A STUDY OF PORT SITE COMPLICATIONS AFTER LAPAROSCOPIC CHOLECYSTECTOMIES AT TERTIARY CARE HOSPITAL IN WESTERN RAJASTHAN

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Abstract

Background: Port site complications though rare, shall be evaluated and studied so as to improve the quality of healthcare.

Materials and Methods: This prospective study was conducted in the Department of General Surgery, Sardar Patel Medical College & P.B.M. Hospital, Bikaner, Rajasthan. 200 patients of all age group and both sexes with symptomatic cholelithiasis undergoing laparoscopic cholecystectomy.

Result: Out of 200 patients studied only 1 patient presented with port site hernia in the follow up and 13 patients presented with port site infection. No other complication was detected after laparoscopic cholecystectomies.

Conclusion: It is concluded that port site complications are rare in elective laparoscopic cholecystectomy and can be further reduced by proper selection of patients, and strictly following basic principles of laparoscopic cholecystectomy.

Keywords: Laparoscopic surgeries, Port site infections, Complications

Introduction:

Cholecystectomy is the most common operation of the biliary tract and the second most common operative procedure performed nowadays. The technique of open cholecystectomy developed by Carl Johann August Langenbuch, has become the gold standard for the definitive management of symptomatic cholelithiasis¹.

Laparoscopic Cholecystectomy, introduced in 1980's, has revolutionized the management of gall bladder disease and the NIH consensus conference, held in September 1992 in Bethesda, have concluded that laparoscopic cholecystectomy was the choice treatment for cholelithiasis. The new procedure has been widely accepted and adopted by surgical community and has now become the new "Gold Standard" for management of cholelithiasis².

The mortality rate in laparoscopic cholecystectomy is reported to be 0.04% versus 0.4% and the overall complication rate 9% versus 16% as compared to open cholecystectomy³. Although it is a safe and effective procedure and offers several benefits compared to the open procedure, it also has its own set of complications that include those of laparoscopy (abdominal wall bleeding, omental

bleeding, abdominal vessel injury, retroperitoneal vessel injury, gastrointestinal perforation, bladder perforation, solid visceral injury, and infection) and those of cholecystectomy (gallbladder fossa bleeding, bile duct injury, bile leakage, and infection).

Aim of our study is to assess the port site infections in laparoscopic surgeries and its management. To prevent the infection, proper sterilisation and storage of instruments is recommended. The centers for Disease control & prevention classification (CDC) categorised Surgical Site Infection (SSI) in to incision site infection and organ space infection. The incision site infection is divided in to superficial and deep infection. Superficial means only skin and subcutaneous tissue infection whereas deep means fascia and muscle involvement⁴.

MATERIALS & METHODS

Study design: prospective hospital based study.

Study duration: 12 months

Study place: Dept. of Surgery, S.P. Medical College and P.B.M Hospital, Bikaner

Study population: Patients of all age group and both sex who underwent laparoscopic surgeries during the above period was include in the the study.

Sample size: All patients reporting to the Surgery dept. within study duration and eligible as per inclusion criteria was included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria: Patients of all age group and both sex who underwent laparoscopic surgeries during the above period was include in the the study.

Exclusion Criteria: Those patients who were converted to open procedures was excluded from the study.

Data Analysis:

To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Microsoft excel and statistical software SPSS was used and data was analysed with the help of frequencies, figures, proportions, measures of central tendency and appropriate statistical test wherever required p -value <0.05 was considered as significant.

RESULTS

Figure 1: Sex distribution of cases

Among the 200 patients, 138 (69.0%) were females and 62 (31.0%) were males.

Figure 2: Sex wise distribution of port site infection cases

13 (6.50%) patients had port site infections among the patients. Of which 8 were females and 5 were males.

DISCUSSION

There is no debate that laparoscopic surgery has had tremendous positive impact on patients and the healthcare system. Patients tend to have less pain, less morbidity and return to their daily activities more quickly. Thus, the number of laparoscopic procedures done each year continues to rise substantially.

For many surgical diseases, laparoscopic surgery is the gold standard. Nevertheless, this procedure needs to be performed by experienced surgeons to avoid major complications. Just like the open surgeries, laparoscopic surgeries are also not without complications.

Port site complications can be grouped into postoperative complications and access-related complications, and these have been reported in all age groups and in both genders. It has been reported that obesity is one of the risk factors for increased morbidity related to port site due to various factors such as the need for longer trocars, thick abdominal wall, need for larger skin incision to expose fascia adequately, and limitation in mobility of the instrument due to increased subcutaneous tissue. Hence, care must be taken during placement of trocars to align their axes as needed for the procedure.⁵

In the present study, 6.50% of the patients had port site infections. This was in accordance to a study by Mir et al who observed a PSI of 6.7% in patients after elective cholecystectomy by laparoscopy. The cause of the incidence was accredited to the reusable trocars.⁶ PSI was 5.7% in a study by Sujith Kumar et al 6.3% by Shindholimath et al, 5.3% by Den Hoed et al and 5.5% by Atul K et al in their studies.⁷⁻¹⁰ Atul K et al pointed out that proper sterilization of instruments is the most crucial step in prevention of PSI.

CONCLUSION

It is concluded that port site complications are rare in elective laparoscopic cholecystectomy and can be further reduced by proper selection of patients, and strictly following basic principles of laparoscopic cholecystectomy

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