

# Stenosis of Hepaticojejunal Anastomosis with Intrahepatic Lithiasis: Treatment with Single-Balloon Enteroscopy-Assisted ERCP

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## Keywords

ERCP · Enteroscopy · Stricture · Dilation

**Estenose de Anastomose Hepatico-Jejunal com  
Litíase Intra-Hepática: Tratamento por CPRE  
Assistida por Enteroscópio de Mono-Balão**

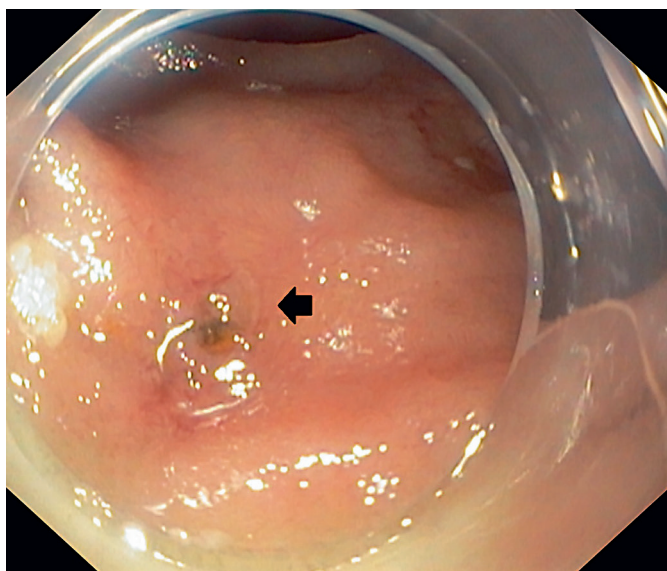
## Palavras Chave

CPRE · Enteroscopia · Estenose · Dilatação

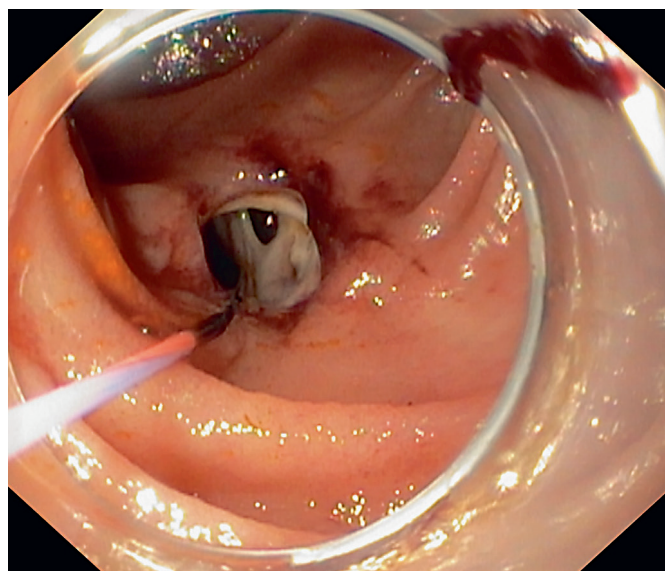
A 53-year-old male patient with a history of Roux-en-Y hepaticojejunostomy due to an iatrogenic lesion of the biliary tract during cholecystectomy in 2013 presented with recurrent episodes of acute cholangitis. Magnetic resonance cholangiopancreatography showed dilation of the intrahepatic biliary ducts associated with intrahepatic lithiasis. Due to a high index of suspicion of hepaticojejunal anastomosis stenosis not evident in the magnetic resonance cholangiopancreatography, the patient was referred to our department for enteroscopy-assisted endoscopic retrograde cholangiopancreatography (ERCP). The procedure was performed with a single-balloon enteroscope (SIF-Q180, Olympus Medical Systems®, To-

