

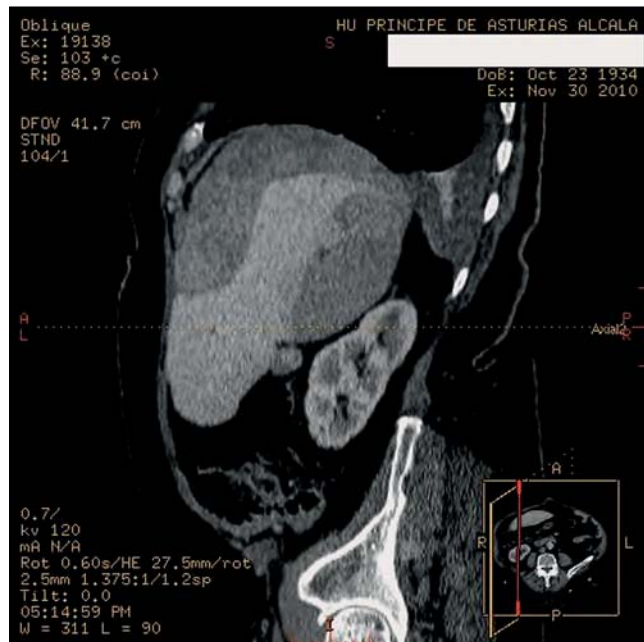
## Subcapsular hepatic hematoma following ERCP: case report and review

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-



**Fig. 1** Computed tomography showing subdiaphragmatic and subhepatic hematomas.

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

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

M, male; F, female; NA, details not available.

biotics. 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.

Endoscopy\_UCTN\_Code\_TTT\_1AU\_2AC

**Competing interests:** None

**D. Del Pozo<sup>1</sup>, I. Moral<sup>1</sup>, E. Poves<sup>1</sup>,  
C. Sanz<sup>1</sup>, M. Martín<sup>2</sup>**

<sup>1</sup> Gastroenterology Unit, Hospital Universitario Príncipe de Asturias, Madrid, Spain

<sup>2</sup> Internal Medicine Department, Hospital Universitario Príncipe de Asturias, Madrid, Spain

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DOI 10.1055/s-0030-1256267

Endoscopy 2011; 43: E164–E165

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## Corresponding author

**D. Pozo Prieto, MD**

Aparato Digestivo

Hospital Universitario Príncipe de Asturias,

Alcalá de Henares,

28805 Madrid,

Spain

Fax: +34-91-8801825

dpozo.hupa@salud.madrid.org