

Postoperative complications of laparoscopic cholecystectomy among women in Permam hospital

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Abstract

Background: Benefits of minimally invasive or laparoscopic procedures include less postoperative discomfort.

Objective: This study aimed to identify the early postoperative complications of laparoscopic cholecystectomy and their association with age, occupation and previous laparotomy.

Patients and Methods: 60 female patients diagnosed with having symptomatic gallstone underwent laparoscopic cholecystectomy in Permam General Hospital, during the period from January 2015 to July 2015. Surgery done by researchers and after 10 days, the patient interviewed and examined for finding the complications, the patient then reexamined after 30 days for the presence of other complications.

Results: Postoperative complications among study sample were as following: shoulder pain (25%), serous discharge from port (3.3%), stone spillage (1.7%), and hernia (18.3%). There was no statistically significant association between postoperative complications and age groups, occupation and history of previous laparotomy (mostly lower abdominal operations).

Conclusion: Laparoscopic cholecystectomy is associated with few and low rate complications the most common distressing complication is shoulder pain .

Key words: Laparoscopy, cholecystectomy, treatment outcome.

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Introduction

Laparoscopic Cholecystectomy (LC) has gradually replaced Open Cholecystectomy (OC) in the Treatment of symptomatic gall stone disease and even in asymptomatic in selected patients. Better cosmetic results, short hospital stay, early.

Recovery and return to physical activity and work have all contributed to the popularity of this Technique, establishing it is the gold standard for the treatment of cholelithiasis Complications decreased with increasing experience, to 0.98% after a surgeon's 75th procedure [1-3]. The first Laparoscopic cholecystectomy was

performed by Erich Mühe in the County Hospital of Böblingen, Germany, on September 12th, 1985 [4]. The overall technical complication rate was 4.7%; common bile duct injuries occurred in 15 patients (0.3%). In the beginning, patients with acute cholecystitis, empyema, gangrenous gallbladder, cirrhotic patients and Mirizzi syndrome were contraindication for carrying out LC because of high risk of complications and conversion rate [4]. With the increase in expertise and introduction of newer techniques, difficult gallbladders are being subsequently dealt with [4-5]. However, despite its low degree of

invasiveness, many patients complain of postoperative pain (PP) and postoperative nausea/ vomiting, which may be due to residual pnemoperitonum [6-7]. Pain after LC may occur in the upper abdomen, lower abdomen, back, or shoulders. It may be transient or persistent for about 3 days. CO₂ gas remains in the subdiaphragmatic space after laparoscopy for >24 hours [8].

The origin of pain after LC is multifactorial, with pain arises from the incision sites, the pneumopretonum, and the cholecystectomy[9].

This study aimed to identify the postoperative complications of laparoscopic cholecystectomy and their association with age, occupation and previous laparatomy.

Patients and Methods

This study carried out in Permam General Hospital/Erbil Governorate/Kurdistan Region of Iraq, sixty female patients who diagnosed as having gall stone. The diagnosis done clinically and confirmed by ultrasound. These patients admitted to the Permam general hospital and laproscopic cholecystectomy done for them during the period from Jan 2015 to Jul 2015. A questionnaire format were designed by researcher for purpose of data collection which include following information: socio-demographic data such as age, occupation,

history of diabetes mellitus and hypertension and early complications of laparoscopic cholecystectomy. The sample of the study followed up for 30 days as outpatient cases to detect complications. The proposal of the present study approved by Scientific and Ethical committee of the Nursing College/Hawler Medical University. Formal agreement was taken from mentioned hospital. Written consent was taken from the patient before undergoing the procedure. Data were entered to SPSS (Statistical Package for Social Sciences version 17) (SPSS version 17). Frequency and percentage and Chi-square test used for data collection.

Results

Sixteen female patients involved in the present study with age mean $\pm$ Sd 35.9 $\pm$ 10.17. The highest percentage (45%) were in age group 30-39 years old. The majority (88.3%) of the study sample were housewife. The residency area of the study sample were as follow: Masif salahadin town (36.7%), Harir city (20%), Erbil city (15%), Shaqlawa city (18.3%) and Bastora district (10%). Only one and four of the study sample had history of diabetes mellitus and hypertension, respectively. More than half (53.3%) of the study sample had upper abdominal pain as chief complain (Table 1).

Table (1): Demographic characteristics and medical history of the study sample.

