Original Article

Port Site Complications in Patient after Laproscopic Cholecystectomy

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ABSTRACT

Objective: To assess the frequency of port site complications in patient after laproscopic cholecystectomy.
Study Design: Observational study.
Place and Duration of Study: This study was carried out in the Department of Minimal Invasive Surgical Centre (MISC) at Liaquat University of Medical & Health Sciences Jamshoro Pakistan, from Oct 2009 to 31st May 2011.
Materials and Methods: This study consisted of Four hundred & fifty patients, admitted for laparoscopic cholecystectomy. Base line and specific investigations were done in all patients, especially ultrasound of abdomen for assessment of gallstone disease. Inclusion criteria were that all patients diagnosed as case of gallstone disease on the basis of history, clinical examination and investigations specially ultrasound of abdomen. Exclusion criteria included complicated gallstone disease, unfit patients for general anesthesia, pregnant ladies due to risk of foetal loss, patients with carcinoma of gall bladder, patients with acute pancreatitis and patients with obstructive jaundice. Postoperatively the patients were followed for up to 6 month and observed port site complications. Results were prepared with help of tables and graphs. Data was analyzed through SPSS software.
Results: 315(70%) were female and 135(30%) male. Ratio male: female ratio of 1:2.3 .Age ranging from a minimum of 20 year to 65 year with mean age was 38+ 3.4 years. Complications were port site infection in 4 (0.88 %) cases, followed by port site bleeding in one (0.22 %) case and epigastric port site diathermy burn in one (0.22 %) case.
Conclusion: In conclusion, we recommend all 10 mm trocar sites be closed care fully. Over stretching of infra / supra umbilical port should be avoided. Gallbladder should be removed in endo- beg.
Key Words: Gall Stone, Laproscopic cholecystectomy, Port site complications.

INTRODUCTION

Nowadays surgery is modernized into minimally invasive techniques, at present laparoscope is a tool used by almost in every surgical field[1]. History of laparoscopic surgery is attractive and long. In late 1980, Kelling invented a main computerized camera chip ,which is use in laparoscopic surgery[2]. Open cholecystectomy has long been accepted as gold standard treatment of gallstones [3]. Changing in the treatment of gallstones came in 1987 when first laparoscopic cholecystectomy was performed by Carl August Langerbach [4]. Nowadays laparoscopic cholecystectomy has become a reputable practice due to less pain, short hospital stay, minimum morbidity and accelerating postoperative recovery [5,6].

Laparoscopic cholecystectomy though superior than open cholecystectomy but is still not free from complications and can be responsible for various minor to major problems. Port-site complications associated with laparoscopic cholecystectomy are intraoperative and post operative i,e bleeding, haematoma, wound infection, painful scar, hernia and metastatic malignancy [7]. In surgery wound infection is common complication reported all around the world. Some studies have reported frequency varied from 5% to 6.3% of port site infection in Laparoscopic Cholecystectomy procedure[8]. Port site bleeding may be present as very slow ooze or frank bleeding if major vessel is damaged during LC procedure. It can be seen on the overlying dressing or can present as concealed internal bleeding postoperatively[7]. Port site hernia is a type of incisional hernia that occurs at port or trocar site after laparoscopic surgery. It is usually seen at the site of 10 mm port in umbilical region. It is rarely found in 5 mm cannula site. Incidence of port site hernia varies from 1% to 6 % [9.] Port-site tuberculosis following laparoscopic cholecystectomy is rare.

The current study was aimed to evaluate various port related complications encountered during laparoscopic cholecystectomy.

MATERIALS AND METHODS

This case series study was carried out in minimal invasive surgical centre at Liaquat University of Medical & Health Sciences Jamshoro Pakistan, from Oct 2009 to 31st May 2011. This study consisted of Four hundred & fifty patients, admitted through the outpatient department, as well as from casualty department of Liaquat University Hospital Jamshoro/Hyderabad for laparoscopic cholecystectomy.

Base line and specific investigations were done in all patients, especially ultrasound of abdomen for assessment of gallstone disease. Inclusion criteria were that all patients diagnosed as case of gallstone disease on the basis of history, clinical examination and investigations specially ultrasound of abdomen. Exclusion criteria included complicated gallstone disease, unfit patients for general anesthesia, pregnant ladies due to risk of foetal loss, patients with carcinoma of gall bladder, patients with acute pancreatitis and patients with obstructive jaundice. Postoperatively the patients were followed for up to 6 month and observed port site complications. Results were prepared with help of tables and graphs. Data was analyzed through SPSS software.

