

Treatment of a bile duct leak with ERCP double-balloon enteroscopy in a patient with Roux-en-Y reconstruction

A 75-year-old man previously presented with gastric outlet obstruction caused by a pyloric peptic stricture, which did not respond to balloon dilation. He required surgical treatment with a Roux-en-Y re-

construction in 2011. Four years later, he presented an episode of cholecystitis, and an open partial cholecystectomy was performed after discovery of gallbladder empyema. Postoperative biliary leakage

occurred, with drainage of 350 mL/day through external drains. A magnetic resonance cholangiopancreatography confirmed the presence of a biliary collection and a cystic duct leak (▶ Fig. 1).

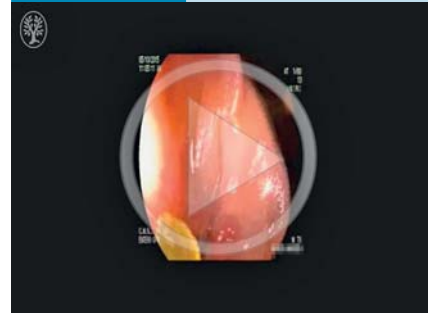
Endoscopic retrograde cholangiopancreatography (ERCP) was attempted using double-balloon enteroscopy to reach the native papilla through the afferent limb. Cannulation with a Soehendra BII sphincterotome was successful, and a Jagwire was introduced into the bile duct. Contrast material was then injected to confirm the cystic duct leak (▶ Fig. 2a). A small sphincterotomy was performed, and a 7Fr × 10 cm plastic stent was placed in the bile duct (▶ Fig. 2b, ▶ Video 1).

After the procedure the bile drainage decreased to 30 mL/day, and disappeared



Fig. 1 Magnetic resonance cholangiopancreatography showed a biliary collection and a cystic duct leak.

Video 1



Treatment of a bile duct leak with endoscopic retrograde cholangiopancreatography double-balloon enteroscopy in a patient with Roux-en-Y reconstruction.



Fig. 2 Treatment of cystic duct leak. **a** Endoscopic retrograde cholangiopancreatography showed the cystic duct leak. **b** A plastic stent was placed in the bile duct.

completely after a week. The stent was removed using a double-balloon enteroscopy 4 weeks later.

Roux-en-Y entero-enteric anastomosis of the small bowel is a common surgical technique used in gastrectomy procedures and bariatric surgical malabsorption procedures. Following this surgery, drainage of the biliopancreatic system is via an afferent jejunal limb that cannot be accessed by conventional endoscopy [1]. Double-balloon enteroscopy has been used successfully for ERCP in patients with Roux-en-Y reconstruction, with enteroscopy success in 89% and ERCP success in 82% [2–3].

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**Gerardo Blanco-Velasco,
Juan Manuel Blancas-Valencia,
Oscar Víctor Hernández-Mondragón,
Aracely Muñoz-Bautista,
María Lourdes Altamirano-Castañeda,
Héctor Chavez-Piña**

Department of Endoscopy, Hospital de Especialidades, Centro Médico Nacional Siglo XXI, Instituto Mexicano del Seguro Social, Mexico City, Mexico

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Corresponding author

Gerardo Blanco-Velasco, MD
Department of Endoscopy
Hospital de Especialidades
Centro Médico Nacional Siglo XXI
Instituto Mexicano del Seguro Social
Av. Cuauhtemoc 330
México D.F. 03100
Mexico
Fax: +52-55-740535
gerardoblancov@hotmail.com