EPIGASTRIC VS. UMBILICAL PORT FOR RETRIEVAL IN LAPAROSCOPIC CHOLECYSTECTOMY : WHICH IS BETTER

General Surgery

Dr. Zayd Ashok Rahman

Associate Professor, Department of general surgery, Ramakrishna Mission Seva Pratishthan, Kolkata, West Bengal.

Dr. Priyanka pant*

PG Resident, Department of General Surgery, Ramakrishna Mission Seva Pratishthan, Kolkata, West Bengal. *Corresponding Author

ABSTRACT

Background and aim - cholelithiasis is most common cause for cholecystectomy. These days laparoscopic cholecystectomy is the standard treatment for cholelithiasis. Extraction of gall bladder is an important cause for post operative pain after cholecystectomy. Laparoscopic cholecystectomy is still evolving, the number of ports are being reduced day by day. From standard four port to single incision and using natural orifices (NOTES).

This study was done to determine whether the patients undergoing gall bladder retrieval via umbilical port was associated with more complications than epigastric port in a standard four port laparoscopic cholecystectomy.

Method - 400 patients were selected for the study and were randomly allocated into 2 groups. Postoperatively, port-site pain score assessed at 2, 6, 12, and 24 hours by visual analog scale (VAS) score both for the epigastric and umbilical ports in all the patients and other variables are assessed accordingly and the collected data were analyzed by using SPSS version 22.

Result - The postoperative pain and spillage was more in retrieval via epigastric port with only mild technical difficulty and relatively higher incidence of port site hernia from the retrieval port in group B i.e. retrieval via umbilical port.

KEYWORDS

Gall Bladder, Laparoscopic Cholecystectomy, port site hernia, VAS - Visual Analogue scale.

INTRODUCTION -

Laparoscopic cholecystectomy is gold standard for treatment of cholelithiasis¹. Post operative pain is one of the important reason for delay in the recovery and discharge of the patient following surgery².

Other factors are - haemoperitoneum, trauma while port insertion, retained carbon dioxide (CO₂)².

Gall bladder is extracted either via umbilical port or via epigastric port³. Few prefer epigastric extraction and few preferred umbilical extraction of gall bladder^{4,5,6}. Till date there is no strong evidence that supports the superiority of any one method over other.

MATERIALS AND METHOD -

This study was conducted at tertiary health center of Kolkata from June 2018 to April 2019. In total 400 patients were selected and were randomly allocated into two groups 'A' and 'B'

In Group A the extracting port was epigastric and in Group B the extracting port was umbilical.

The patients selected are -

18-50 years age with symptomatic gall stone disease (Gall stones, polyps) and the procedure being standard four port laparoscopic cholecystectomy.

Exclusion criteria -

Pregnant patient
Bleeding diathesis
History of obstructive jaundice
Gall bladder malignancy
With previous abdominal surgery were excluded from the study.

Post operative pain managed by the use of paracetamol intravenous at dose of 15mg/kg body weight 8 hourly and blind assessment of pain was done by another doctor, using the Visual Analogue Scale (VAS : 0-10). Preoperatively patient was educated about the VAS in the ward. Pain was assessed after 2, 6, 12 and 24 hours postoperatively in both the port sites.

Analgesia was stepped up to NSAIDs or tramadol, according to the VAS score in patients with complaint of significant pain (VAS 5 or more).

RESULT

Mean age of patients - 42 yrs
Male : Female - 1:3

In both the groups, gall bladder is retrieved in an endobag under vision. Group A - Out of 200 patients significant (VAS>5) post operative pain was complained by 15 (7.5%) patients, difficulty in retrieval was faced in 5 (2.5%), bile spillage occurred in 3 (1.5%), port site infection occurred in 2 (1%) and on follow up port site hernia was not observed in any patient from epigastric port (Table 1)

Group B - Out of 200 patients significant (VAS>5) post operative pain was complained by 10 (5%), difficulty in retrieval was faced in 6 (3%) patients, bile spillage occurred in 1 (0.5%), port site infection occurred in 1 (0.5%) and on follow up port site hernia was found in 2 (1%) (Table 2)

CONCLUSION -

Both the techniques are used for retrieval of gall bladder and have their own merits and demerits. In this study we compared retrieval via epigastric and umbilical port and observed that post operative pain and port contamination from spillage of bile is more in epigastric port which is still manageable but retrieval via umbilical port can cause port site hernia which increases the morbidity and may lead to further surgery.

Tables

Table 1 : Retrieval via Epigastric port

Variable	Numbers (n= 200)	Percentage
Pain (VAS)	15	7.50%
Difficulty in extraction	5	2.5
Bile spillage	3	1.5
Port site infection	2	1
Port site hernia	0	0

Table 2: Retrieval via Umbilical port

Variable	Numbers (n= 200)	Percentage
Pain (VAS)	10	5
Difficulty in extraction	6	3
Bile spillage	1	0.5
Port site infection	1	0.5
Port site hernia	2	1

REFERENCES

1. Gallstone disease: Epidemiology of gallbladder stone disease. Shaffer EA Best Pract Res Clin Gastroenterol. 2006; 20(6):981-96
2. Characteristics and prediction of early pain after laparoscopic cholecystectomy. Bisgaard T, Klarskov B, Rosenberg J, Kehlet HPain. 2001 Feb 15; 90(3):261-9.
3. Hunter JG, Thompson SK. Laparoscopic cholecystectomy, intraoperative cholangiography, and common bile duct exploration. In: Fischer JE, Bland KI, editors. Mastery of Surgery. Philadelphia: Lippincott Williams & Wilkins; 2007. pp. 1117-28.
4. Abbas T, Saleha AK, Lateef M, Burhan-ul-Haq FR, Choudhary ZA. Procedural time and complications in delivery of gall bladder in laparoscopic cholecystectomy umbilical

- port vs subxiphoid port. J Allama Iqbal Med Col. 2012;9:54–7.
5. Postoperative port-site pain after gall bladder retrieval from epigastric vs. umbilical port in laparoscopic cholecystectomy: a randomized controlled trial. Siddiqui NA, Azami R, Murtaza G, Nasim S Int J Surg. 2012; 10(4):213-6.
 6. A comparative study of postoperative port-site pain after gallbladder retrieval from umbilical versus epigastric ports in laparoscopic cholecystectomy Ranendra Hajong et al. J Family Med Prim Care. 2019 May; 8(5): 1617–1620.