

CLINICAL CASE

ERCP and splenic injury



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KEYWORDS

Endoscopic Retrograde Colangiopancreatography; Complication; Splenic injury; Costa Rica.

Abstract Endoscopic Retrograde Colangiopancreatography (ERCP) is an invasive procedure with important complications that occurs in 5%-10% of the cases. The most frequent procedure related complications are: acute pancreatitis, hemorrhage, perforation and infection. An infrequent but potentially life threatening ERCP complication is the splenic injury, with very few cases reported in the literature. We report a patient with cholelithiasis and biliary pancreatitis who was diagnosed with a subcapsular splenic laceration a few hours after an ERCP. Clinicians should be alerted to this potential post-procedure complication associated with ERCP.

PALABRAS CLAVE

Colangiopancreatografía retrógrada endoscópica; Complicación; Lesión esplénica; Costa Rica.

CPRE y lesión esplénica

Resumen La colangiopancreatografía retrógrada endoscópica (CPRE) es un procedimiento invasivo con importantes complicaciones que ocurren en el 5%-10% de los casos. Las complicaciones más frecuentes relacionadas a este procedimiento son: pancreatitis aguda, hemorragia, perforación e infección. Una complicación de la CPRE infrecuente pero potencialmente mortal es la lesión esplénica, con muy pocos casos reportados en la literatura. Realizamos un reporte de caso de un paciente con coledocolitiasis y pancreatitis biliar, quién fue diagnosticado con una laceración esplénica subcapsular pocas horas después de la realización de la CPRE. Los médicos deben tener en cuenta esta potencial complicación asociada a CPRE.

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Case presentation

A 74-year-old man without any history of disease, who presented to the hospital complaining of intermittent upper abdominal pain located in the epigastric area and vomiting. A physical examination revealed a painful and soft abdomen with mild distention. An abdominal ultrasound reveals presence of gallstones and dilation of 8 mm in the common bile duct with choledocolithiasis, and inflammatory changes in the peripancreatic fat tissue.

Abdominal tomography showed a pancreas with minimal changes in peripancreatic fat tissue, suggestive of mild pancreatitis with grade of severity Balthazar C, without pancreas necrosis.

Patient was referred for ERCP for the treatment of choledocholithiasis. During this procedure, ampullary cannulation was performed without difficulty, and cholangiogram showed dilation and stone in the common bile duct, therapeutic sphincterotomy was made successfully and the endoscopist made three balloon sweeps, and removed the stones of the common bile duct (fig. 1). The total procedure time was approximately 20 minutes. There were no unplanned events or complications during the ERCP and the patient was sent to the hospital room post-procedure without any noted complaint.

Two hours after the procedure, the patient became hypotensive with a systolic and diastolic blood pressure of 95 mmHg and 65 mmHg respectively. He was afebrile and a physical examination revealed mild diffuse abdominal pain and mild abdominal distention without peritoneal signs. At this moment he was managed conservatively after surgical consultation. Six hours after the procedure, the patient persisted hypotensive, and a physical examination persisted with the abdominal pain and distention. Laboratory data revealed hemoglobin of 7.9 g/L, a 2 gram decline post-ERCP. He was examined for the surgeon, who suggests an upper endoscopy and abdominal ultrasound. Upper endoscopy showed site of sphincterotomy without bleeding but the abdominal ultrasound demonstrated a large intraperitoneal

fluid around of liver and spleen with important gas distention (figs. 2 and 3).

An emergency laparotomy revealed approximately 2 L of hemoperitoneum and multiple clots, and the spleen was de-capsulated with a large clots and active bleeding from a laceration (fig. 4). A splenectomy and cholecystectomy was performed without complications. The patient was discharged in good condition after 18 days, because he presented a nosocomial pneumonia and mild infection of surgical wound.

