

Port Site Complications

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Abstract: Aim: To determine port site complications in laparoscopic cholecystectomy and laparoscopic appendectomy. Methods: It is a case series of 100 laparoscopic operations which was done between during November 2021 to October 2022. Inclusion criteria: patient undergoing cholecystectomy, appendectomy giving consent. Exclusion criteria: previous abdominal scar, immunocompromised. Results: Total 100 cases were studied, complications found were total 6 in which Port site bleeding were 3 of which two was managed intraoperatively, and for one patient bleeding was stopped next day with no intraperitoneal collection, Port site infection were 2, Port site hernia only one. Conclusion: Laparoscopic operations should be done in sterile environment to reduce complications with proper antiseptic painting and draping. Meticulous surgical technique and experience of the surgeon can also minimize complications

Keywords: port site complication, laparoscopic cholecystectomy, laparoscopic appendectomy

1. Introduction

Port site complications refer to the complications that occurs while making the ports or that occurs post operatively. Laparoscopic operations are readily done nowadays having benefits of less postoperative stay, pain, less scar, more compliant but sometimes having complications as port site bleeding, infection, hernia. The incidence of port site complications following laparoscopic surgery is considered to be around 21 per 100, 000 cases.

2. Aims and Objectives

To determine the port site complications in laparoscopic cholecystectomy and appendectomy:

- Port site infection
- Port site bleeding
- Port site hernia
- Others

3. Material and Method

It is a case series

Age group: Cholecystectomy (20-50 yrs), appendectomy (15-35 yrs)

100 patients were studied in JLNMC during November 2021 to October 2022

Patient preparation

Preanesthesia checkup

NPO for 6- 8 hours,

Consent,

Part Preparation

IV antibiotics.

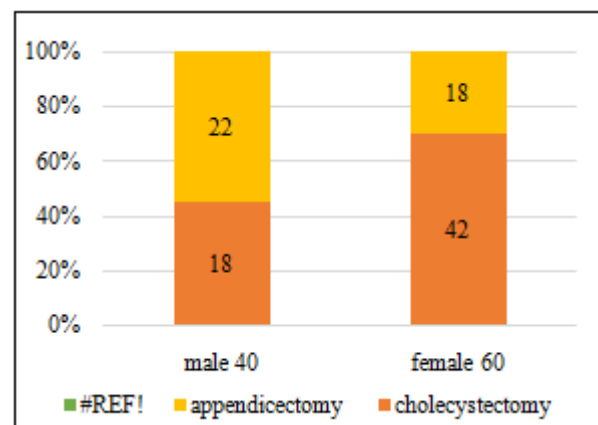
Laparoscopic operations

Postoperative care and discharge

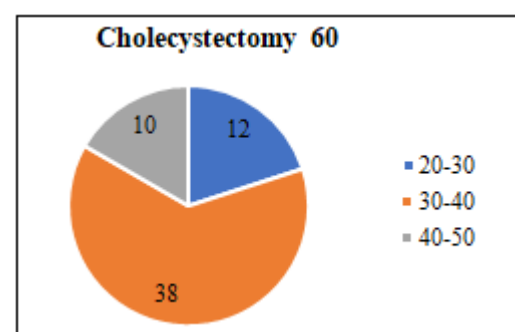
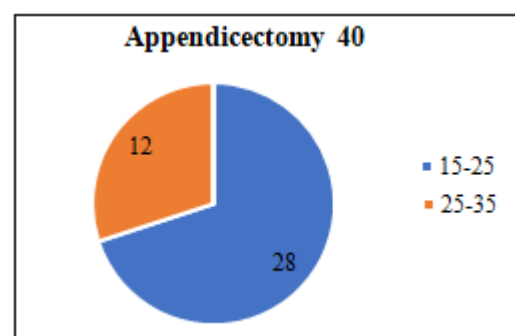
Selection Criteria

- **Inclusion criteria:** Patient undergoing cholecystectomy, appendectomy giving consent
- **Exclusion criteria:** Previous abdominal scar, immunocompromised

