An Analytic Study of 100 Patients with Laproscopic Cholecystectomy

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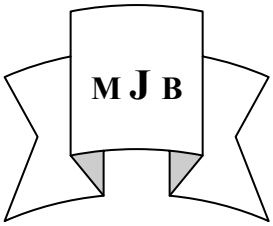

Abstract

Surgical treatment of gallstone disease has changed dramatically because of the introduction of laparoscopic cholecystectomy that is why The rapid and widespread adoption of laparoscopic cholecystectomy has aroused concern about the safety of the new procedure. this analytic study was conducted in Al-karama general hospital ,kut city,on 100 patients with symtomatic gallstones over 2years. 99% of patients were Iraqi citizens and only 1% was a palastinian. 75%were from Wasit,22%from Nassirya and 3%from Baghdad governorates.the vast majority were females(87.4%) ,the mean age was 39.9year with a range from14-70year .the patients underwent laparoscopic cholecystectomy after complete preoperative assessment with a success rate of 94% ,while 6%of patient completed by conversion into open laparotomy. the mean operative time was 36.2 minutes ,ranged from(180-15)min. the mean hospital stay was 1.43 day, ranged from (1-18)days. there was no major complications and the intraoperative complications were managed intraoperatively. no death was encountered in this series . the mean time to return to work was12days.This study showed that laparoscopic cholecystectomy is a safe procedure with short operative time, less postoperative pain, a short hospital stay, early return to work, and a low morbidity and mortality rate.

الخلاصة

لقد أحدث استخدام المنظار في عمليات رفع المراره صدى واسعا كما اثار تساؤلات عديدة بين الاوساط المعنية عن مدى أمان أو سلامة وجدوى هذه الطريقة الجراحية التكنولوجية الحديثة. وهذه دراسة تحليلية أُجريت في محافظة واسط – مستشفى الكرامة العام أبتداء من السابع من تموز ٢٠٠٧ حيث تم إجراء اول عملية رفع مرارة ناظوريا موثقة في المحافظة على (١٠٠) حالة مرضية خضعوا لهذه العملية وعلى مدى عامين متتاليين كانوا يعانون من التهاب المرارة الحصوي ، ٩٩% منهم عراقيوا الجنسية ، ١%فلسطيني ، ٧٥% من سكان محافظة واسط ،٢٢% ناصرية و٣% من بغداد . شكل الاناث منهم الغالبية العظمى (٨٧,٤%) حيث تراوحت اعمار المرضى بين ١٤ –٧٠ عام ومتوسط عمر ٣٩,٩ سنة. اجريت العملية وبنجاح تام في(٩٤%) من هذه السلسلة ، في حين اكملت العملية بطريقة فتح البطن في (٦%) من المرضى . كان معدل وقت اجراء العملية ٣٦,٢ دقيقة ، متراوحا بين (١٥–١٨٠) دقيقة . معدل الرقود ١,٤٣ يوم متراوحا بين ١–١٨ يوم . لاتوجد مضاعفات كبرى ، كما عولجت المضاعفات الصغرى اثناء اجراء العملية الجراحية، لاتوجد وفيات في هذه السلسلة. معدل العودة الى العمل ١٢ يوم. نستنتج من هذه الدراسة ان عملية استئصال المرارة ناظوريا هي طريقة امينة، وذات وقت جراحي قصير، اقل الما، واقصر رقودا ، واسرع عودة لمزاولة العمل ، وذات مضاعفات ووفيات قليلة .

Introduction

Since it was first described in 1882 cholecystectomy has been the standard treatment for symptomatic gallbladder stones [1,2]. Over the next century cholecystectomy became the most common operative procedure of the biliary tract and in fact one of the most common major operations performed in general surgery [3].

In 1978, Dr Phillipe Mouret, a French surgeon, performed the first laparoscopic cholecystectomy [4]. This technique has received a great deal of publicity as a

procedure establishing a new standard of care for the treatment of patients with symptomatic gallstone disease [5]. Reports in the lay press detailed the advantages of a marked reduction in recovery time and postoperative pain and better cosmetic appearance [5].

Surgical treatment of gallstone disease has changed dramatically because of the introduction of laparoscopic cholecystectomy [6,7]. In some populations as many as 80 percent of cholecystectomies are now performed laparoscopically [7,8].

The rapid and widespread adoption of laparoscopic cholecystectomy has aroused concern about the safety of the new procedure. In addition, one wonders whether the availability of a less invasive approach to cholecystectomy has led to a change in the spectrum of patients undergoing the procedure and in the threshold for performing it [8,9].