Discussion

The splenic injury is rare but potentially life threatening complication of the endoscopy¹. Only 11 total cases post-ERCP have been reported in the literature²⁻¹². Predisposing factors include a decrease in movement between the spleen and surrounding organs, excess traction on the splenocolic and gastrosplenic ligaments, and direct trauma to the spleen¹.

The causative mechanism postulated by the most authors is bowing of the endoscope in the long position with torsion on the greater curvature of the stomach^{5,6,9,10}.

Main factors contributing to splenic injury during ERCP are pancreatitis and abdominal adhesions. Pancreatitis, especially chronic pancreatitis, may lead to calcification and fibrosis of the supporting ligaments between the pancreas and the spleen, resulting in reduced relative mobility between the stomach and spleen^{13,14}. The abdominal adhesions due to prior abdominal surgery are associated with splenic injury during the ERCP.

In conclusion, this case emphasizes the need for awareness of splenic injury in patient with persistent post-ERCP abdominal pain, particularly when seen in conjunction with hemodynamic instability or acute anemia.

Conflict of interest

The authors declare no conflict of interest.

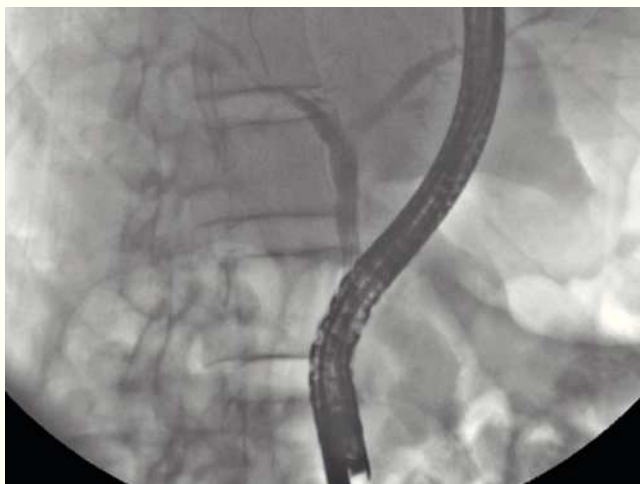


Figure 1 Colangiogram after removed the stones of the common bile duct.



Figure 2 Upper endoscopy showed site of sphincterotomy without bleeding.

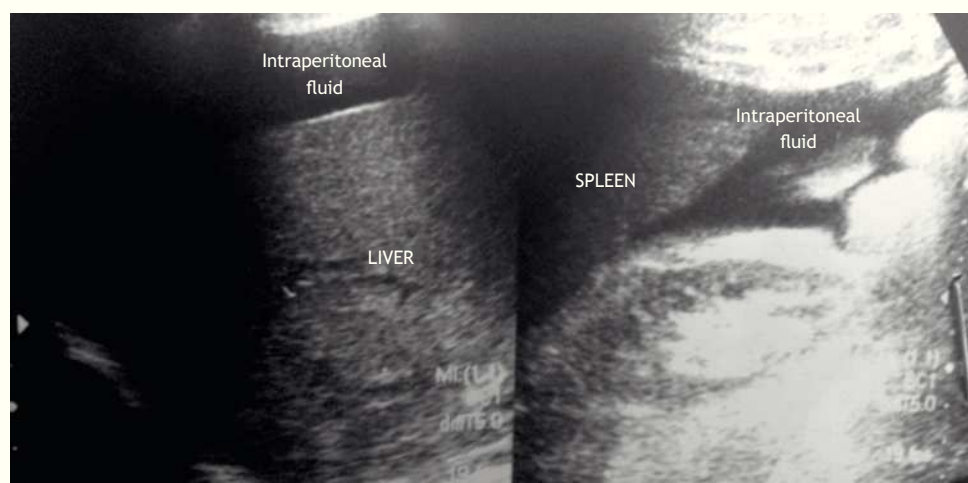


Figure 3 Abdominal ultrasound demonstrated intraperitoneal fluid around the liver and spleen.



Figure 4 Splenic injury revealed by emergency laparotomy.

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