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# HEPATO GASTROSTOMY GUIDED BY EUS ENDOSCOPIC SECONDARY TO A STENOSIS ROUX-EN-Y HEPATICOJEJUNOSTOMY, A CASE REPORT

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## INTRODUCTION

Endoscopic retrograde cholangiopancreatography (ERCP) has become the gold standar of treatment for pancreatobiliary diseases. However, in patients with surgically altered anatomy (SAA), ERCP represents a challenge, with many limitations. In recent years, endoscopy-guided biliary drainage (EUS-BD) represents a drainage alternative to the percutaneous or surgical approach. (1)

Our objective is to report a case of stenosis of the hepatic-jejunal Roux-en-Y anastomosis in which the EUS endoscopy served as drainage of the bile duct.

## CASE DESCRIPTION

This case is regarding a 22-year-old female patient, without chronic degenerative history, a surgical laparoscopic cholecystectomy was performed on 14-03-19 in an external Hospital, with unfavorable evolution, jaundice and abdominal pain, she is reintervened by laparotomy, a drainage was placed and was referred to our hospital on March 18 for a protocol study.
During her stay a cholangioresonance was performed with repored Bismuth 2 bile duct disruption. She was scheduled for ERCP on 04-01-21, reporting complete section of the Amsterdam Bergamn type D common bile duct, for which biliodigestive bypass was scheduled on 22-04-19,
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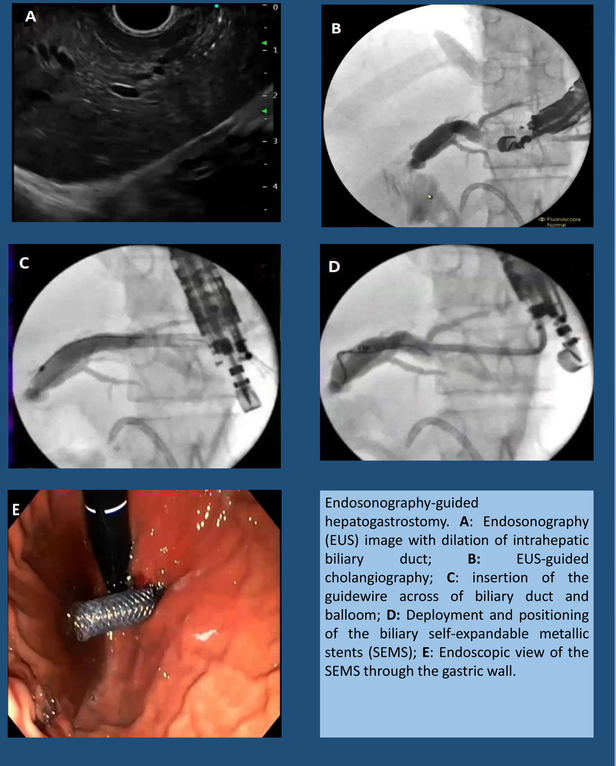
## CASE DESCRIPTION

hepatic-jejunal anastomosis was performed laterally at 40cc from the fixed loop and jejunal-jejunal anastomosis at 80cm from the fixed loop, a surgical event without complications, after remaining asymptomatic for 2 years.

The patient arrived on 02-03-21, with symptoms of jaundice, abdominal pain and fever; initial studies reported leukocytes 14,740 thousand/ul neutrophils 87% lymphocytes 10%, total bilirubin 12mg/dl at the expense of direct 8mg/dl, CRP 15mg/dl, study protocol is started, management with antibiotic therapy and order an abdominal CT, where evidence of dilation of the intrahepatic bile duct, percutaneous cholangiography was performed showing stenosis of the hepatic-jejunal anastomosis, after which percutaneous transhepatic drainage of the left intrahepatic bile duct was performed with a 10Fr x 25cm multipurpose catheter, procedure without complications.

11-06-21 She went for percutaneous catheter replacement and placement of a 10Fr x 10cm Amsterdam plastic biliary prosthesis.

Two days later the catheter accidentally came out, with all the information gathered, we decide to go ahead with transpercutaneous cholangioscopy and balloon dilation, being impossible to pass guidance or cholangioscopy to biliodigestive anastomosis, so referral was scheduled for 16-09-21. EUS-guided hepaticogastrostomy (EUS-HG) with Olympus GF UCT 180 model lineal endoscopic ultrasound, performing ultrasonography with the following findings:




Endosonography-guided hepatogastrostomy. **A**: Endosonography (EUS) image with dilation of intrahepatic biliary duct; **B:** EUS-guided cholangiography; **C**: insertion of the guidewire across of biliary duct and balloom; **D:** Deployment and positioning of the biliary self-expandable metallic stents (SEMS); **E**: Endoscopic view of the SEMS through the gastric wall.

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At the transgastric level, a left liver of 8.7mm in diameter is observed, 19G FNA needle puncture is performed under ultrasonography and fluoroscopic vision, 0.025" hydrophilic guide with curved tip is is passed to the confluence, needle is exchanged for hurricame biliary dilator balloon of up to 4mm for 30 seconds, within two periods, balloon are removed and a self expandable metallic stent (SEMS) of 10mm x 8mm is placed fully covered.
With the guidance of fluoroscopic vision up to the common liver system and endoscopy adequate permeability is corroborated, given for granted procedure, without complications, the patient is discharged asymptomatic 24 hours later.

## DISCUSSION

The case corresponds to a biliodigestive stenosis secondary to a diversion due to a disruption of the bile duct. In the literature, it has been documented that EUS-guided biliary drainage has been an alternative therapy to PTBD and surgery in ERCP failure, as in our case. . Giovanni et al. demonstrated in 2001 the safety and efficacy as it is a minimally invasive technique with a low rate of complications, which can be bile leak (3%), hemorrhage (2.7%), cholangitis (0.3%), sepsis and peritonitis ( 3.5%) However, there is no consensus on the best EUBSD technique. (4,5.), In our case, our patient had surgically altered anatomy, a dysfunctional multipurpose catheter carrier, and a failed cholangioscopy, making her a candidate for Endosonography-guided hepatogastrostomy. (6).

## CONCLUSION

EUBSD is a diagnostic and therapeutic tool for the treatment of obstructive diseases of the bile duct, especially in patients with altered surgical anatomy. Likewise, we believe that hepatic gastrostomy is a safe and effective technique for PTBD therapy and surgery, when performed in specialized centers.