Variable	No.	%
Age groups		
- 20 - 29	17	28.3
- 30 - 39	27	45
- 40 - 49	10	16.7
- > 50	6	10
Age Mean $\pm$ Sd	35.9 $\pm$ 10.17	
Occupation		
- Housewife	53	88.3
- Worker	7	11.7
Residence		
- Masif salahadin	22	36.7
- Harir	12	20
- Erbil	9	15
- Shaqlawa	11	18.3
- Bastora	6	10
History of diabetes mellitus		
- Yes	1	1.7
- No	59	98.3
History of hypertension		
- Yes	4	6.7
- No	56	93.3
Chief complains		
- epigastric pain	32	53.3
- Right hypochondrial pain	28	46.7

postoperative complications among study sample were as following: shoulder pain (25%), hernia (18.3%), serous discharge from

port (3.3%) and stone spillage (1.7%). Nobody experience the fever as complication (table 2).

Table (2): Postoperative complications of choilcystictomy among study sample.

Complications	Yes No (%)	No No (%)
- Fever	0(0)	60(100)
- Shoulder pain	15(25)	45(75)
- Discharge from port	2(3.3)	58(96.7)
- Stone spillage	1(1.7)	59(98.3)
- Hernia	11(18.3)	49(81.7)

There was no statistically significant association between postoperative complications and age groups, occupation and history of previous laparotomy. Shoulder pain and hernia was more in age group 30-39

years old; housewife patients had complications more than workers; and frequency of complications was more among those patients who had no history of previous laparotomy (table 3,4,5).

Table (3): Association between postoperative complications and age group of the study sample.

Complications	Age group				P-value
	20-29	30 – 39	40 - 49	≥ 50	
Shoulder pain					
- Yes	4(26.7)	6(40)	3(20)	2(13.3)	0.865*
- No	13(28.9)	21(46.7)	7(15.6)	4(8.9)	
Discharge from port					
- Yes	1(50)	0(0)	1(50)	0(0)	0.390*
- No	16(27.6)	27(46.6)	9(15.5)	6(10.3)	
Stone spillage					
- Yes	0(0)	0(0)	0(0)	1(100)	0.100*
- No	17(28.8)	27(4.8)	10(16.9)	5(8.5)	
Hernia					
- Yes	2(18.2)	6(54.5)	2(18.2)	1(9.1)	0.855*
- No	15(30.6)	21(42.9)	8(16.3)	5(10.2)	

* Fisher exact test was applied.

Table (4): Association between occupation and postoperative complications among study sample.

Complications	Housewife	Worker	P-value
	No (%)	No (%)	
Shoulder pain			
- Yes	11(73.3)	4(26.7)	0.058*
- No	42(93.3)	3(6.7)	
Discharge from port			
- Yes	1(50)	1(50)	0.221*
- No	52(89.7)	6(10.3)	
Stone spillage			
- Yes	1(100)	0(0)	1.000*
- No	52(88.1)	7(11.9)	
Hernia			
- Yes	10(90.9)	1(9.1)	1.000*
- No	43(87.8)	6(12.2)	

* Fisher exact test was applied.

Table (5): Association between postoperative complications and previous laparotomy.

Complications	History of previous laparotomy		P-value
	Yes No (%)	No No (%)	
Shoulder pain			
- Yes	5(33.3)	10(66.7)	0.743*
- No	12(26.7)	33(73.3)	
Serous discharge from port			
- Yes	0(0)	2(100)	1.000*
- No	17(29.3)	41(70.7)	
Stone spillage			
- Yes	0(0)	1(100)	1.000*
- No	17(28.8)	42(71.2)	
Hernia			
- Yes	4(36.4)	7(63.6)	0.712*
- No	13(26.5)	36(73.5)	

* Fisher exact test was applied.

Discussion

This study includes 60 female patients. Most common complications was shoulder pain which is multi-factorial and probably related to the duration of operation some report have suggest that women has lower threshold for pain than man and science our data is conduct from female this will be the explanation why shoulder pain is most prominent complication [14,15].

It has been suggested by some that this gas is converted to carbonic acid on the moist peritoneal surfaces, irritating the diaphragm and leading to referred shoulder and neck pain [11]. Others believe that rapid distension of the peritoneum may be associated with overstretching of the diaphragmatic muscle fibers, tearing of blood vessels, traumatic traction of nerves, and release of inflammatory mediators [12]. Pro longed presence of shoulder-tip pain suggests excitation of the phrenic nerve [13].

The most common age of presentation is 30-39 years which is the same age of presentation in other research done by Sarli *et al* [16]. There were no significant correlations between rate of complications and history of previous laparotomy probably because most of the previous laparotomy is lower abdominal surgery (cesarean section and appendectomy) which is usually not interfere with laparoscopic cholecystectomy. But in other study these operations interfere with the laparoscopic cholecystectomy [16].

Other possible explanation why shoulder pain is most prominent complication is that we use relatively high pressure pneumoperitoneum (12 mmhg). Several studies reported that the use of lower pressure technique result in remarkable reduction of pain [17][18].

In conclusion, Laparoscopic cholecystectomy is associated with few and low rate complications.

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