Subcapsular hepatic hematoma following ERCP: case report and review

A 76-year-old woman, who was receiving anticoagulation for atrial fibrillation, was referred to our center for management of a common bile duct stone diagnosed by endoscopic ultrasonography. Anticoagulation was suspended and endoscopic retrograde cholangiopancreatography (ERCP) was subsequently performed. Cannulation of the main bile duct with a 0.035-inch guide wire was achieved without complications. Endoscopic biliary sphincterotomy was performed and stone extraction with a Fogarty catheter was achieved successfully, without apparent complications. Subsequently, the patient developed sharp right upper quadrant pain 6 hours after the procedure, but showed no signs of hemodynamic instability, and laboratory data did not show any evidence of complications. By 24-hours after the procedure, she was asymptomatic and was discharged after the reintroduction of anticoagulation.

The patient consulted again 5 days later because of persistent pain. Abdominal examination elicited mild right upper quadrant pain without tenderness. Laboratory data showed hemoglobin 9.6 g/dL (normal range 12–15 g/dL) and hematocrit 30.7% (normal range 36–41%). Computed tomography showed two high-density collections consistent with hematomas within the subdiaphragmatic and subhepatic spaces (Fig. 1). The patient was managed conservatively. Anticoagulation was discontinued and a broad-spectrum antibiotic (piperacillin–tazobactam) was administered. The patient was discharged 15 days after the ERCP, without any further complications.

Subcapsular hepatic hematoma is a rare complication of ERCP. There are few published reports of this unusual complication [1–10], which may be explained by accidental puncture of the intrahepatic biliary tree by the guide wire. In this case, the patient probably developed an initial hematoma 6 hours after the procedure, which worsened because of the resumption of anticoagulation.

From the literature [1–10] (Table 1), there is unanimous concern about the risk of infection in these patients, and in all cases, except two where no detail was given, patients were treated with anti-

<table>
<thead>
<tr>
<th>Age/ Sex</th>
<th>Indication for ERCP</th>
<th>Guide wire</th>
<th>Puncture</th>
<th>Treatment</th>
<th>Antibiotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortega et al. 2000 [1]</td>
<td>81/M</td>
<td>Common bile duct stone</td>
<td>NA</td>
<td>Yes, positive culture</td>
<td>Percutaneous drainage</td>
</tr>
<tr>
<td>Horn et al. 2004 [2]</td>
<td>88/F</td>
<td>Pancreatic cyst</td>
<td>Yes</td>
<td>No</td>
<td>Observation</td>
</tr>
<tr>
<td>Chi et al. 2004 [3]</td>
<td>43/F</td>
<td>Pancreatic cancer</td>
<td>Yes</td>
<td>No</td>
<td>Embolization</td>
</tr>
<tr>
<td>Priego et al. 2007 [4]</td>
<td>30/F</td>
<td>Obstructive jaundice</td>
<td>NA</td>
<td>No</td>
<td>Surgery, positive culture</td>
</tr>
<tr>
<td>Petit-Laurent et al. 2007 [5]</td>
<td>98/M</td>
<td>Common bile duct stone</td>
<td>Yes</td>
<td>Yes, negative culture</td>
<td>Percutaneous drainage</td>
</tr>
<tr>
<td>Bhati et al. 2007 [6]</td>
<td>51/F</td>
<td>Common bile duct stone</td>
<td>Yes</td>
<td>Yes, negative culture</td>
<td>Percutaneous drainage</td>
</tr>
<tr>
<td>McArthur et al. 2008 [7]</td>
<td>71/M</td>
<td>Common bile duct stone</td>
<td>Yes</td>
<td>No</td>
<td>Observation</td>
</tr>
<tr>
<td>De la Serna et al. 2008 [8]</td>
<td>41/F</td>
<td>Common bile duct stone</td>
<td>Yes</td>
<td>Yes, negative culture</td>
<td>Observation</td>
</tr>
<tr>
<td>Cárdenas et al. 2008 [9]</td>
<td>54/M</td>
<td>Bile leak post liver transplant</td>
<td>Yes</td>
<td>No</td>
<td>Observation</td>
</tr>
<tr>
<td>Revuelto et al. 2010 [10]</td>
<td>41/M</td>
<td>Common bile duct stone</td>
<td>NA</td>
<td>No</td>
<td>Observation</td>
</tr>
<tr>
<td>Current report</td>
<td>76/F</td>
<td>Common bile duct stone</td>
<td>Yes</td>
<td>No</td>
<td>Observation</td>
</tr>
</tbody>
</table>

Table 1 Patient characteristics from the reports of hematoma post endoscopic retrograde cholangiopancreatography (ERCP).

**Fig. 1** Computed tomography showing subdiaphragmatic and subhepatic hematomas.
Most of the patients including our own (6/11) were observed; three were treated by percutaneous drainage; and one each by embolization and surgery. There were no long term complications.

Competing interests: None

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Endoscopy 2011; 43: E164–E165
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