

## PICTURES IN DIGESTIVE PATHOLOGY

# Gallbladder perforation after closed thoracoabdominal trauma, diagnosed and treated by ERCP

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### INTRODUCTION

Single gallbladder injury after abdominal trauma is a rare finding. Early diagnosis of this disease is often difficult due to the variability of symptoms and unspecific results in common radiological tests. The usual management in patients with vesical trauma is surgery.

We report a case of a patient with a gallbladder perforation after closed thoracoabdominal trauma diagnosed and treated with ERCP and a conservative management, with good clinical evolution.

### CASE REPORT

A 55-year-old male with a past history of thoracoabdominal trauma presented with dull and diffuse abdominal pain without signs of peritonitis and hemodynamic stability. Ascites were observed in the initial emergency ultrasound.

During the first 48 hours the patient presented an increase in ascites and fever. Analytical data highlights: hemoglobin, 10 mg/dl; GGT, 104 U/l, and CRP, 266 mg/dl. An abdominal computed tomography (CT) was requested (Fig. 1) and piperacillin/tazobactam treatment was initiated. Paracentesis of five liters was performed (RBCs: 21,000/mm<sup>3</sup>, 2,880 leukocytes/mm<sup>3</sup>, total bilirubin: 19.26 mg/dl, bile acids: 3,952.4 µmol/l).

Endoscopic retrograde cholangiopancreatography (ERCP) was performed due to a suspected bile leak, and a gallbladder leak was noted (Fig. 2). It was treated by sphincterotomy and the establishment of a 10 Fr biliary plastic stent for eight weeks (Fig. 3) with good results.

### DISCUSSION

The extrahepatic bile duct injury occurs mainly by iatrogenesis in laparoscopic surgery. Traumatic etiology is rare, the gallbladder break being an exceptional occurrence (1). Gallbladder injury may be classified as contusion, perforation, avulsion and traumatic cholecystitis. Concomitant abdominal injuries are usually found (liver, spleen and duodenal). Clinical presentation can be immediate (shock and peritonitis) or insidious, when the only injury is the

bile leakage (2). CT findings are usually nonspecific and the usual treatment is cholecystectomy. In bile leakage situations, the approach was usually surgical; however,



Fig. 1. Bladder collapse observed by abdominal CT and moderate to severe ascites without injuries in intra-abdominal organs or pneumoperitoneum. Radiographic findings of bladder trauma determined by CT are often nonspecific (perivesical liquid, poor delineation and gallbladder wall thickening, ascites, fasting gallbladder contracted, hyperdense intraluminal content [hemobilia], biliomas and the involvement of other organs).

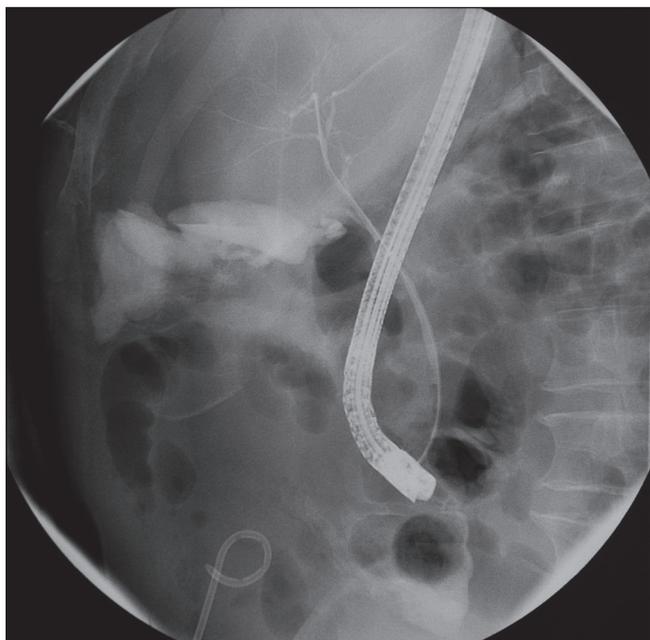


Fig. 2. Extravasation of contrast from the gallbladder observed via ERCP. A sphincterotomy was performed and a biliary plastic stent was placed, leaving the proximal part in the common hepatic duct, just above the cystic duct.

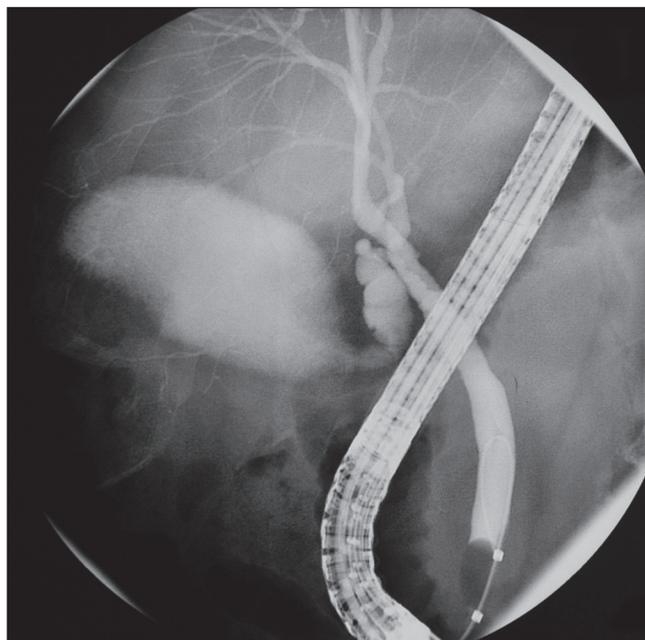


Fig. 3. Radiological ERCP control without a biliary gallbladder leak.

advances in ERCP and cholangio-RM have resulted in an improved diagnosis and the introduction of non-operative management in most patients (2).

In an incomplete bile duct injury, the European Society of Gastrointestinal Endoscopy (ESGE) recommends the performance of an ERCP with plastic stent insertion and removal in 4-8 weeks, with a success rate of 80-90% (3).

## REFERENCES

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