



**ORIGINAL RESEARCH PAPER**

**General Surgery**

**EVALUATION OF SURGICAL SITE INFECTION AND PORT SITE HERNIA IN PATIENTS UNDERGOING LAPAROSCOPIC CHOLECYSTECTOMY**

**KEY WORDS:**

Gallbladder(GB), laparoscopic cholecystectomy(LC), port site hernia, surgical site infection(SSI)

**Dr Savya Sachi** MS General Surgery CH Baijnath

**Dr Arpita Sharma** MD Ayurveda

**ABSTRACT**

Gallstone disease remains one of the major causes of abdominal morbidity and mortality through the world. Complications of LC include bile duct injuries, bile leak, bleeding, vascular and visceral injuries, pneumoperitoneum-related complications (subcutaneous emphysema, pneumothorax, hypercarbia, air embolism, and ileus), infection, retained gall stones (in the common bile duct or intraperitoneal spillage), port site hernia, postcholecystectomy syndrome, and complications related to anesthesia.

**INTRODUCTION**

Laparoscopic cholecystectomy (LC), introduced in 1987, is now the preferred method of cholecystectomy. Laparoscopic cholecystectomy has revolutionized the surgical management of gallbladder (GB) diseases by reducing postoperative pain, risk of surgical site infection and incisional hernia. Laparoscopic cholecystectomy is also reported to have an edge over open cholecystectomy due to shorter hospital stay, early return to work and overall low cost. Gallstone disease remains one of the major causes of abdominal morbidity and mortality through the world. Complications of LC include bile duct injuries, bile leak, bleeding, vascular and visceral injuries, pneumoperitoneum-related complications (subcutaneous emphysema, pneumothorax, hypercarbia, air embolism, and ileus), infection, retained gall stones (in the common bile duct or intraperitoneal spillage), port site hernia, postcholecystectomy syndrome, and complications related to anesthesia.

**Observation**

**Southampton Wound Scoring Of Surgical Site Infection On Day 1, 3 And 7 And Evidence Of Port Site Hernia At 3 Month Follow Up (n=100)**

On post operative day 1, surgical site infection was seen in 2(4%) patients of epigastric port group. The infection was classified as grade 1B. There was no surgical site infection in the patients of umbilical port group. On day 3, surgical site infection was seen in 2(4%) patients of epigastric port group. The infection was classified as grade 1B. There was no surgical site infection in the patients of umbilical port group. On day 7, surgical site infection was seen in 2(4%) patients of epigastric port group. The infection was classified as grade 1B. there was no surgical site infection in the patients of umbilical port group not. There was no port site hernia swelling was visible in any patient of the two groups and no port site palpable defect was seen in any of the study participant in either of the two groups at 3 month follow up.

**DISCUSSION**

**Port Site Surgical Site Infection**

In the present study no patient in the umbilical port group was observed to be having port site infection upto 7 days postop, whereas the incidence of port site infection in epigastric port group was 4%. Jain et al reported that 20% of the patients in the epigastric port group developed port site infection during follow-up on POD 10, while none of the patients in the umbilical port group developed any port site infection. A similar result was seen in the study conducted by Shakya et al, where the port site infection rate was less for the umbilical port group (3%) in comparison with the epigastric port group (5%). On the contrary, Memon JM et al, reported that in umbilical port group, wound infection occurred in 5.11% patients, whereas in the epigastric group, wound infection

was found in 1.55% patients

**Port Site Hernia**

No incidence of port site hernia in epigastric as well as umbilical port group upto 3 months follow up. Memon JM et al, reported that port-site hernia incidence in epigastric port group was 0.11% whereas the port site hernia incidence in umbilical port group was 3.66% at 24 month follow up.<sup>7</sup>

**Summary**

- In the present study no patient in the umbilical port group was observed to be having port site infection upto 7 days postop, whereas the incidence of port site infection in epigastric port group was 4% (p value <0.001 significant).
- There was no port site hernia in either of the two groups at 3 month follow up.

**REFERENCES**

1. Johnston DE, Kaplan MM. Pathogenesis and treatment of gallstones. N Engl J Med. 1993;328:412-21.
2. Ahmed ML, Lolah MA, Mohammed MA, Sharabash MM. Difficulties during laparoscopic cholecystectomy. Menoufia Med J 2014;27:469-73
3. Gul R, Dar RA, Sheikh RA, Salroo NA, Matoi AR, Wani SH. Comparison of early and delayed laparoscopic cholecystectomy for acute cholecystitis: experience from a single center. N Am J Med Sci. 2013;5(7):414-8.
4. Johnston DE, Kaplan MM. Pathogenesis and treatment of gallstones. N Engl J Med. 1993;328:412-21.
5. Ahmed ML, Lolah MA, Mohammed MA, Sharabash MM. Difficulties during laparoscopic cholecystectomy. Menoufia Med J 2014;27:469-73
6. Jain A, Tajudeen M, Sreekanth A, Raj Kumar N. Comparison of Postoperative Port-Site Pain After Gallbladder Retrieval From Epigastric Versus Umbilical Port in Patients of Laparoscopic Cholecystectomy for Symptomatic Cholelithiasis: A Randomized Controlled Trial. Cureus. 2021 Sep 18;13(9):e18087. doi: 10.7759/cureus.18087. PMID: 34692302; PMCID: PMC8523391.