe MA, McPherson K, Overton C, Hall V, Hargreaves J, et al. **The VALUE national hysterectomy study: description of the patients and their surgery.** BJOG. 2002;109:302–12.
12. Makinen J, Johansson J, Tomas C, Tomas E, Heinonen PK, Laatikainen T, et al. **Morbidity of 10 110 hysterectomies by type of approach.** Hum Reprod 2001;16:1473–8.
13. Johnson N, Barlow D, Lethaby A, Tavender E, Curr L, Garry R. **Methods of hysterectomy: systematic review and meta-analysis of randomised controlled**

- trials. BMJ 2005;330:1478.
14. Ghezzi F, Cromi A, Bergamini V, Uccella S, Beretta P, Franchi M, et al. **Laparoscopic-assisted vaginal hysterectomy versus total laparoscopic hysterectomy for the management of endometrial cancer: a randomized clinical trial.** J Minim Invasive Gynecol 2006;13:114–20.
  15. Ottosen C, Lingman G, Ottosen L. **Three methods for hysterectomy: a randomized, prospective study of short term outcome.** BJOG 2000;107:1380–5.
  16. Leonard F, Chopin N, Borghese B, Fotso A, Foulot H, Coste J, et al. **Total laparoscopic hysterectomy: preoperative risk factors for conversion to laparotomy.** J Minim Invasive Gynecol 2005;12:312–7.



“Raise your words, not your voice,  
It is rain that grows flowers, not thunder.”

Rumi



#### AUTHORSHIP AND CONTRIBUTION DECLARATION

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