Postcholecystectomy syndrome in Northern India — study on the diagnostic and therapeutic role of ERCP

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Summary: One hundred and twenty two patients with postcholecystectomy syndrome were studied by endoscopic retrograde cholangiopancreatography (ERCP). The procedure was successful in 105 patients (85.3%) and it accurately detected abnormality of the pancreatico-biliary system in 71 patients (67.6%). ERCP results were abnormal in 82.6% of patients with biliary symptoms, with or without jaundice, compared with 34.7% of patients with non-biliary symptoms (P<0.001). Though ERCP showed abnormality in all patients with biliary symptoms and jaundice, as many as 70.4% of patients without jaundice had abnormal ERCP. The commonest abnormality was retained/recurrent stones (37/105 patients). Patients with biliary strictures presented significantly more often with jaundice compared with patients with biliary stones (74.3% vs 22.3%). In 19 of the 37 patients with retained biliary stones endoscopic sphincterotomy was performed and it was successful in 16 patients (84.2%). Our data indicates that ERCP detects the anatomical level as well as the nature of lesion accurately, and is essential and safe in the diagnosis and management of patients with postcholecystectomy syndrome.

Key words: endoscopic retrograde cholangiopancreatography (ERCP); endoscopy; postcholecystectomy

Introduction
Post cholecystectomy syndrome is the persistence or recurrence of symptoms following cholecystectomy. The incidence varies from 4-40%,1-4. Most of these patients have non biliary symptoms like dyspepsia, diarrhoea or symptoms attributed to acid peptic disease, irritable bowel syndrome, and pancreatitis. Biliary symptoms due to retained stone, stricture and biliary dyskinesia are also frequent1,2. For the diagnosis of this difficult group of patients many investigations are available, like ultrasound, CT scan, intravenous cholangiography, endoscopic retrograde cholangiopancreatography (ERCP) and percutaneous transhepatic-choangiography (PTC). ERCP has the ability to define both pancreatic and biliary ducts clearly. Moreover, it has a therapeutic role in the form of endoscopic sphincterotomy for subgroups of patients with retained/recurrent common bile duct stones. This study was undertaken to define the diagnostic and therapeutic role of ERCP in the range of lesions responsible for post-cholecystectomy symptoms.

Materials and Methods
Over a 10 year period, from February 1978 to February 1988, 122 (34 males; 88 females) patients with postcholecystectomy syndrome were studied in our unit. Their ages ranged from 18-80 years with a mean of 46.5 years. Symptoms oc-
curred from immediately postoperatively to as long as 20 years following cholecystectomy. Detailed histories regarding date and place of cholecystectomy, duration of symptoms after cholecystectomy and nature of symptoms were recorded.

Based on the symptoms, the patients were classified into (A) Biliary Group i.e. those with symptoms pertaining to residual stones, biliary stricture, papillary stenosis or biliary dyskinesia and (B) Non-Biliary group i.e., when symptoms were suggestive of esophagitis, peptic ulcer, irritable bowel syndrome or of chronic pancreatitis.

All the patients underwent ERCP to delineate the problem further, because the basic work up i.e., routine hematological and biochemical tests, plain X-ray abdomen, barium meal and UGI endoscopy did not help.

ERCP was done with a side viewing duodenoscope (Olympus JF IT10) following intravenous premedication with Pethidine (50 mg) Diazepam (10 mg) and Hyoscine-N butyl bromine (40 mg).

Films were evaluated for any pancreatico-biliary pathology like bile duct stone, biliary stricture, pancreatitis etc. The maximum extrahepatic biliary diameter was measured on cholangiograms. This figure was corrected for magnification by using the endoscope as a known standard and assuming that bile duct and endoscope were in the same plane. Endoscopic sphincterotomy was done in patients who had retained CBD stones with a diameter of less than 1.5 cm after ensuring normal bleeding characteristics.

Results

Liver function tests in non jaundiced patients were either normal or minimally disturbed. In the jaundiced patients serum bilirubin ranged from 2.5-26.5 mg%, alkaline phosphatase 170-793 IU/litre (normal 70-140 IU/litre) while transaminase levels were mildly raised.

ERCP was successfully carried out in 105 of the 122 patients (86.1%). The pancreatic duct was cannulated in 79 patients (64.7%) while the common bile duct (CBD) was cannulated in 93 patients (76.2%). In the biliary group the desired duct was cannulated in 78.13% and 88.5% in the non-biliary group.

A. Biliary group

Ninety-six patients (78.7%) had symptoms suggestive of biliary disease. Jaundice was present in 41 patients (33.6%). The common bile duct (CBD) was cannulated in 31 (45.6%) of these patients. Biliary strictures were seen in 19 patients, stones in 7 and stricture with stone in 4 patients. One patient showed only a dilated CBD without a stricture or a stone. The pancreatic duct was cannulated in 21 of these patients and it was normal in all.

Of the remaining 55 patients (45.1%) with biliary symptoms without jaundice, the CBD was cannulated in 44 (80%) of these patients. Findings were normal in 13, stones were seen in 22, stricture in 3 and stricture with stone in 3 patients. Dilated CBD without any obstructing lesion was seen in 2 patients. One patient had a blood clot in the CBD proved on surgery.

The pancreatic duct was cannulated in 35 and was abnormal in only one patient, showing evidence of moderate pancreatitis involving the head and body of the pancreas.

B. Non biliary group

Of the 26 patients (21.3%) with non-biliary symptoms successful cannulation of the pancreatic duct was done in 23 (88.5%) patients. Normal pancreatogram was seen in 19 patients while 4 showed changes of mild to moderate pancreatitis. A cholangiogram was obtained in 18 patients and it showed a normal CBD in 14, CBD stricture in 2, while a stone and a dilated CBD was

Table 1 Diagnosis of the 105 cases with postcholecystectomy syndrome who had a successful ERCP

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stones</td>
<td>30</td>
</tr>
<tr>
<td>Benign stricture with stone</td>
<td>7</td>
</tr>
<tr>
<td>Benign stricture without stone</td>
<td>20</td>
</tr>
<tr>
<td>Malignant stricture</td>
<td>4</td>
</tr>
<tr>
<td>Dilated CBD without cause</td>
<td>4</td>
</tr>
<tr>
<td>Pancreatitis</td>
<td>5</td>
</tr>
<tr>
<td>Hemobilia</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>71</strong></td>
</tr>
</tbody>
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(67.6%)