The objectives of the study:

In this study we analysed the result of our work on 100pattientsunderwent laparoscopic cholecystectomyin Al-karama general hospital-kut city from mortality,morbiditty,hospital stay and the retun to normal activity,and compared it with result puplished in the world literature.

Materials and Methods

From july 2007 to May2009 hundred patients with symtomatic gall stone were scheduled on the list for laparoscpic cholecystectomy where the first laparoscopic cholecytectomy in Al-karama general hospital-Kut city in 7th july2007.this series of patients were underwent the laparoscopic cholecytectomy, included 85 female and 15 male. the whole patients where subjected to abdominal ultrasound to establish the diagnosis and the routine preoperative assessment and investigation such as CBC, Blood group and compatibility, liver function test, ,renal function test and clotting profile .In the out patient clinic ,the patients informed about the procedure details ,the advantages ,the potential complications, and the possibility of conversion into open method in case of any intraoperative difficulties that withheld the proceeding of laparoscopic cholecystectomy and admitted fasting in the same day of surgery and underwent the procedure in the manner described by the others[10,11],where the whole patients underwent the surgery under general anesthesia and recieved 1gm. ceftriaxon at the time of induction of anesthesia. The patient is usually started oral fluid diet two-three hours postoperatively and the vast majority of patients were discharged in the 1st. postoperative day after removal of the tube drain which is routinely used in our work. the stitches were removed in 7th.postoperative day and the patients were reviewed in outpatient clinic

Results

In this series 99 patients were Iraqi citizens and only one was Palestinian. 75%of them from Wasit governerate,22%from Al-Nassirya,3% from Baghdad. the vast majority of the patients were females(87.4%) and the males were13.6% . the mean age group was 39.9%with range from14-70year. the operative time range from15-180min.with average of 36.2minutes. the hospital stay mean time(1.43)day. with range from1-18 day. the operative findings are tabulated below(Table2).

the conversion to open method was in 6 patients which represents a percentage of 6%.the causes of conversion are summarized below(Table1).

Complications

The complications encountered in this series were divided into intraoperative and postoperative complications :

1.Intraoperative Complications Include

- **Bleeding**

bleeding from liver bed occure in 5cases and easily controlled by electocoagultion of the bleeding area.

Bleeding from the posterior branch of cystic artery which was also controlled by application of pressure and electro coagulation in only one case .

Bleeding from anomalous cystic artery was difficult to control and ended with conversion in one case.

Bleeding from anomalous right hepatic artery injury ended with conversion and control of the bleeding in one case.

 Spillage of Bile Into Peritoneal Cavity after perforation of the gall bladder whether during dissection or its retrieval through epigastric port. Occur in 23 cases.

2. Postoperative Complications

 Bile collection and leakage :encountered in 2 cases in this series one of them complicated intraoperatively by uncontrolled bleeding from anomalous Rt .hepatic artery ended with conversion as we mentioned above. the patient discharged well in 5th. Postoperative day. But came back with abdominal pain and distention in 8th.postoperative day ,abdominal sonography revealed localized left subhepatic collection, where it is immediately aspirated under US. Guidance of about1500cc.of Bile, but the patient presented with recollection 2days later, tube drain inserted under local anasthesia with daily drainage of about 700cc of bile gradually decreasing over the next ten days down to only few cc.s of bile, where the tube drain removed after the abdominal US. confirm that the patient was free of any collection.

In the 2nd. Case700cc.s. of bile was found in sac of the drain tube in the 1st .POD (post operative day). But the patient was clinically stable, had no jaundice, Abdominal US. no subhepatic or pelvic collection, the patient was managed conservatively, where the bile leak gradually decreasing down to 100cc/day in the 10th POD. and stopped leakage in the 17th POD.

 Epigastric port abscess encountered in one case in the 3rd. month POP (post operatively).drainage of the abscess revealed that a small piece of gallstone was missed subcutaneously was the cause.

There was no death in this series.

