



STUDY OF INDICATIONS AND OUTCOME OF LAPAROSCOPIC HYSTERECTOMY AT TERTIARY CARE TEACHING HOSPITAL

Gynaecology

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ABSTRACT

Introduction-Hysterectomy is the commonest major surgical procedure in Gynaecology. Laparoscopic route of hysterectomy has many advantages like reduced blood loss, less post operative morbidity and speedy post operative recovery. **Material and methods**-It was a retrospective study of all laparoscopic hysterectomy performed during three years period (2017-2019) at Pravara Rural Hospital, Loni. **Results**-Highest number of patients in (55.50%) were from age group 41-50 years. The commonest indication for hysterectomy was abnormal uterine bleeding (51.40%). The mean duration of surgery was 135 minutes. There was one case (0.95%) of thermal injury to urinary bladder. The mean blood loss was 70 ml. The need for postoperative analgesia was in 38.09% cases.. **Conclusion**-Laparoscopic hysterectomy is safe and cause less morbidity and intra-operative blood loss. It is suggested that laparoscopic route should be chosen in all gynaecological cases requiring hysterectomy except cases with huge uterine enlargements.

KEYWORDS

Laparoscopic hysterectomy , Post operative morbidity

INTRODUCTION-

Laparoscopic technique of hysterectomy is becoming increasingly popular in developing and developed world. It is emerging as a definite alternative to conventionally performed abdominal hysterectomy. Laparoscopic hysterectomy (LH) is an innovation in the Gynaecologists armamentarium. It is a minimal access procedure that allows patients to recover faster. Approximately 6,00,000 hysterectomies are performed annually in the United States, 1 of which 70% are performed by the abdominal route.²In some countries the rate is as high as 95%.³ The laparoscopic approach is clearly superior to laparotomy.²⁻⁴The advantages of laparoscopic hysterectomy over abdominal hysterectomy include less postoperative pain, shorter hospital stays and more rapid return to normal activities and work.⁵

Material and Methods-

An observational longitudinal study was carried out at tertiary care centre over a period of three years (Jan 2017-December 2019) . One hundred and five women, as per inclusion and exclusion criteria, who had undergone abdominal hysterectomy for benign uterine pathology, by laparoscopic technique during study period were included. Hysterectomy operation was performed under general anaesthesia by same team of surgeons. Patients received a single dose of prophylactic antibiotic in the form of Inj.Cefotaxime 1 gram and Inj.Metronidazole 500 mgs at 8am on the day of surgery. Surgery usually began at 9am in the morning. Antibiotics in the form of Inj.Cefotaxime 1 gram intravenously every 12 hourly and Inj.Metronidazole 500 mg every 8 hourly were continued for 24 to 36 hours and then same drugs was given by oral route for next 7 days. Following hysterectomy, patients were given analgesic drugs as per individual need and intravenous fluids for first 24 hours. In addition to the antibiotics, all cases received anti-inflammatory drugs in the form of combination of diclofenac sodium-50 mg twice daily and tablet vitamin-C 500mg once daily from second to seventh day after hysterectomy operation. Data related to age, indication for hysterectomy, technique of operation, duration of surgery and anaesthesia, intra-operative complications, need for post-operative nursing care, need for post-operative pain relief, duration of parenteral fluid therapy, timing of ambulation, infective morbidity, surgical site infections, hospital stay, wound related late complications and period of post-operative rest was collected. Women were asked to come for follow-up personally after 2 weeks and then subsequently every 3 months or earlier if needed. All patients were followed-up for a minimum period of six months after surgery.

Results-

Highest number of patients (55.50%) were in the age group 41-50 years, followed by patients from age group 31-40 years (38.09%). The commonest indication for hysterectomy was abnormal uterine bleeding (51.40%). (Table 1)The mean duration of surgery was 135

minutes.(Table 2).There was one case (0.95%) of thermal injury to urinary bladder. The intra-operative blood loss in maximum number of cases (66.33%) was less than 50 ml. The mean blood loss was 70 ml.(Table 3)The need for postoperative analgesia was observed in 38.09% cases. Maximum number of cases (57.10%) needed post-operative analgesia for duration up to 12 hours. The average number of doses of injectable analgesics, required for pain relief were 2. Maximum number of cases (91.40%) needed post-operative intravenous fluid therapy for the duration up to 24 hours. The average duration of post-operative intravenous fluid therapy was 12 hours. Maximum number of cases (73.33%) could be ambulated out of bed within 7-12 hours. The average duration required for out of bed ambulation was 14 hours.

Post-operative pyrexia was the commonest morbidity observed in 2.85% cases. Surgical site infections were seen in 1.90% cases. Gastritis was observed in 1.90% cases. Complications related to skin suture site was observed in 1 case (0.95%).One case(0.95%) had post operative paralytic ileus. Maximum number of cases (62.82%) had hospital stay of 3-4 days. The mean hospital stay was 3.5 days. Average duration for resumption of routine activity after discharge from hospital was 2 weeks.

