

Replacement of Total Abdominal Hysterectomy by TLH in a Patient with Previous Pelvic Surgery

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Abstract

Original Research Article

Background: In a patient who had previous pelvic surgery, total laparoscopic hysterectomy (TLH) has well-established advantages over total abdominal hysterectomy. The hysterectomy is a common gynaecological operation. Although the vaginal route is preferred for hysterectomy, the best route for women who are not candidates for the vaginal approach is unknown. Hysterectomies are increasingly being performed laparoscopically as technology advances and experience grows. **Objectives:** The aim of this study is to evaluate the replacement of total abdominal hysterectomy by TLH in a patient with previous pelvic surgery. **Method:** This observational study was carried out on 60 women admitted in the Department of obstetrics and gynaecology, Labaid specialized Hospital, Dhaka, Bangladesh during the study period. The duration of the period was from July 2021 to June 2022. The data for this study about had been accumulated from patients sociodemographic & obstetrics information, physical examination and per-operative findings. Statistical evaluation of the results used to be got via the use of a window-based computer software program devised with Statistical Packages for Social Sciences (SPSS-24). **Results:** A total of 60 patients were included in final analysis. According to the study population's age distribution of the study population, it was observed that 15(25.0%) were in group 35-38, 23(38.33%) were in group 39-42, 16(26.66%) were in group 43-46 and 6(10.0%) were in group 47-50. according to patient demographics, it was observed that 44(73.33%) were Leiomyoma, 29(48.33%) were Bleeding, 3(5.0%) were Pelvic pressure, 19(31.66) were Pelvic pain and 15(0%) were size growth. **Conclusion:** TLH for endometrial pathology has few problems and is well tolerated by a restricted group of patients. For suitable patients, the benefits include decreased blood loss and a shorter hospital stay. TLH can be performed effectively despite previous abdominal surgery. Patients who had previous abdominal surgery are good candidates for TLH.

Keywords: Total laparoscopic hysterectomy, abdominal hysterectomy, Previous abdominal surgery.

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INTRODUCTION

Hysterectomy is a widespread gynaecological treatment, with over 600,000 instances performed in the United States alone each year [1]. More than 70% of hysterectomies are done for benign surgical reasons, such as menorrhagia, fibroids, pelvic pain and uterine prolapse [2]. Traditionally, this has been accomplished by the abdominal or vaginal routes [3]. However, hysterectomies are increasingly being performed with limited access procedures. Laparoscopic hysterectomy was first documented in 1989 [4], and several improvements have been described since then depending on the extent of surgery performed with the laparoscope [5]. Laparoscopic assisted vaginal hysterectomy

(LAVH) is a frequent technique in which just the upper pedicles are secured laparoscopically and the rest of the portion - including uterine artery division - is performed vaginally.

Since Reich [6] reported the first total laparoscopic hysterectomy (TLH) in 1989, TLH has been acknowledged as a safe, effective, and acceptable alternative to traditional abdominal hysterectomy [7, 8]. The full TLH surgery, including vaginal vault closure, is performed laparoscopically. As a result, it is the most difficult type of laparoscopic hysterectomy to perform and necessitates a high level of surgical experience [9].

Although laparoscopic hysterectomy has less blood loss, reduced hospital stays, less pain, and is less invasive than abdominal hysterectomy [10, 11], it can be converted to laparotomy if there is severe obesity, a large leiomyoma, or adhesion caused by previous abdominal surgery. The incidence of intra-abdominal adhesions after laparoscopic surgery ranges from 30% to 90% [12], and various studies have revealed that a surgical history is most closely connected with the prevalence of problems during laparoscopic surgery due to intra-abdominal adhesions [13].

Several recent studies have suggested that previous abdominal surgery is not associated with complication rates during TLH [14]; therefore, there is controversy regarding whether it is safe and feasible to perform TLH in patients who have undergone previous abdominal surgery. In the present study, we evaluated the influence of previous abdominal surgery on the safety and feasibility of TLH. Several recent studies have demonstrated that past abdominal surgery is not connected with complication rates during TLH [14], therefore there is debate about whether doing TLH in patients who have previous abdominal surgery is safe and practicable.

A variation on this approach comprises laparoscopic division of both the upper pedicles and the uterine arteries, followed by vaginal hysterectomy. Total laparoscopic hysterectomy (TLH) is performed entirely through the laparoscopic technique, including vaginal vault closure, with the uterus removed either vaginally or morcellated and evacuated through abdominal ports. It is the most difficult type of laparoscopic hysterectomy and necessitates a high level of surgical skill.