Operations done in male and female

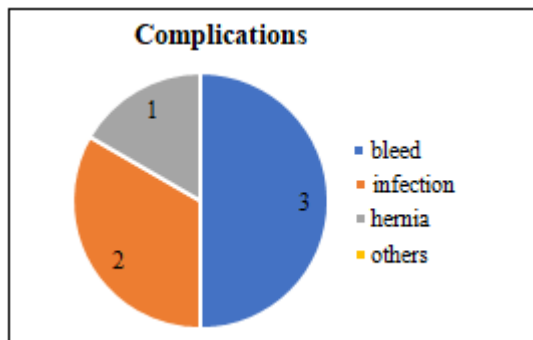
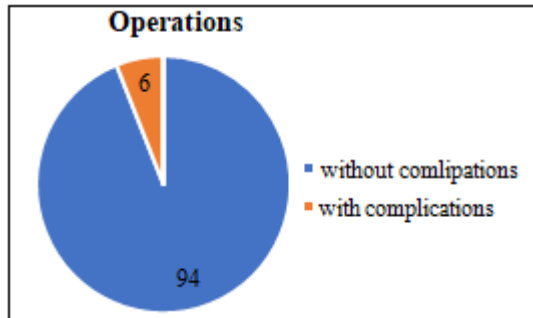


Type and no. of operations with age



4. Results

- Total 100 cases were studied,
- Complication found were total 6 in which
- Port site bleeding were 3, in which two was managed intraoperatively, and for one patient bleeding was stopped next day with no intraperitoneal collection
- Port site infection were 2,
- Port site hernia 1(one)



Before (umbilical port)



After (umbilical port)

5. Discussion

1) Port site Bleeding:

Bleeding from the port-site occurs due to the injury to the epigastric vessels. To prevent this it is advisable for the camera assistant to bring the tip of the laparoscope near the area, the surgeon is expected to make an incision, the light from the tip delineates the vessels in the abdominal wall and they can be avoided. In case the vessel is damaged, the tamponade can be done by compressing the site with the trocar this usually is enough, but if the bleeding still continues then a direct suture ligation may be tried. However recently an innovative technique has been developed which involves plugging the portsite with Surgicel (local hemostatic agent) which has shown excellent wound healing

2) Port site Infection:

Classified as acute and chronic port-site infections. Acute port-site infection; patient presents with pain, fever and seropurulent discharge, most common organism cultured is *Staphylococcus aureus*. The management of acute port-site infections includes drainage of the underlying collection and leaving the wound open accompanied by antibiotics. Chronic port-site infections in third world countries especially where tuberculosis is more prevalent, the patients can develop a chronic discharging sinus. Port-site infections are preventable if adequate steps are taken pre-operatively, intra-operatively and post-operatively. Port-site infections can often be treated non-surgically with early identification and appropriate management.

3) Port site Hernia:

Port-site hernia are found with increasing incidence with trocar size greater than 10mm, it is rarely found in 5mm trocar size. To prevent this complication it is essential to close defects of 10mm and more. The management of port-site hernia is by closing the defect. The incidence of port-site hernia in a range of laparoscopic procedures is 0.3%-5.4%. Time of diagnosis as per recent literature ranged anywhere from 5 days to 3 years with an average of 9.2 months.

Holzinger F et al observed that patient experiences far less pain and other wound-related complications. Even when there is port site infection it is far less in severity and easily controlled by local means in the majority of the cases. The wound disruption and herniation is very less if proper port site closure is employed especially in 10 mm port sites

According to Boni L, Benevento A, Rovera F, Dionigi G, et al. the rate of surgical site infection is 2% in laparoscopic surgery versus 8% in open surgery

In another study by Chuang SC, Lee KT, Chang WT, Wand SN, et al it is reported that wound infection after cholecystectomy is 1.4% in laparoscopic surgery versus 14.8% in open surgery

6. Conclusion

Laparoscopic operations should be done in sterile environment to reduce complications with proper antiseptic painting and draping

Meticulous surgical technique and experience of the surgeon can also minimize complications

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