DISCUSSION-

Since the first laparoscopic hysterectomy was described by Reich et al. back in 19891 and the first subtotal hysterectomy was performed in the early 1990s, the laparoscopic approach has become the procedure of choice in gynaecological surgery. Numerous advantages for the patient (less pain and discomfort, quicker recovery time and shorter hospital stay) and the surgeon (magnification of the pelvic anatomy) are detailed in the literature.⁶⁻⁷Traditionally, abdominal hysterectomy has been indicated in cases of fibroids, uterine bleeding, suspected adnexal pathology, severe endometriosis and pelvic inflammatory disease and chronic pelvic pain. In a CREST Study in 1982, the indications for abdominal hysterectomy included fibroids (40%), and pelvic pain and endometriosis (22%).⁴ In the present study, fibroid of the uterus and abnormal uterine bleeding were the commonest indications.⁸.

In the present study, it was observed that the clinical outcome was much better in laparoscopic hysterectomy and also the complication rate was less. The operating time was considered from time of incision to the time of last stitch on the abdomen. The mean operating time for laparoscopic route was 135 minutes. The operating times have ranged on average from two to four hours in personal reports by experts in laparoscopy.⁹⁻¹⁷ In the two reviews, the average operating times were 115 and 117 minutes.¹⁸These authors stated that most of these reports

were the surgeon's or institution's initial experiences and operating times would decrease with the learning curve.¹⁹

Blood loss is often calculated as the difference between the amount of irrigation fluid introduced into the pelvic cavity and the amount of fluid aspirated during surgery. Some authors have estimated blood loss by the drop in hemoglobin concentration or hematocrit from the preoperative value. Aniliene R et al performed a comparative analysis of hysterectomies. The amount of blood loss depend on the type of hysterectomy--less blood was lost during laparoscopic and more during abdominal hysterectomy (123.4 vs. 308.5 mL, respectively; $P < 0.01$).²⁰ In the Belcohyst study, the hematocrit drop was 6.2% from the preoperative value and the blood transfusion rate was 5.4%²¹. In one observational retrospective study, the hematocrit drop was 5.4% in abdominal, 5.5% in vaginal and 6% in laparoscopic hysterectomy, but there was no statistical difference in these parameters.²² In the present study, the blood loss was assessed by visual impression of the surgeon depending on the number of surgical mops soaked during abdominal hysterectomy and colour and quantity of the irrigation fluid required to keep the operative field clear of blood. There was significantly less blood loss (approximately 40 ml). The amount of blood loss was proportionate to the size of the uterus and duration of surgery. The findings of present study co relate with the findings of other studies²⁰⁻²².

In the present study, it was observed that the mean duration of period of convalescence was 2.29 weeks. Aarts JW et al reported similar observations.²³ A retrospective telephone survey of 100 women who had undergone laparoscopic hysterectomy revealed the mean time to return to work to be 3.3 weeks in Australia. The women reported that they could have returned to work at 2.3 weeks on average.²⁴ In one comparative study the patients returned to work in two weeks after laparoscopic hysterectomy compared with five to six weeks after abdominal and vaginal hysterectomy.²⁵ In the review by Meikle et al. of observational and comparative studies, the time to return to work was always less for laparoscopic compared with abdominal hysterectomy (2 to 6 weeks for LH and 5 to 9 weeks for TAH).¹⁹

The minor complications observed in the present study were pyrexia, paralytic ileus, drug induced gastritis, thrombo-phlebitis, surgical site infections and urinary tract infections. Similar observations were noted by Schindlbeck C, Johnson N, Kovac SR and Aarts JW.^{26-28,23} The higher complication rates were reported by Debodinance P.²⁹

CONCLUSION-

Study revealed that fibroid uterus and abnormal uterine bleeding were the commonest indications for laparoscopic hysterectomy in perimenopausal women. Laparoscopic hysterectomy had many advantages over conventional abdominal hysterectomy. Following laparoscopic hysterectomy, women had less morbidity, less need for post-operative pain relief, had early ambulation, short hospital stay and early resumption of routine activities at home.

TABLES

TABLE No. 1:- DISTRIBUTION OF CASES AS PER INDICATION FOR SURGERY

Indication for surgery	Number (%)
Abnormal uterine bleeding	54 (51.40%)
Fibroid uterus	37 (35.20%)
Chronic cervicitis	08 (07.60%)
Endometriosis	00 (00.00%)
CIN	02 (01.90%)
Pelvic inflammatory disease	04 (03.80%)

TABLE No.2:- DISTRIBUTION OF CASES AS PER DURATION OF SURGERY

Duration of surgery (Hrs)	Number (%)
< 1	00 (00.00%)
1-1.5	04 (03.80%)
1.5-2	21 (20.00%)
2-2.5	37 (35.20%)
2.5-3	24 (22.80%)
>3	19 (18.09%)

TABLE No. 3:- DISTRIBUTION OF CASES AS PER ESTIMATED INTRA-OPERATIVE BLOOD LOSS

Intra-operative Blood loss (ml)	Number (%)
<50 ml	70 (66.60%)
50-100 ml	31 (29.50%)
100-200 ml	04 (03.80%)
Mean $\pm$ SD	38.97 $\pm$ 12.14

TABLE NO.4:- DISTRIBUTION OF CASES AS PER POST-OPERATIVE MORBIDITY

Postoperative morbidity	Number (%)
Pyrexia with or without rigors	03 (02.85%)
Drug induced gastritis	02 (01.90%)
Paralytic ileus	02 (01.90%)
Surgical site infections (SSI)	01 (00.95%)
Secondary haemorrhage	01 (00.95%)

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