A STUDY OF PORT SITE INFECTION AFTER LAPAROSCOPIC CHOLECYSTECTOMY

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Abstract

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

Materials and Methods: This prospective study was conducted on 100 patients of all age group and both sexes with symptomatic cholelithiasis undergoing laparoscopic cholecystectomy were analysed for port site infection.

Result: Out of 100 patients studied only 3 patients presented with port site infection.

Conclusion: It is concluded that port site infection 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: Port site infection, laparoscopic, Cholecystectomy

Introduction

Laparoscopic techniques have revolutionized the field of surgery. Benefits include decreased postoperative pain, quicker return to normal activity, and less postoperative complications.¹

Gallstones are a major cause of morbidity and mortality throughout the world². At least 10% adults have gallstones. Its prevalence has become more apparent since the introduction of ultrasound. The estimated prevalence of gallstone disease in India has been reported as 2% to 29%. In India, this disease is seven times more common in the North (stone belt) than in South India.³

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 & classification-prevention (CDC) categorised Surgical Site Infection (SSI) in to incision site infection and organ space infection. The incision site infection is divided in to superficial means only skin and and deep infection.

Material and Methods

This prospective study was conducted in the Department of General Surgery, Sardar Patel Medical College & P.B.M. Hospital, Bikaner, Rajasthan. 100 patients of all age group and both sexes with symptomatic cholelithiasis undergoing laparoscopic cholecystectomy were analysed for any operative and post-operative infection at port sites with 3 months follow up from date of operation. All cases were performed by experienced laparoscopic surgeons.

Observations

Table 1: Incidence of Port Site Infections

No. of Cases	Port site Infection	Percentage	
100	Epigastric	2	2.0
	Umbilical	1	1.0
	Right Subcostal	0	0
	Right Lumbar	0	0
	Total	3	3.0

Table no: 1 shows that out of 100 patients studied only 3 (3.0%) patients developed port site infection. Out of these 2 patients developed port site infection at epigastric port, 1 at umbilical port but there was no port site infection at right subcostal and right lumbar port. 2 patients developed infection at port site in immediate post-operative period and 1 patient developed after 3 weeks of operation. All PSIs were superficial infections and treated with empirical antibiotics and local care of wounds.

Discussion

Cholecystectomy is the treatment for cholelithiasis. Laparoscopic Cholecystectomy is the gold standard procedure for symptomatic cholelithiasis. We have done our study on 100 patients undergoing laparoscopic Cholecystectomy in Dept. of General Surgery at Sardar Patel Medical College and P.B.M. Hospital, Bikaner, Rajasthan. The purpose of our study was to assess the port site infection in patients who underwent laparoscopic cholecystectomy and duration of hospital stay & overall morbidity in patients due to the complications.

The incidence of port site infection in our sample was 3%. Highest incidence of port site infection was observed by Voitek & Tsao⁴ which was 9%. Hamzaoglu *et al*⁵ reported port site infection in 8% of the patients. The studies were conducted in 2001 and 2004 respectively which were early years of LC.

Later studies conducted by Bhutta *et al*⁶, Memon *et al*⁷, and Rooh-ul-Muqim *et al*⁸ showed infection rate of 5%, 1.8%, and 4.84% respectively.

Then studies conducted by Karthik *et al*⁹ reported incidence of port site infection of 1.8% respectively.

The reduction in port site infection may be due to better instruments, increased experience of surgeons, better sterilisation techniques and good post-operative care.

In our study 100 patients were operated including 82 females and 18 males and only 3 patients developed port site infections, common in 21-40 years of age group and more common in females. All PSIs were superficial infections. Out of 3 patients infections of 2 patients were controlled by local dressings and oral antibiotics. 1 patient developed abscess at port site after 20 days of operation and treated by incision & drainage and regular dressings.

The infection during LC mostly occurred at epigastric and umbilical ports⁷. Umbilical flora has been responsible for infection at the port⁵. The infection at umbilical port site has been shown to be controlled by prophylactic topical antibiotics¹⁰. There are also reported cases of port site tuberculosis which were treated successfully with anti-tubercular drugs¹⁰.

Conclusion

It is concluded that port site infection 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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