

Laparoscopic Cholecystectomy 7 years Experience in Hilla

Al-Khafaji, M. M., Al-Tae, M.
Al-Hilla Teaching Hospital

Abstract

Objectives: To evaluate the results of patients under went laparoscopic cholecystectomy ,rate of complications and causes of conversion to open cholecystectomy.

Method: 1200patients operated upon in Al-Hilla teaching hospital from 2000 – 2007 most of theme were female (860) &(340) were male. all operations done under G.A. & using co2 pneumoperitoneum .

Results: 44 % of patients were between 41-50 years of age.860 (71.6%) patients were female and 340 (28.4%) patients were male.78.7% of patients presented with chronic calculus chlecystitis and 20.6% of patients presented with acute calculus chlecystitis and 0.58% of patients presented with acute a calculus chlecystitis.

Conversion rate was 6.2% (75 patients).The most common cause of conversion was failure to progress due to anatomical variations in 65 patients.

Complications occurred in 45 (3.7%) of patients. The most common complication was port site infection in 18 patients. Complete transaction of C.B.D occurred in one patient.

Conclusion:

Laparoscopic cholecystectomy is a safe & minimally invasive procedure.

The complication rate is relatively lower than in the open technique in expert hands.

During Laparoscopic cholecystectomy we can do diagnostic or exploratory laparoscopy to fined out other things in the patients that can explain the patients symptoms.

Introduction

Laparoscopic cholecystectomy is a minimally invasive procedure in which the gall bladder is removed. Patients with symptomatic gall stone or biliary dyskinesia are eligible for this procedure(1). Since its introduction in **1987** , the technique of laparoscopic cholecystectomy has continued to undergo evolution (2). With increasing experience, it offers a cost-effectiveness both to services and employers by shortening the operation time , hospital stay

and allowing faster return to normal life. (1,4)

Previous surgery , obesity & pregnancy should no longer be considered contraindication to laparoscopic surgery. (5) Patients & surgeon should be aware of increased conversion rate (5) . The conversion to open cholecystectomy should not be considered as a complication of this type of surgery & should be undertaken when progress no longer seems feasible. (3)

Causes of conversion can be divided into three groups

- I) Pathomorphological (anatomical
 - II) variation)
 - II) Iatrogenic (any organ injured that can not be dealt with laparoscopically)
 - III) Technico-instrumental in form of cardiopulmonary insufficiency due to pneumoperitoneum or failure of any device during surgery like light source, gas insufflator , camera
(6)
- Complications can be divided into 2 groups
(7,8,9)
1. Those related to laparoscopic access

Complications of pneumoperitoneum like hypercarbia, cardiopulmonary insufficiency, air embolism

Complications of trocar entry like hollow viscous injury or vascular injury.

Complications of puncture wound like infection ,hematoma or hernia.

2. Those related to cholecystectomy

- a) Intra-abdominal collection ,
- b) Bleeding.
- c) Bile leak & bile duct injury.

Complications can be classified according to Clavien score (10,11) depending on its effect on the patient. (Table 1)

Table No. 1 Clavein classification for surgical complication

Clavein type	Description
I	Mild complication that don't affect patients recovery in hospital
IIa	Potentially life threatening complication with out sequel that require noninvasive therapy
IIb	Potentially life threatening complication without sequel that require surgery
III	Complications with residual disability
IV	Death

1200patients operated upon in Al-Hilla teaching hospital from 2000 – 2007 most of theme were female (860) & (340) were male. all operations done under G.A. & using co2 pneumoperitoneum.

The duration of operation ranged from 20 – 120 minutes most of operations completed within 40 minutes. The age of the patients range from 9 -87 years , most of the patients were between 40-50 years.

The operation started by the insertion of verres needle through a 1 cm infra umbilical incision & through CO2 insufflation done with intra-abdominal pressure up to 13 mm Hg . In patients with previous surgery we used (Hassons method) where the rectus sheath & the peritoneum opened under direct vision & the 1st port (10 mm) introduced, & the 2nd port which is 12 mm introduced in to the epigastric region through which the gall bladder extracted, the 3rd port (5 mm) fixed laterally in the right

sub costal region , an other (5 mm) port might be needed just lateral to the 3rd port.

Exploratory laparoscopy done by introducing the scope through the infra umbilical port to examine the abdominal organs . The patients then turned in the anti trendlenburg position & slightly to the left to visualize the sub hepatic area.

Dissection of the cystic duct & artery started, the duct clipped by 2 clips& divided , the artery can be clipped by 1 clip or coagulated. The gall bladder then extracted through the epigastric port. In all patients we left a sub hepatic tube drain which was removed after 12-24 hours. All patients started oral intake within 6 hours postop. Most of the patients received single dose of analgesia and 2 doses of injectable antibiotics in the hospital. Most of the patients discharged on oral antibiotics within 12-24 h postop.

