Balloon expandable biodegradable stent using EUS-antegrade approach in biliary stenosis in a patient with surgically altered anatomy
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Introduction
Therapy of biliary strictures due to altered surgical anatomy may be challenging. Access through percutaneous approach and double balloon-assisted enteroscopy was described (1). In these cases, plastic or fully covered self-expandable metal stents are traditionally used for calibration of the stenosis (2).

Case presentation
A 34-year-old-women had a complicated cholecystectomy 6 years ago with subsequently Roux-en-Y hepaticojejunostomy (HJ). She presented multiple episodes of cholangitis due to biliary stricture. She required surgical dilation and drainage placement a year ago. However, she repeated cholangitis.

Diagnosis and Treatment
EUS-guided hepaticogastrostomy (EUS-HGS), revealed the stenosis and antegrade dilation with 10 mm balloon was performed. Finally, a 7-Fr x 10 cm double pigtail stent was used, for temporary calibration of stenosis, assuring gastro-jejunal communication.
After 2 months, placement of biliary balloon expandable biodegradable stent (BEBS) (UNITY-B; AMG International, Winsen, Germany) was proposed. Using a 19-G needle, followed by cholangiogram, 0.035-inch guidewire was passed into the jejunum. The former plastic stent was left in-situ. The HGS fistula was dilated with 4-Fr balloon catheter, followed by 10 mm dilation of anastomotic stricture. The indwelling plastic stent was then removed.

Despite previous dilation, insufficient duct calibration was shown on fluoroscopy. To minimize complications due to debris in the biliary ducts, ascendent cleaning with balloon was performed. The uncovered 10 mm diameter BDBS was then introduced. The stent was placed with identification of radiopaque markers. Migration was prevented by previous dilation up to 10 mm and proximal end insertion into the 8 mm dilated intrahepatic bile duct. This was followed by placement of 7-Fr double pigtail stent for stricture calibration.

No periprocedural complications were reported.

Magnetic resonance with cholangiogram reconstruction after one week described calibrated bile duct.

Fig. Balloon expandable biodegradable stent and double pigtail placement
Conclusions
The advantages of BEBS placement are the continuous calibration of stenosis and lack of reintervention.

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Bibliography