**Introduction**

Rendezvous ERC is known for a long time as a valid alternative in patients where the standard retrograde ERC approach is not feasible or has failed. In fact, it has been reported to be safe and superior to pre-cut sphincterotomy for single session biliary access [1]. One of the possible challenging factors in performing EUS-based rendezvous-ERC is the manipulation of the guidewire before it can be securely retrieved after transpapillary advancement. This is particularly the case in conditions of minimal endoscopic maneuverability such as in congested compressed duodenum. Here we report a novel technique in order to avoid guidewire dislodgement by using an ultra-slim endoscope to stabilize the guiding wire during rendezvous-ERC, where we had to opt for EUS-transgastric access to the biliary system.

**Case presentation**

A 51-year-old patient suffering chronic alcohol-induced pancreatitis was admitted with an acute exsudative pancreatitis and elevated cholestatic enzymes. MRCP showed no signs of biliary tract obstruction or a cholecystolithiasis. Cholestasis seemed to be due to external bile duct compression caused by welling of the pancreatic parenchyma induced by exsudative pancreatitis. Due to worsening Liver Function Tests (LFTs) biliary drainage...
was indicated and hence, ERC was attempted. However, severe duodenal swelling and external compression of the duodenal lumen resulted in failure to identify the papillary orifice while severely limiting maneuverability of the duodenoscope.

Procedure

After failure to cannulate the Common Bile Duct (CBD) via standard ERC (Figure 1A), a left-sided dilated intrahepatic biliary duct in liver Segment II was transgastrically punctured under EUS-guidance (EG 3870UTK Linear Array Ultrasound Gastroscope, Pentax) using a 19-gauge needle (Firma Boston 19 Ga Expect™ flexible needle) (Figures 1B). After access to the biliary system and cholangiogram (Figure 1C). A 0.025-inch guidewire (Visiglide, Olympus) was advanced through the needle into the CBD and subsequently into the duodenum (Figure 1D). The needle and the echoendoscope were then removed while maintaining the guidewire position. In order to stabilize the wire an ultra-slim endoscope (GIF-XP-180N, Olympus) was back-loaded onto the guidewire using a papillotome as a bridge between the distal tip of the scope and the biopsy channel. The slim scope was then advanced into the stomach just adjacent to the puncture site and the wire was stabilized further with the help of the tip of the papillotome (Figure 1D).

After disconnecting the slim endoscope from the image processor while maintaining its position under fluoroscopic control we switched to a duodenoscope which was advanced beside the slim endoscope to the fourth part of the duodenum. Next, the transpapillary end of the guidewire was grasped with a snare and pulled out through the accessory channel of the duodenoscope. Indeed, occasionally only a few centimeters of the wire can be advanced distal to the papilla insertion parallel to the guidewire. In fact, the wire stabilization at the puncture site within the stomach wall also may improve guidance and maneuvering capabilities are required to overcome obstacles hindering transpapillary wire advancement such as stenosis of the distal CBD. In fact, the wire stabilization at the puncture site within the stomach wall also may improve guidance and maneuverability of the wire per se.

The method proposed here offers a more elegant way for stabilizing the guidewire in cases where increased manipulation capabilities are required to overcome obstacles hindering transpapillary wire advancement such as stenosis of the distal CBD. In fact, the wire stabilization at the puncture site within the stomach wall also may improve guidance and maneuverability of the wire per se.

Another risk when using the transgastric approach is that of the dislodgement of the guidewire during the duodenoscope insertion parallel to the guidewire. Indeed, occasionally only a few centimeters of the wire can be advanced distal to the papilla and even a small displacement of the wire into the CBD during duodenoscope insertion would require the whole procedure to be repeated from the beginning. During the proposed SOS-approach however, the guidewire is protected by the papillotome and the slim endoscope itself minimizing the risk of accidental

Figure 1(A-E): (A) Edematous papilla. (B) EUS-guided transgastric-puncture. (C) Cholangiogram.
guidewire dislocation while advancing the duodenoscope.

Due to these advantages it is tempting to speculate that this SOS-approach may increase the success rate of the EUS-rendezvous-ERC. This may help to establish EUS-Rendezvous-ERC in difficult cases particularly considering the known lower rates of complication risks and morbidity as compared to EUS-based transmural stenting procedures such as hepatico-gastrostomy oder choledocho-duodenostomy [5]. Finally, compared to PTCD-rendezvous ERCP which requires two sessions, only one session is needed, which results in shortened post-procedural hospital stay while maximizing patient comfort and quality of life since no external drainage is needed [1].

The downside of this method is that it requires a highly experienced endoscopist and at least two highly trained assistants for the guidewire manipulation and slim endoscope fixation at the same time.

**Conclusion**

Utilizing a slim endoscope to Stabilize the Guidewire (SOS) in EUS-rendezvous-ERC via transgastric access may help increase the success rate of the intervention by offering better long guidewire manipulation while minimizing the risk of guidewire dislocation.

**References**