
Patients Recovery Following Cholecystectomy through A cohort Randomized Clinical Trial.

Fadel Habeeb Taher *
F.R.C.S Ed.

Jameel Hazza**
FICMS

Abstract

Background & Objectives: The effect of incision length on patient recovery following cholecystectomy has not been investigated previously. In this study, an effort to objectively document the benefits of short incision.

Patients & Method s: Three hundred patients with a diagnosis of gall stones were involved in this study. Elective cholecystectomy were randomized to either 5-cm or 15-cm transverse subcostal incision, there were 150 patients in each group, age varies from 35 years to 70 years, mean SD the study was conducted from Dec 1999 to June 2005. All patients received prophylactic antibiotic.

Result: Post-operative hospital stay was significantly shorter in the 5 cm incision group (mean 2 days vs 5-days). In the 5 cm incision group analgesic requirements were reduced and recovery of depressed, post-operative pulmonary function was faster (3% difference between groups day 1 and 7% on day 7) moreover oral intake in 5 cm group was 5-6 hours post-operatively while 15cm group oral intake was 24-36 hours post operatively.

Conclusion: These results suggest that the length of incision may influence patient recovery following elective cholecystectomy .

Keywords:

Introduction:

Cholecystectomy is a common abdominal operation in this part of Iraq.^[1]

Mini cholecystectomy (5cm) is being preferred more than the conventional cholecystectomy(15cm)because of the small incision ,less post operation pain and fewer pulmonary complications.[2]

Carl langenbuch of Berlin performed the first cholecyste-ctomy 1882, using the aseptic technique that Joseph lister had initiated 1868^[3]

Basic technique remained unchanged until 1980 ies, where new concept has developed; the minimal invasive surgery, that new trend has evoked remarkable changes in approach to surgical diseases. It involves laparoscopic laparotomy and mini laparotomy (5cm).^[4]

Patients & Methods:

Three hundreds patient with the diagnosis of symptomatic gall bladder stones were involved in this study , age varies from 20-80 years, elective cholecystectomy were randomized to either 5-cm subcostal transverse incision. There were 150 patients in each group, sex incidence, 135 males 15females in each group. Symptomatology: most cases complained of flatulent dyspepsia, few has had history of acute choleaystitis the pain located at epigastria and right hypochorium, but only two cases had the pain located at left hypochrdrim. This study was conducted in Al-yarmuk teaching hospital, surgical department, from Des 1999 to June 2005. Transverse subcostal incision, conventional cholecystectomy consisted of 15cm in length. 2cm below and parallel to the right costal margin starting from the midline outwards. The cystic artery and duct were ligated and divided and the gall bladder dissected from the liver bed, the

abdomen was closed in layers, no drain was used. Post operative medication consisted of immediate i.m. diclofenac 75 mg in 5cm group, while 15cm group the medication consisted of 75mg i.m. every 8-hours on day of surgery then 75mg on need in day 1 and 2 post operatively, i.m. 1g cephalosporine every 8 hours for 3 days and i.v. infusion of 500 ml glucose 5% for 5cm group within 6 hours, while 15cm group need 500ml glucose every 6 hours plus 500ml 0.9% saline in day of operation to be repeated if required.

All patients were early, mobilized and as soon as they were allowed to drink liquid, they returned to normal diet within 2days, both groups of patients were monitored during the post operative period and followed after discharge in a week later in the outpatient clinic. Data were analyzed, collected and compared in both groups.

Results

1. the age of patients were similar in both groups ranging from 20-80 in 5-cm group with mean age 44.78 and ranging from 20-60y with mean age 47.40 in the 15cm group.
2. Sex ratio (male: female) was 15: 135 in both age groups.
3. The mean operating time was 50 min. and 60 min in 5cm. and 15cm. groups respectively.
4. The incision length ranged from 4-7 with mean of 5cm. in first group and ranged from 13-16cm. with a mean of 15cm. in second group.
5. Post operative analgesia requirement was less in first group than in second group.
6. Post operative complications in both groups are presented in table 2.

Table1 patient clinical data

Clinical date	15 cm group	5cm group
No.of patient	150	150
Mean age	47.40	44.78
Age range	20-60	20-80
Female/male(no.)	135/15	135/15
Weight(kg)	75.28	78.04

Table 2: Late post operative complication in both groups.

complication	5-cm		15-cm		Total	
	No.	%	No.	%	No.	%
Haematoma	3	2%	5	3%	8	2%
Fever	1	0.6%	1	0.6%	2	0.6%
Pneumonia	1	0.6%	3	2%	4	1%
cardiac complication	0		1	0.6%	1	0.3%
DVT	0		1	0.6%	1	0.3%
Total	5	3.2%	12	6.8%	17	4.2%

Discussion:

At present, the laparoscopic approach has been the method of choice for cholecystectomy^[5]. In this study, mini chole-cystectomy is assessed in being a better alternative or not against the standard of conventional cholecystectomy with the lowest rate of complications, in the present study, the duration of the 15- cholecystectomy operation was 10 min longer than in 5- cholecystectomy, due to big incision which need additional time for opening and closing the wound .

Post operative hospital stay was significantly shorter in 5 cm (Mean 2 days vs. 5 days).

Analgesic requirement were reduced and recovery of pulmonary function was faster⁶

But ODwyer et al-^[2] found no significant difference in analgesic requirement.

Mahmud et al^[8] study was comparative with our study. The idea of the rapid discharge of patients from hospital i.e. shortening the duration of hospitalization, after mini supported by Warren and Marais^[9].

conclusion:

These results suggest the length of the incision may influence patient recovery following elective cholecyste-ctomy, this has important implication as surgery carried out through shorter and less traumatic incision may offered a cost effective alternative to laparoscopic cholecystectomy^[10].

Moreover some surgeons may find cholecystectomy through short incision easier to adopt than laparoscopic-cholecystectomy^[10].

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*Consultant surgeon, senior lecturer medical college Department Of Surgery – Al Yarmouk-Teaching Hospital

**Consultant surgeon, senior lecturer medical college Department Of Surgery – Al Yarmouk-Teaching Hospital