Table 1 Distribution of cases according to the causes of conversion

REASONS FOR CONVERSION :	NO.	percentage
1.empyema with severe adhesions around and unclear anatomy	2	2
2. acute calculous cholecystitis , Difficult dissection of adherant tissues and bleeding masking the field.	1	1
3. Uncontrolled bleeding from anomalous Rt.hepatic A.	1	1
4. Chronic calculus cholecystitis, thick-walled gallbladder	1	1
5. Anomalous cystic artery injury.	1	1

Table 2 Distribution of cases according to the operative findings:

OPERATIVE NOTES	NO	percentage
adhesion-free or minimal omental adhesions	65	65
dense visceral or omental adhesions	25	25
obliteration of calot's tiangle by adhesions andoedema	14	14
thin-walled gall bladder	75	75
thick-walled andinflamed gall bladder	25	25
mucocoele	2	2
empyema	4	4
anomalous cystic artery	1	1
anomalous Rt. hepatic artery	1	1
intrahepatic gall bladder	1	1
cholecystohepatic duct	2	2

RETURN TO WORK: Time taken by the patient to work and preoperative activities from the day of operation.

Table 3 Distribution of cases according to the time of return to work :

TIME IN WEEK	NO.OF PATIENTS (Lap.chol.)	percentage
1-2	83	83
3-4	8	8
5-6	3	3
TIME IN WEEK	NO.OF PATIENTS (conversion group)	percentage
3-4	3	3
5-6	2	2
7-8	1	1

Discussion

Laparoscopic cholecystectomy is rapidly replacing the conventional open method for treatment of cholelithiasis. Due to its obvious benefit to the patient, it is now offered to "all the comers" with a success rate of 99%.this technique of minimal access surgery has gained a wide acceptance, because of high quality of results, obtained in various series[12,13].

The conversion rate in our series was 6%,which is comperable to the conversion rate of(3.6- 13.9%)reported in the world literature[14,15].however the conversion rate is high amongst the Asian studies as compared to those from the western world(16).the reasons of conversion in our series were:

1.empyema with severe adhesions around and unclear anatomy 2%

2.acute calculus cholecystitis,difficult dissection of adherent tissues andbleeding masking the field1%.

3.uncontrolled bleeding from anomalous Rt.hepatic A. 1%

4.chronic calculous cholecystitis,thick-walled gallbladder and unclear calot's triangle. 1%.

5.anomalous cystic artery injury1%. Jaffary et al in their study found that instumetal failure,including insufflator ,camera, monitor and clip applicator failure being the commonest cause of conversion[17].in one study history of acute attackfor more than 72houreswas a

strong predictor of conversion even in patient has minimal signs and symptoms(18). Conversion should be opted for in the beginningand at the time of recognition of a difficult dissection rather than after the occurance of complications[19,20]

insertion of drain tube in all cases of laparoscopic cholecystectomy was our policy and we think it is a useful tool as diagnostic and therapeutic measure for cases of bile leak which are not recognized intraoperatively,where biliary tract injuries missing rate are propably reached as high as high 63% in the abscence of intraoperative cholangiograpy[21-23]which is already not available in our hospital . where we had a case with severe adhesion, injury of anomalous Rt. hepatic artery occur during dissection, ended with conversion and bleeding control but presented with subhepatic collection in the 7th.postoperative day(POD). managed conservatively by insertion of drain tube under local anasthaesia where the bile leak decreased from 700cc down to complete resolution in the 17th. POD.

Also we have another case complicated by bile leak (800cc.s of bile)in the 1st. POD.,Abdominal US.revealed no any dilatation of biliary tree, no subhepatic or pelvic collections were found.the patient managed on the base of expectant and conservative regimen where clinically had no jaundice or sign and symptom of peritonism, Bile leak gradually decreased till the 18th.POD.where it ceased completely and the drain was removed, after a normal abdominal sonography, where the patient discharged home.

most of our patients in this study were ready for discharged in 1st. POD. except for the conversion group where their hospital stay period ranged from 3-5 days ,beside one patient from the Lap. chol. group where discharged in the 18th. POD. making the mean hospital stay 1.43day

It is worth mentioning that the whole bleeding complications in this series were recognized and dealt with intraoperatively, wherever the cause was. and represented half the conversion rate. While the causes of bile leakage were unrecognized intraoperatively, and their definite diagnosis were not well established, although suspected to be cholecystohepatic duct injury were the causes in our series .

one of the advantages of the laparoscopic surgery is Early return to work ,and this was evident in our series with mean time of two weeks, our series indicated an overwhelming patient satisfaction, namely to postoperative pain, hospital stay, return to normal activity, and from cosmetic point of view[24].

Conclusion

The laparoscopic cholecystectomy is essentially a safe procedure with low morbidity and mortality rate. Easy to perform once mastered, and its complications can be minimized by maintaining "low threshold "for conversion.

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