

Evaluation of post-operative pain in conventional laparoscopic cholecystectomy

¹Dr. Sanjay Kumar, M.O. Specialist (General Surgery) M.G.M.S.C. Khaneri, Deptt. of Health and Family Welfare Himachal Pradesh.

²Dr. Ashok Kaundal, Associate Professor (General Surgery), Deptt. of General Surgery I.G.M.C. Shimla.

³Dr. Suneet Katoch, M.O. Specialist (General Surgery) M.G.M.S.C. Khaneri, Deptt. of Health and Family Welfare Himachal Pradesh.

Corresponding Author: Dr. Ashok Kaundal, Associate Professor (General Surgery), Deptt. of General Surgery I.G.M.C. Shimla.

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Abstract

AIM: Evaluation of post-operative pain in conventional laparoscopic cholecystectomy

Method: Patients suffering from symptomatic cholelithiasis were subjected to conventional four ports Laparoscopic Cholecystectomy (cLC). Data analyzed included duration of surgery, post-operative pain, For assessment of post-operative pain numeric pain scale scoring system was used and pain scoring done at four hours, twelve hours and twenty-four hours post-operatively.

Results: In SILC group numeric pain score four hours after surgery ranged from 3 to 9. Mean pain score for the SILC group is 4.64 ± 1.89 . The numeric pain score following 12 hours of surgery ranged from 1 to 9. Mean score for SILC group is 2.96 ± 1.881 . The numeric pain score following 24 hours of surgery ranged from 1 to 7. Mean score for SILC group is 1.80 ± 1.443 .

Conclusion: Conventional laparoscopic cholecystectomy is lower to other technique post-operative pain as per our study.

Keywords: Conventional laparoscopic cholecystectomy, post-operative pain, SILS

Introduction

The first laparoscopic cholecystectomy was performed by Erich Mühe in the County Hospital of Böblingen, Germany, on September 12th, 1985. Mühe described designing and constructing his own laparoscope, called the Galloscope, and utilizing it before the era of video assistance. In fact, his technique, especially maintaining pneumoperitoneum proved to be so cumbersome that after performing the first six true laparoscopic cholecystectomies he abandoned the optically guided transumbilical approach under pneumoperitoneum for a single 3-cm subcostal incision approach where the gallbladder was removed under direct visualization .¹In the following 23 years, Mühe have witnessed many competitive approaches to minimize the invasiveness of laparoscopic cholecystectomies with surgeons developing new instruments and techniques to decrease postoperative pain and improve cosmesis . Traditionally, laparoscopic cholecystectomy (LC) has

involved four ports. Many laparoscopic techniques have been developed using this 4-port LC, and it has become possible to perform these techniques safely. Since the introduction of laparoscopic cholecystectomy as the gold standard procedure to remove the gallbladder, many surgeons have attempted to reduce the number and size of ports in laparoscopic cholecystectomy to decrease parietal trauma and improve cosmetic results. Although it is hard to improve on laparoscopic cholecystectomy, the arrival of single-incision or single-port access surgery may allow this.²⁻⁵

Material and methods

The present prospective study included ultrasonographically proved 25 patients of symptomatic cholelithiasis posted for elective cholecystectomy. These patients were admitted in Surgical Wards of Indira Gandhi Medical College, Shimla. cLC was performed on 25 patients. The patients were selected randomly. All the patients were subjected to same general anesthesia, antibiotics, perioperative analgesics and intravenous fluids. cLC was done by infra-umbilical incision and conventional LC done by four Trocars Technique.

Patients having following conditions were excluded from the study.

1. Acute Cholecystitis /Pancreatitis.
2. Choledocholithiasis
3. Jaundice /Hypoproteinemia /Malignancy
4. History of Allergy , taking Steroids and Chemotherapy
5. Patients on Oral Contraceptive Pills or pregnant.
6. Patients requiring intra-operative blood transfusion.
7. Conversion of conventional LC to OC.
8. Intra operative injury to adjacent organs/structures.
9. Cholecystoenteric fistulae

Results

Pain experienced by patients following surgery is compared between two groups using numeric pain rating scale. Patients were asked to score the pain experience by them on scale of 0 to 10, four hours, twelve hours and twenty four hours post-surgery, a higher score signifies greater pain experienced by patient. Both group of patient were given standard NSAIDs (Diclofenac) post-operatively.

In cLC group numeric pain score four hours after surgery ranged from 3 to 9. Mean pain score for the SILC group is 7.72 ± 0.843 . The numeric pain score following 12 hours of surgery ranged from 1 to 9. Mean score for cLC group is 5.08 ± 1.152 . The numeric pain score following 24 hours of surgery ranged from 1 to 7. Mean score for cLC group is 3.80 ± 1.118 .

Table 1: PAIN

	Pain at 4 hours		Pain at 12 hours		Pain at 24 hours	
	n=25	%	n=25	%	n=25	%
≤ 3	0	0	2	8	9	36
4-6	2	8	20	80	15	60
≥ 7	23	92	3	12	1	4
Mean	7.72 ± 0.843		5.08 ± 1.152		3.80 ± 1.118	

Discussion

Laparoscopic cholecystectomy presents obvious advantages for the patient such as excellent cosmesis, shorter recovery periods and improved postoperative pulmonary function⁷. Due to these advantages, laparoscopic cholecystectomy has, within the last two years, replaced conventional cholecystectomy and become the method of choice for the treatment of symptomatic gallbladder disease in our service. The rapidly growing popularity of the new method made large, randomized studies comparing laparoscopic and conventional cholecystectomy impossible in Germany

because most patients refused conventional cholecystectomy. To evaluate the laparoscopic operation, we retrospectively compared the results of our laparoscopic cholecystectomies with those of the conventional operation. Operative time was much longer for laparoscopic cholecystectomies in the beginning but showed an impressive learning curve and decreased rapidly with growing experience. Operative duration varied considerably with the degree of difficulty of the operation. For simple cholecystectomies, it has become shorter laparoscopically than conventionally.³⁻⁶

Conclusion

Conventional laparoscopic cholecystectomy is lower to other technique post-operative pain as per our study.

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