A number of recent assessments, including one by the Cochrane Collaboration [15, 16], have addressed the ideal surgical method to hysterectomy. They came to the conclusion that, when possible, vaginal hysterectomy (VH) should be preferred over abdominal hysterectomy (AH). When VH is not technically achievable, AH and laparoscopic methods are available. Laparoscopic hysterectomies are associated with decreased post-operative discomfort and faster recovery, but this is compensated by longer operating times and, more importantly, greater incidence of significant complications, notably ureteric and haemorrhagic problems [17]. However, different subtypes of LH have been linked to varying incidences of surgical problems.

Despite an increase in the number of laparoscopic hysterectomies, this surgical method is still used in a minority of all benign hysterectomies, with 60% performed via the abdominal route. Furthermore, according to a recent poll, many Australian gynaecologists wish to raise their incidence of laparoscopic hysterectomy [18].

METHODS

The study was an observational study which was conducted in over a period from July 2021 to June 2022 with a semi structured questionnaire. The post-operative ward, maternity ward, and operating room at the department of obstetrics and gynecology, Labaid specialized Hospital, Dhaka, Bangladesh were the study's settings. About 60 study population admitted in the Department of obstetrics and gynecology, Labaid specialized Hospital, Dhaka. Convenience sampling technique was used as a sampling method. The study included people who need total laparoscopic hysterectomy. However, patients with known sensitivity to the drugs administered, liver disease, patients who had significant infections were excluded from the study. After collection, the data were checked and cleaned, followed by editing, compiling, coding and categorizing according to the objectives and variable to detect errors and to maintain consistency, relevancy and quality control. The choice of treatment was made by the patient after a full discussion with the multidisciplinary team consisting of gynecologists. Collected data were edited and analyzed according to the objectives and variables by IBM software- Statistical package for Social Science (SPSS 25) version.

RESULTS

Table 1: Age distribution of the study population

Age	n =60	%
35 – 38	15	25.0
39 – 42	23	38.33
43 – 46	16	26.66
47 - 50	6	10.0
Mean ± SD	27.7 ± 4.7	
Range	(20 – 38)	

Table-1 shows age distribution of the study population, it was observed that 15(25.0%) were in group 35-38, 23(38.33%) were in group 39-42, 16(26.66%) were in group 43-46 and 6(10.0%) were in group 47-50.

Table 2: Distribution of the study patients according to patient demographics (n=60)

Variables	n (%)
Parity (Mean±SD)	1.98
Body Mass Index (BMI)	23.9±3.3
Indications for TLH	
Leiomyoma/adenomyosis	44(73.33)
Bleeding	29(48.33)
Pelvic pressure	3(5.0)
Pelvic pain	19(31.66)
Large Size growth	15(25.0)

Table-2 shows the study patients according to patient demographics, it was observed that 44(73.33%) were Leiomyoma, 29(48.33%) were Bleeding, 3(5.0%)

were Pelvic pressure, 19(31.66) were Pelvic pain and 15(0%) were large size growth.

Table 3: Distribution of the study patients according to surgical data by approach

Variables	Mean ± SD
Duration of surgery (min.)	319.2±67.9
Blood loss (mL)	363.9±196.7
Transfusions (units/pt)	3.5±1.4
Length of hospital stay (days)	38.7±25.0

Table - 3 shows distribution of the study patients according to surgical data by approach, it was observed that 319(67.9%) were Duration of surgery, min,

363.9 (196.7%) were Blood loss, ml, 3.5(1.4%) were Transfusions units/pt and 38.7(25.0%) patients were Length of hospital stay days.

Table 4: Demonstrated the distribution of the study patients according to complications by number of surgeries

Variables	n =60	%
Adhesiolysis	21	0.3
Conversion to laparotomy	1	1.4
Transfusion	1	1.4
Complication		
Bleeding	1	1.66
Fever	4	6.66
Ureter injury	2	3.33
Vaginal cuff dehiscence/bleeding	8	13.3
Reoperation	2	3.33
Readmission within 30 days	1	1.66

Table - 4 shows distribution of the study patients according to complications by number of surgeries, it was observed that 1.66 patients were bleeding, 6.66 patients had fever, 3.33 patients had ureter injury, 13.33 patients had vaginal cuff dehiscence and 3.33 patients were reoperation.

was performed by a small number (1-3) of laparoscopic surgeons in all of the studies considered in this research. All procedures in the study by Ribeiro *et al.*, [21] were performed by the same surgeon, although surgical experience was not addressed. Both Kluiivers *et al.*, [22] and Perino *et al.*, [23] said that TLH were conducted by surgeons with at least 100 difficult laparoscopic surgeries. As a result, the findings of this meta-analysis look unlikely to be muddled by an underlying 'learning curve' impact.

