Diagnosis and management of postcholecystectomy syndrome

Authors
Dr Prashant Kumar*, Dr Sudhir Kumar, Dr Md. Eqbal Ahmad, Dr Vinita Sinha

Introduction
Postcholecystectomy syndrome, after removal of gall bladder, usually manifested by the presence of abdominal symptoms. The symptoms occurs within months in majority of patient and months to year in few patient in upto 15% of patients, postcholecystectomy syndrome is seen. The most frequent symptoms are pain abdomen jaundice or dyspepsia but few patients may have nonspecific syndrome. These patients are initially assessed by transabdominal ultrasound (TUS) or computed tomographoy, endoscopy followed by endoscopic retrograde chelongio-pancreatography (ERCP).

Material and Methods
We included 50 patients with postcholecystectomy symptoms admitted during a period 24 months in NMCh, Patna.

Observation
Among 50 patients-15 male and 35 female and average age was 46 years. All symptomatic after cholecystectomy were investigated.
Cholecystectomy had been performed in all the patients with the addition of common bile duct exploration in 8 cases.

Table – 1

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholecystectomy alone</td>
<td>42 cases</td>
</tr>
<tr>
<td>Additional CBD exploration</td>
<td>8 cases</td>
</tr>
</tbody>
</table>

Patients referred to our department with post cholecystectomy syndrome had usually already undergone some investigation:

Diagnosis: The interval from cholecystectomy ranged from 1 to 60 months the liver function analysed were serum bilirubin and serum alkaline phosphatase. A diameter of the common bile duct (CBD) of less than 10mm was considered normal and greater than or equal to 10 mm was considered abnormal. Direct evidence of a stone in bila duct was considered as a true positive result.

Trans abdominal ultrasound (TUS) was thaintial imaging test, the diameter of the CBD and presence at calculi in biliary tract noted. Endoscopic ultrasonography is an accurate technique to determined the presence of stone in CBD, at the same time it can diagnose and stage both pancreatic and peri ampullary cancer.

Computed tomography: it allows visualization of the liver, bile ducts, pancreas and malignancy of biliary tract. It also gives informations about metastatic disease or enlarge lympo note.

Magnetic resonance cholanizio pancreatography (MRCP)— it is a non-invasive technique, images the gall bladder and biliary system.

Endoscopic retrograde cholangio pancreatography (ERCP)— it was used as both a diagnostic and
therapeutic modality, provide excellent images of auctal anatomoy.

Radioisotope scanning– technetium-99m allows visualization of the biliary tree and gall bladder. When there is a suspicion of a bile leak following cholecystectomy radioiscope imaging becomes first choice.

<table>
<thead>
<tr>
<th>Final diagnosis</th>
<th>No of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common bile ductetones</td>
<td>10</td>
</tr>
<tr>
<td>Bile duct stricture</td>
<td>02</td>
</tr>
<tr>
<td>Chronic Paincreatitis</td>
<td>04</td>
</tr>
<tr>
<td>Cystic duct remnant</td>
<td>01</td>
</tr>
<tr>
<td>Enlarged lymph nodes</td>
<td>01</td>
</tr>
<tr>
<td>Sphincter of oddi dysfunction</td>
<td>02</td>
</tr>
<tr>
<td>Non biliary symptom (Peptic ulcer disease, esopoagitis, Hiatus Hernia, Diverticular disease, Functional Bowel disease etc.)</td>
<td>30</td>
</tr>
</tbody>
</table>

Table – II Diagnosis and examinations performed in patients with post cholecystectomy syndrome

Algorithm used for diagnosis of post cholecystectomy syndrome

Management– among the biliary cause of post cholecystectomy syndrome, common bile stone outnumbered the other cause. For CBD stone – ERCP tried first, stone removed in 6 cases. Laparoscopic removal done in one case. Choledocholithotomy done in rest three cases. Bile duct stricture – endoscopic stenting done in one case and Hepaticojejunostomy in one case. Chronic pancreatitis – most patients were managed conservatively except in one case pancreaticojejunostomy done. Sphincter of oddi dys function – sphincterotomy and stenting done by ERCP.

Discussion

postcholecystectomy syndrome is seen in upto 10 to 15 percent patients. Analysis of serum bairubin and alkaline phosphatase was the most useful liver function test. Serum alkaline phosphatase was elevated in front of biliary cases but it has below accuracy. Transabdominal ultra sonography, a non invasive and easily available is the first imaging procedure use for the initial evaluation of patients with postcholecystectomy problems. It is a rapid method, being capable of differentiating between non- obstructive and obstructive jaundice. Improvement in US device has made diagnosis easier but the distal part of CBD, the papillary region and the retroperitoneal pathology are difficult to examine by TUS. However, an abrupt change in the caliber of the bile duct from dilated to normal is suggestive of malignant obstruction. The EUS of the pancreatico-biliary system made visualization of extra hepatic and the head of pancreas easier. Small CBD stones can be observed with greater accuracy slightly better than ERCP. The EUS has minimal risk of inducing
acute pancreatitis and there is no radiation exposure. ERCP is most accurate test whenever it is technically successful, it allows tissue diagnosis and therapeutic interventions. Acute pancreatitis is the most common complication. It should only be performed when an indication for endoscopic treatment is shown by other tools. Flexible endoscopy is the best investigation for the upper gastro intestinal tract it haips in diagnosing not biliary cause of postcholecystectomy symptom. As far as treatment is concerned, non-biliary cause needs medical treatment. In our series, 10 cases had biliary duct stone, seven of them was treated by ERCP successfully. One case of CBD stone removed by laparoscopically in which cannulation of amoulla of vater failed by ERCP. Only two cases which had open cholecystectomy previously gone for open choledochromy due to dense adhesions. For bile duct stricture Hepatico-Jejunostomy done in both cases. Chronic pancreatitis dealt conservatively. Sphincter of oddi dysfunction treated by ERCP sphincterotomy.

Conclusion
After cholecystectomy few patients complain of continuing symptom. Non-biliary cause like peptis ulcer disease, functional bowel disease, diverticular disease must be investigated as it is major contributor of postcholecystectomy symptom. Patients presenting with upper quadrant pain, chills fereror jaundice suggests biliary tract disease, that aeeds EUS. Whenever EUS is available, it should be first imaging tools for biliary cases. However, in the patients with persistent symptoms and in whom all investigation have not yielded a definite diagnosis, ERCP is clearly indicated. Functional disorder affecting the coordination motility of bile duct and sphincter of oddi-biliary dyskinesia is a cause of persistent symptom after cholecystectomy. It is commonly seen in females. In patients in whom the presting features are vague abdominal pain may suffer from a disorder of gastro-intestinal motility associated with duodenogastric reflux.

References