RESULTS

The 450 cases of gallstone were admitted. 315(70%) were female and 135(30%) male. Ratio male: female ratio of 1:2.3 (Chart No.1). There was wide variation of age ranging from a minimum of 20 year to 65 year with mean age was 38± 3.4 years.

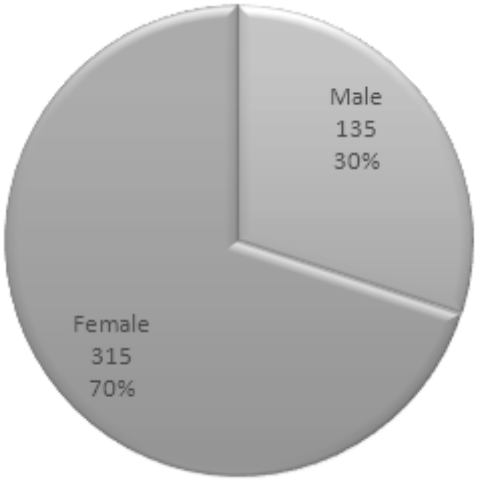

Chart No.1: Distributions of Gender

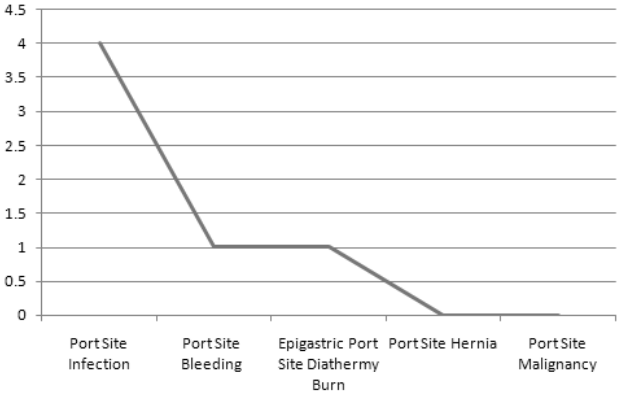

Chart No. 2: Complications at Port Site

The common complications seen in this study were port site infection in 4(0.88 %) cases, followed by port site bleeding in one (0.22 %) case and epigastric port site diathermy burn in one (0.22 %) case. Port site hernia and metastatic malignancy were not reported in our study (Chart No. 2).

DISCUSSION

In recent times laparoscopic gastrointestinal surgery has become established among general surgeons. Since 1980, once first laparoscopic cholecystectomy was performed, there is continuous decrease in numbers of port site complications due to increased surgeons skills and techniques [10].

The present study elaborates the experience of 450 patients underwent laparoscopic cholecystectomy in terms of port site complications. In our study female was dominant over the male and ratio of male to female ratio was 1:2.3. However the male to female ratio given by Siddiqui K [11] is 1:5.2 which is quite different from present study. The age of the patients ranged from 20-65 years with the maximum number in the 4th decade with mean age was 38± 3.4 years. Which is comparable to other study where the age range was 16-59 years with mean 37±10 years [12].

Laparoscopic Surgery associated with certain conditions that may influence surgical infection are use of antibiotic prophylaxis, impact on the immune system, influence of pneumoperitoneum and technical aspects related to sterilization of instruments [11].In our study we observed the frequency of port site infection in 4(0.88 %) cases, while in study of Shindholimath VV et al [13] reported wound site infection was 6.3% which is quite higher and Den Hoed PT et al reported 5.3% port site infection in 1998 [14].

Surgeons encountered complication of port site bleeding if major vessel is damaged during the insertion of Veress needle or trocar. Our study shows port site bleeding in one (0.22 %) case, this result is compared with study of Malik AM [15] reported port site bleeding in 13(0.5%) cases. Veress needle remains the important cause of port site bleeding due to access blindly peritoneal cavity as reported by some authors [16,17]. In our study also reported epigastric port site diathermy burn in one (0.22 %) case.

Postoperative at port site hernia is a rare and incisional type of hernia after laparoscopic surgery. It is usually seen at the site of 10 mm port in umbilical region [18]. In our study no case was reported for post operative laparoscopic port site hernia even after one year fallow up, but several other studies have reported trocar site hernia 1 in 500 cases [19], 3 in 1983 cases [20], 1 in 800 cases [21],11 in 1300 cases [22] and 10 in 1453 cases [23].

CONCLUSION

Port site hernia at 10 mm or larger size 12 mm site is rare but still experienced by both the patient & surgeon.