Table 2. Age distribution of the patients

Age /year (range)	No. of patients	%
10 and less	2	0.16
11-20	6	0.5
21-30	52	4.33
31-40	180	15
41-50	532	44.3
51-60	273	22.75
61-70	120	10
71-80	32	2.66
81-90	3	0.25
Total	1200	100

Table 3. Clinical pattern of presentation

Clinical pattern	No. of patient	%
Chronic cholecystitis	945	78.75
Acute cholecystitis		
a) Calculus	248	20.66
b)A calculus	7	0.58
Total	1200	100

Results

Conversion rate was 6.2% (75 pt.)

Table 4. Causes of conversion

Causes	No.	%
Failure to progress due to anatomical variation or disturbed anatomy	65	5.4
Bleeding	6	0.5
Cardio pulmonary insufficiency	3	0.25
Gall bladder agenesis	1	0.08
Total	75	6.2

Table 5. Complications of laparoscopic Cholecystectomy

Complications	Clavein type	No.	%
Port site infection	<i>Ila</i>	18	1.5
Bile leak treated conservatively	<i>Ila</i>	12	1
Bile leak R. surgically	<i>Ilb</i>	4	0.33
Hemoperitoneum	<i>Ilb</i>	3	0.25
Complete transaction of C.B.D	<i>III</i>	1	0.08
Port site hernia	<i>Ilb</i>	2	0.16
Port site hematoma	<i>Ilb</i>	1	0.08
Lesser sac collection	<i>Ila</i>	1	0.08
Subphrenic collection	<i>Ilb</i>	1	0.08
Post operative jaundice	<i>I</i>	1	0.08
D.V.T	<i>I</i>	1	0.08

In 2 patients we discovered incidental findings. One of them was young female has right sided ovarian cyst (dermoid cyst) removed laparoscopically in the same session.

The 2nd one was an old female has pancreatic mass which was proved to be pancreatic carcinoma.

Discussion

The risk of complications was high in patients with acute cholecystitis (30 pt.) compared with patients presented with chronic cholecystitis (15 pt.)

The risk of conversion was also high in patients with acute cholecystitis compared with chronic cholecystitis.

No mortality was reported in our study.

A study done by Vafa & Lisa in USA. In 1997 showed the following results(9):

- 1) The incidence of major complication rate was 2 – 11 %
- 2) The mortality rate was 0.1 %(16)

Conclusions

- Laparoscopic cholecystectomy is a safe & minimally invasive procedure.
- The complication rate is relatively lower than in the open technique in expert hands.

During Laparoscopic cholecystectomy we can do diagnostic or exploratory laparoscopy to find out other things in the patients that can explain the patients symptoms.

References

- 1- R.C.G. Russell , Norman S. William , and Christopher J . K . Bulstrode; principles of minimally invasive surgery ; Short practice of surgery , 2004 ; 24th edition, Vol. 2 107 – 117 .
- 2- Legget, -P-L; Bissell, -C-D; Churchman-Winn, -R. Cosmotic minilaparoscopic cholecystectomy. Surgical endoscopy. 2001 Oct. ; 15 (10) : 1229-31.
- 3- Owing, P-L, Kozak L J. Ambulatory and in patient procedures in the United State ,1996. National center for health state.
- 3- Gadacz, -T-R, Update on lap. Cholecystectomy, including a clinical pathway. Surgical clinic of North America. 2000 Aug.; 80(4): 1127-49.
- 5- Curet,-M-J.Special problems in lap. Surgery. Previous surgery, obesity, and pregnancy ; surgical clinic of North America 2000Aug. 80(4):1093-110.
- 6- Koreshkin, -I-N; Panshin, -A-A; Loit,-A-A, Causes of unsuccessful attempt of lap. Cholecystectomy; Vesten-Khir-Im-I-I-Grek.2000;159(1):50-4.
- 7- Deziel D,Millikan K, Ekonomou S, et al. complications of lap. Cholecystectomy. A national survey of 4, 292hospital and an analysis of 77,604 cases Am J Surg. 1993;165:9-14
- 8- Fitzgibbons R, Annibali R, Litke B. Gall bladder and gallstone removal open versus closed laparoscopy, and pneumoperitoneum. Am J, Surg. 1993;165:497-504.
- 9- Vafa Shayani, MD; Lisa Jacobs, MD; Jonathan M. Laparoscopic Cholecy-ectomy complications prevention and management; Home - society of Laparoendoscopic surgeons, 2nd edition 1997; 12-14.
- 10- Coopermant A. Complications: creative solutions. In Laparoscopic Cholecystectomy Difficult Cases & Creative Solutions. St. Louis: Quality Medical publishing, Inc, 1992,145-169.
- 11- Clavien PA, Sanabria JR, Strasberg JM. proposed classification of complications of surgery with example of utility in Cholecystectomy. surgery, 1992; 111: 518-526.