Table 5: Distribution of the study patients according to reason for conversion to laparotomy

Variables	n	%
Pelvic adhesion	4	6.66
Uterine size	2	3.33
Total	5	8.33

Table - 5 shows distribution of the study patients according to reason for conversion to laparotomy, it was observed that 4(6.66%) patients had pelvic adhesion and 2(3.33%) patients had Uterine size.

According to patient demographics, 44 (73.33%) had leiomyoma, 29 (48.33%) had bleeding, 3 (5.0%) had pelvic pressure, 19 (31.66%) had pelvic pain, and 15 (0%) had large size growth. According to surgical data by method, 319 (67.9%) were Duration of operation, min, 363.9 (196.7%) were Blood loss, ml, 3.5 (1.4%) were Transfusion units/pt, and 38.7 (25.0%) patients were Length of hospital stay days.

DISCUSSION

Previous investigations of laparoscopic hysterectomy outcomes [19] have highlighted the learning curve effect in TLH as well as the role of surgical expertise on complication rates and operating times. Makinen *et al.*, discovered that surgeons with 30 operations' experience were twice as likely to harm the bladder and four times as likely to induce ureteric injury as surgeons with >30 procedures' experience [20]. TLH

To present, the majority of studies addressing the role of laparoscopic hysterectomy for benign illness have included either unspecified laparoscopic techniques or LAVH exclusively [24, 25]. Furthermore, recent research has found disparities in operative outcome across different laparoscopic methods [26]. Long *et al.*, [27] discovered no statistically significant changes in the incidence of related problems between LAVH and TLH in 101 patients undergoing hysterectomy for fibroids or

adenomyosis. Donnez *et al.*, recently discovered no statistically significant differences in complication rates between laparoscopic subtotal hysterectomy and a combination LAVH/TLH group [28]. It is worth noting that data on the role of total laparoscopic hysterectomy in comparison to other surgical methods is scarce.

In this study, complications by number of procedures were observed to be 1.66 patients had bleeding, 6.66 patients had fever, 3.33 patients had ureter injury, 13.33 patients had vaginal cuff dehiscence and 3.33 patients had reoperation.

For numerous decades, the criteria for either vaginal or abdominal hysterectomy looked very clear in most situations. VH was the method of choice for patients with a smaller uterus, no other adnexal diseases, at least one previous birth, no previous laparotomies, and optionally prolapse. VH was recommended as the first choice in various guidelines [29] because it is time and cost effective, and it has the best post-operative recovery [30]. Otherwise, a laparotomy would have to be performed. Method distributions varies among countries. AH rates of 63% in the United States [31], 67% in the United Kingdom [32], and 80% in Denmark [33] have been reported. LAVH and TLH were added to this spectrum as endoscopic procedures advanced in the 1980s and 1990s. In different countries, the rate of laparoscopically assisted or conducted HEs ranges from 3 [32] to 9.9% [34]. As expected, our patient population closely matched these guidelines for various types of HE. In 58% of cases, patients with VH were substantially older, had more previous deliveries, had a lower uterus weight, and required extra surgeries for prolapse. In the case of a previous laparotomy, such as a cesarean section, big fibroids, or the exploration of unknown genital tumors, AH was indicated. Similar to the TLH group, around half of the patients had previous surgery on the tubes or ovaries. TLH was usually prescribed to younger patients with no or few previous births, smaller uteri, and a history of adnexal diseases. Surprisingly, there was no variation in weight between the three groups of patients. Obesity induced longer operation time, as documented by Heinberg *et al.*, [35], a correlation that was also seen in our general patient group, but no significant drop in TLH rate.

CONCLUSION

Among adequately qualified gynaecologists, total laparoscopic hysterectomy has emerged as a viable option to total abdominal hysterectomy. In most patients, TLH may be conducted effectively, and no significant variations in post-operative hospital stay, blood loss, complication rate, or conversion to laparotomy were seen between patients with and without prior abdominal surgery. Thus, TLH can be explored for patients who have had abdominal surgery in the past.

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