We recommend all 10 mm trocar sites be closed care fully. Over stretching of infra / supra umbilical port should be avoided. Gallbladder should be removed in endo- beg. Factors causing delayed wound healing i.e malnutrition, poor blood supply, anemia, connective tissue disorder be carefully taken into consideration pre operatively so that this unkind complication of such artistic technique (Laparoscopy) for both patient & surgeon be avoided.

REFERENCE

1. Geraci G, Sciume C, Pisello F, Volsi FL, Facella T, Modica G. Trocar-related abdominal wall bleeding in 200 patients after laparoscopic cholecistectomy: Personal experience. J Gastroenterol 2006; 12(44): 7165-67.
2. Stellato TA. History of laparoscopic surgery. Surg Clin North Am. 1992; 72: 997-02
3. McSherry CK. Cholecystectomy: the gold standard. Am J Surg 1989; 158:174-8.
4. Gondal KM, Akhtar S, Shah TA. Experience of laparoscopic cholecystectomy at Mayo Hospital, Lahore. Ann KE Med Coll 2002; 8:216-8.
5. Dubois F, Icard P, Berthelot G, Leyard H, Coeliscopic cholecystectomy. Ann Surg 1990; 211:60-3.
6. Jenkins PJ, Paterson HM, Parks RW, Garden OJ. Open cholecystectomy in the laparoscopic era. Br J Surg 2007; 94: 1382–1385.
7. Mir IS. Minimal access surgery the port site complications. JK Practitioner 2003;10(3):226-8.
8. Jan WA, Ali IS, Shah NA, Ghani A, Khan M, Khan AS. The frequency of port-site infection in laparoscopic cholecystectomies. JPMI 2008;22(1): 66-70.
9. Memon MR, Arshad S, Rafiq S, Bozdar AG, Shah SQA. Port-Site Hernia: A serious complication of laparoscopy. RMJ 2011;36(1): 14-17.
10. Mufti TS, Ahmad S, Naveed D, Akbar M, Zafar A. Laparoscopic cholecystectomy: An early experience at Ayub teaching hospital Abbottabad. J Ayub Med Coll Abbottabad 2007;19(4):42-44.
11. Siddiqui K, Khan AFA. Comparison of frequency of wound infection: open vs laparoscopic cholecystectomy. J Ayub Med Coll Abbottabad 2006; 18(3):21-4.
12. Ahmad S, Aman Z, Akbar S, Zia-Ul-Haq M, Khan MS. Port site hernia in laparoscopic cholecystectomy. J Med Sci 2011;19(1): 9-11.
13. Shindholimath VV, Seenu V, Parshad R, Chaudhry R, Kumar A. Factors influencing wound infection following laparoscopic cholecystectomy. Trop Gastroenterol 2003;24:90-2.
14. Den Hoed PT, Boelhouwer RU, Veen HF, Hop WC, Bruining HA . Infections and bacteriological data after laparoscopic and open gallbladder surgery. J Hosp Infect 1998;39:27-37.
15. Malik AM, Laghari AA, Mallah Q, Hashmi F, Sheikh U, Talpur KAH.Extra-biliary complications during laparoscopic chelecystectomy: How serious is the problems? J Minimal Access Surg 2008;4(1):5-8.
16. Hashizume M, Sugimachi K. Needle and trocar injury during laparoscopic surgery in Japan. Surg Endosc 1997;11:1198-201.
17. Schafer M, Lauper M, Krahenbuhl L. Trocar and veress needle injuries during laparoscopy. Surg Endosc 2001; 15: 275-80.
18. Bhutta AR, Waheed M, Majid A, Ali SM, Ahmad N, Abid KJ. Port site wound hernias after laproscopic cholecystectomy. Biomedica 2004;20: 104-5.
19. Voyles CR, Petro AB, Meena AL, Haick AJ, Koury AM. A practical approach to laparoscopic cholecystectomy. Am J Surg 1991;161:365-370.
20. Larson GM, Vitale GC, Casey J, Voyles CR. Multipractice analysis of laparoscopic cholecystectomy in 1,983 patients. Am J Surg 1992; 163:221-226.
21. Baird DR, Wilson JP, Mason EM, et al. An early review of 800 laparoscopic cholecystectomies at a university-affiliated community teaching hospital. Am Surg 1992;58:206-210.
22. Ahmad SA, Schuricht AL, Azurin DJ, et al. Complications of laparoscopic cholecystectomy: the experience of a university-affiliated teaching hospital. J Laparoendosc Adv Surg Tech A 1997;7:29-35.
23. Al-Haijar N, Duca S, Molnar G, Vasilescu A, Nicolescu N. Incidents and postoperative complications of laparoscopic cholecystectomies for acute cholecystitis. Rom J Gastroenterol 2002;11:115-119.

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