

## PORT SITE WOUND HERNIAS AFTER LAPROSCOPIC CHOLECYSTECTOMY

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*This comparative study was conducted on 100 patients coming for follow up after laparoscopic cholecystectomy at Sir Ganga Ram Hospital, Lahore. These patients were divided into two equal groups. In group A we stitched the linea alba and skin with monofilament polypropylene and in group B linea alba was not stitched and skin wound was closed with steri strips. In group A, two patients developed wound complications, one had wound infection and the other had bleeding from wound. In group B, four patients out of fifty in whom we did not stitch linea alba and skin, developed wound infection, and in 3 patients minor bleeding was seen from port site. No patients developed hernia at port site in both groups. Port site hernia is a rare complication after laparoscopic cholecystectomy. This clinical trial was carried out to see the prevalence of port site wound hernias after laparoscopic cholecystectomies.*

**Key Words:** *Lap. Chole-laparoscopic Cholecystectomy.*

### INTRODUCTION

There is now a little doubt that laparoscopic procedures, particularly laparoscopic cholecystectomy, have revolutionized intra-abdominal surgery and became gold standard for the treatment of symptomatic cholelithiasis<sup>1</sup>. This fact was in part due to the use of small incisions, which produce less wound pain and result in speedy post operative recovery. Port site wound hernia is one of the complication of laparoscopic cholecystectomy which is mentioned in both local and international literatures<sup>8</sup>. Herniation through port site wounds is the result of inadequate closure of the musculoaponeurotic layers of the abdominal wall<sup>2</sup>. The over all percentage is size related with the majority of hernias occurring in wounds larger than 10mm and in 12mm ports<sup>3</sup>. Port site hernias are more common in the umbilical port<sup>5</sup>. Port site hernias may present acutely with intestinal obstruction, often due to partial entrapment of knuckle of bowel (Richter type of hernias)<sup>2</sup>.

The diagnosis may not be immediately apparent, so often there is no superficial skin bulge. CT-scan has been recommended for establishing diagnosis<sup>3</sup>. This study is performed to see the prevalence of incisional hernia after laparoscopic cholecystectomies.

### PATIENTS AND METHODS

This prospective study was conducted on 100 patients underwent laparoscopic cholecystecto-

mies in surgical unit-III, Sir Ganga Ram Hospital, Lahore from June 2002 to June 2004. Our study included 28 male and 72 female patients who underwent laparoscopic cholecystectomies for symptomatic gall stones. Their ages ranged from 23 to 75 years with mean age of 42 years. All patients were assessed clinically and underwent routine investigations including liver function tests. The diagnosis was mainly confirmed by ultrasonography. Eighty patients presented with pain right hypochondrium, and 20 gave a history of dyspepsia. Thirty seven patients had associated diabetes mellitus, hypertension and morbid obesity. A second generation cephalosporin was given one hour before laparoscopic procedure. We used standard 4 ports technique, umbilical port of 10mm and epigastric port of 10mm, 2 ports of 5mm at RHC and RIF. After completion of operation we washed the peritoneal cavity in 40 patients. Port site of every patient was washed with saline solution adequately. In 50 patients we stitched linea alba and skin both in epigastrium and umbilicus with non absorbable polypropylene suture material (group A). In rest of the 50 patients we did not stitch umbilicus and epigastrium and skin wound was closed with steri strips (group B).

### RESULTS AND OBSERVATION

In group A (in which linea alba and skin were stitched) only one patient developed minor bleeding from port site and one patient developed

wound infection. In group B (in which linea alba and skin were not stitched) 3 patients developed bleeding from port site which was secured and 4 patients developed wound infection post-operatively. No case of hernia formation at port site was recorded in both groups.

**Table 1:** Age Distribution.

Age Limit (Years)	Number of Patients	Percentage
20 to 40	20	20%
40 to 50	60	66%
50 to 65	20	20%

**Table 2:** Diagnosis.

Diagnosis	Number of Patients	Percentage
Acute on chronic Cholecystitis	20	20%
Chronic cholecystitis	60	60

**Table 2:** Diagnosis.

Complications	No. of Patients	% age	No. of Patients	% age
Bleeding form port site	1	2	3	10
Wound infection	1	2	4	15
Hernia formation	Nil		Nil	
Biloma	Nil		Nil	
CBD injury	Nil		Nil	

## DISCUSSION

Hernias at port sites following laparoscopic surgery were reported, with the use of larger ports than 10mm or when 10mm wound port was extended for removal of distended gall bladder. It may be expected that this problem will increase as larger cannulas are used<sup>1</sup>. In our study no case of port site wound hernias and intestinal obstruction were observed, even after follow up for 1 year. On the other hand as in international and in local literature incisional hernias at port sites following laparoscopic surgery is mentioned<sup>8</sup>. The significant incidence of umbilical defects in patients

undergoing laparoscopic surgery calls for accurate diagnosis and good technique<sup>3</sup>. The incidence of incisional hernia might be reduced by avoiding unnecessary wound extension and the use of non-absorbable sutures for closure of defects larger than 10 mm<sup>5</sup>. It has also been suggested that when the pneumoperitoneum is expelled before the extraction of the port, the pressure gradient between the intraperitoneal gas and the atmosphere allows omentum or small bowel to become attached to the end of the cannula, the subsequent withdrawal of which results in the hernia<sup>6</sup>. Simple digital examination of the port site after removal of the trocar may help to prevent this complication but this may be unreliable when using 10mm port sites and in obese patients<sup>3</sup>, required meticulous closure of musculo aponeurotic layer with monofilament poly-propylene<sup>1</sup>. The P-value is 0.00.

## CONCLUSIONS

Port site wound hernia is a rare complication of laparoscopic cholecystectomies and ports wounds are rather small to stitch.

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