kyo, Japan) with a transparent cap attached at its tip. After identification of the Roux-en-Y anastomosis, the afferent limb was intubated, followed by progression to the hepaticojejunal anastomosis. A severe stricture of the anastomosis was identified (Fig. 1). A 0.035-inch guidewire (METII-35-600E, Tracer Metro® Direct™ Wire Guide, Cook®, Bloomington, IN, USA) was passed through the stricture followed by a sphincterotome (CCPT-25ME, Classic Cotton® CannulaTome®, Cook®). Upon contrast injection, dilation of the intrahepatic ducts was evident. Dilation with a 6- to 8-mm through-the-scope balloon (34106PRO, Endo-Flex®, Düsseldorf, Germany) was then performed (Fig. 2, 3) with immediate spontaneous drainage of multiple small calculi. The intrahepatic bile ducts were explored with a balloon catheter, but no more calculi were identified. The patient was discharged on the second day after the procedure and did not present additional episodes of acute cholangitis after a 6-month follow-up.

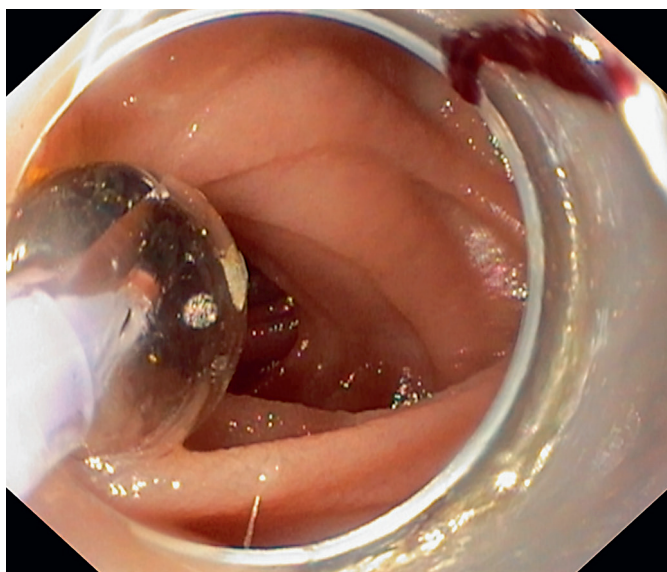
ERCP is an essential therapeutic technique for a wide range of pancreatobiliary conditions and presents a 90–95% success rate in patients with native gastric and pancreaticoduodenal anatomy [1]. In Roux-en-Y surgical reconstruction (hepaticojejunostomy and choledochojejunostomy, gastric bypass surgery, or post-Whipple surgery), ERCP is often unsuccessful because of the in-



**Fig. 1.** Endoscopic view of the hepaticojejunal anastomotic stricture (short arrow) in a 53-year-old male with a history of Roux-en-Y hepaticojejunostomy performed after iatrogenic bile duct injury during cholecystectomy.



**Fig. 3.** Endoscopic image showing the anastomosis after dilation. The guidewire can be seen positioned inside the intrahepatic biliary ducts.



**Fig. 2.** Endoscopic view of the dilation procedure with a 6- to 8-mm through-the-scope balloon (34106PRO, Endo-Flex®, Düsseldorf, Germany).

ability to reach the anastomosis [1]. Double-balloon enteroscopy was initially introduced as a useful procedure to access surgically excluded intestinal segments [2]. Posteriorly, single-balloon enteroscopy, an alternative method for small-bowel evaluation, proved to be safe and use-

ful for engaging in biliary endotherapy [1, 3, 4]. However, the technique presents several limitations, namely the frontal view of the enteroscope (as opposed to the lateral view of conventional duodenoscopes), the smaller caliber channel, and the longer channel length [5]. Moreover, available standard ERCP accessories cannot be used with the enteroscope [5]. These limitations turn the procedure challenging and more demanding than standard ERCP. The use of a cap attached to the distal tip of the enteroscope can improve the endoscopic position and add stability for biliary cannulation. In consequence, and in contrast to patients with native anatomy, in patients with hepaticojejunal anastomosis the cannulation success rate is approximately 70% [1].

This case illustrates the gradual improvement of endoscopic biliary interventions in patients with surgically altered anatomy. With the development of device-assisted ERCP, access to the pancreatic and biliary duct systems in patients with surgically altered anatomies is now possible, although technically challenging and time consuming.

### Disclosure Statement

The authors do not have any interest which might be interpreted as influential in this report. This report did not receive any support from corporations, industrial or private.

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