Early Versus Late Laparoscopic Cholecystectomy Post ERCP
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Abstract
Background: Endoscopic Retrograde Cholangio Pancreatography (ERCP) is the commonest method for treatment of biliary stones. In our study we compared 2 groups of patients managed with laparoscopic cholecystectomy post ERCP after (72 hours and after 7 days) regarding safety, length of hospital stay and cost.

Material and Methods: The study was from March 2010 to August 2011 and included 30 patients; Group A with ERCP followed by laparoscopic cholecystectomy after 72 hours and Group B with ERCP followed by laparoscopic cholecystectomy after 7 days.

Results: There were 2 cases in Group B with transient pancreatitis post cholecystectomy and were treated conservatively, no other complications in both groups, mean hospital stay was 5.2±1 in Group A, 12.3±2 in Group B, more cost in Group B related to the longer stay in the hospital for investigations, the conversion rates to open cholecystectomy were 13.3% in Group A and 33.3% in Group B.

Conclusion: In our study we found that short interval between ERCP and laparoscopic cholecystectomy in treatment of gall stones was safe with less cost in patients with cholelithiasis.

Key Words: Endoscopic Retrograde Cholangio Pancreatography (ERCP) – Laparoscopic cholecystectomy – Biliary stones.

Introduction
THE standard procedure for management of gall bladder stones is laparoscopic cholecystectomy [1,2]. Endoscopic Retrograde Cholangio Pancreatography (ERCP) is the commonest method for treatment of biliary stones [3]. Most of the studies on ERCP revealed the safety and success of ERCP and laparoscopic cholecystectomy in treatment of gall stone disease [4,5]. Many international studies revealed the safety of ERCP prior to laparoscopic cholecystectomy [6-8].

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The aim of our study is to compare 2 groups of patients managed with laparoscopic cholecystectomy post ERCP after 72 hours and after 7 days regarding safety, length of hospital stay, conversion rates to open cholecystectomy and cost.

Material and Methods
The study was from March 2010 to August 2011 on 30 patients, the data were collected from Kasr El Aini and El Fayoum University Hospitals. We included the patients who fulfilled the following criteria: History of obstructive jaundice, elevated liver enzymes, high serum bilirubin, CBD stones by ultrasonography and dilated CBD (≥7mm by ultrasound in diameter). We classified our patients into 2 groups; Group A ERCP followed by laparoscopic cholecystectomy after 72 hours, Group B ERCP followed by laparoscopic cholecystectomy after 7 days. We used the four ports technique in laparoscopic cholecystectomy. Standard statistical analysis were applied to analyze the results.

Results
Our patients were 30 patients and were divided into 2 groups:
Group A (15 patients) 10 females (66.6%) and 5 males (33.3%), mean age 38.6±17 (range 35-39 years).
Group B (15 patients) 9 females (60%) and 6 males (40%), mean age 40.2±11 (range 38-43 years).

There were no complications related to ERCP, clearance of CBD stones were successful in both groups.

The conversion rates to open cholecystectomy were 13.3% (2 patients) in Group A and 33.3% (5 patients) in Group B p<0.10 related to the severe adhesions, the cost of all cases in Group A was less than in Group B.
Table (1): Characteristics of patients.

<table>
<thead>
<tr>
<th>Patient characteristics</th>
<th>Group A</th>
<th>Group B</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years ± SD)</td>
<td>38.6±17</td>
<td>40.2±11</td>
<td></td>
</tr>
<tr>
<td>Sex:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>10 (66.6%)</td>
<td>9 (60%)</td>
<td>p=0.29</td>
</tr>
<tr>
<td>Males</td>
<td>5 (33.3%)</td>
<td>6 (40%)</td>
<td></td>
</tr>
<tr>
<td>Hospital stay:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (days) ± SD</td>
<td>5.2±1</td>
<td>12.3±2</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Complications:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atelectasis</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Transient pancreatitis</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bleeding</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Infection</td>
<td>0</td>
<td>0</td>
<td></td>
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<tr>
<td>G.B injury</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

In our study we compared the results in 2 groups who underwent ERCP followed by laparoscopic cholecystectomy after 72 hours and 7 days regarding the safety, hospital stay, conversion rate and costs.

In our study Group A showed least hospital stay 5.2±1 days and 12.3±2 days in Group B which was statistically significant (p<0.01) compared to other studies it was shorter than in other studies [7,9,10,11].

There were 2 cases with transient pancreatitis post cholecystectomy in Group B treated conservatively which were statistically non significant compared to other studies which show multiple complications as gall bladder injuries and atelectasis [7,4,5,12]. The conversion rates to open cholecystectomy were 13.3% (2 patients) in Group A and 33.3% (5 patients) in Group B (p<0.10) compared from those reported by Meshikhes (1%) [7] and Romano (7.3%) [13].

The cost was more in Group B due to longer stay in the hospital for investigations.

In a study it was found that the incidence of bactobilia increases over time after endoscopic sphincterotomy, the prevalence of bactobilia increases with age and time and patients with bactobilia tend to develop more biliary-related complications awaiting surgery [14].

In a study in which ERCP was not possible to be performed before laparoscopic cholecystectomy as a separate procedure or failed, patients were treated with the one-stage approach of intraoperative ERCP during laparoscopic cholecystectomy using the so-called laparoendoscopic “rendezvous” technique offers some advantages mainly by reducing the hospital stay and the risk of post-ERCP pancreatitis [15].

Conclusion:

In our study we found that the short interval between ERCP and laparoscopic cholecystectomy in treatment of gall stones was safe with less complications and cost in patients with choledocholithiasis.

References


