

An easier option for endoscopic ultrasound-guided biliary drainage: cannulation using two antiparallel guidewires

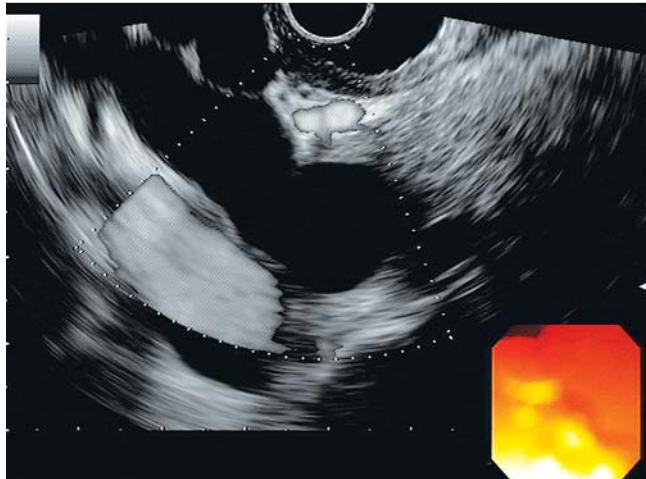


Fig. 1 Extrahepatic biliary dilatation seen at endoscopic ultrasound (EUS) in a patient with advanced pancreatic neuroendocrine tumor referred with fever and obstructive jaundice. EUS-guided needle puncture was done from the duodenal bulb as an initial step in a biliary drainage procedure.

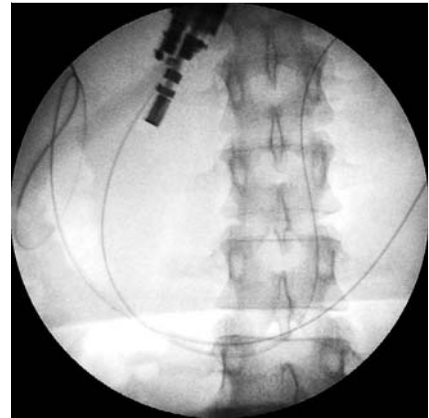


Fig. 2 Following needle puncture, a guidewire was inserted into the common bile duct, advanced antegradely and exteriorized through the papilla, and advanced further to form loops within the duodenal lumen.



Fig. 3 Cannulation of the bile duct through the papillary orifice was achieved by advancing a second guidewire in parallel to the first but in the opposite direction.

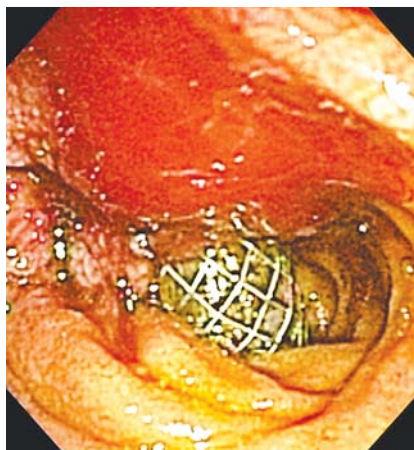
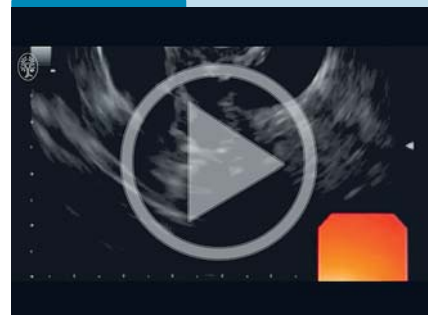


Fig. 4 A self-expandable metallic stent was successfully deployed.

Video 1



Endoscopic ultrasound (EUS)-guided biliary drainage, with cannulation achieved by use of two parallel guidewires placed in opposite directions through the papilla.

A 35-year-old female patient receiving palliative chemotherapy for advanced pancreatic neuroendocrine tumor was referred to hospital with fever and obstructive jaundice.

Computed tomography demonstrated a well-defined, 4×4.5-cm, contrast-enhanced mass in the head of the pancreas, associated with liver metastases and peripancreatic lymph nodes. The common bile duct (CBD) was markedly dilated (25 mm), and laboratory data were compatible with cholangitis.

She was referred for biliary drainage via endoscopic retrograde cholangiopancreatography (ERCP). However cannulation of

the CBD failed because of neoplastic infiltration of the ampullary region.

Endoscopic ultrasound (EUS) (▶ **Fig. 1**) was performed to guide needle puncture (19G Expect; Boston Scientific) from the duodenal bulb. Then a guidewire (0.0035-inch Jagwire; Boston Scientific) was inserted into the CBD and advanced antegradely until exteriorization through the papilla (▶ **Fig. 2**). Following this, a parallel cannulation of the CBD through the papillary orifice with a second guidewire (0.0025-inch Jagwire; Boston Scientific) preloaded in a cannulatome was possible (▶ **Fig. 3**); this was advanced alongside the first guidewire but from the oppo-

site direction. A self-expandable metallic stent (100×60 mm partially covered Wallflex; Boston Scientific) was then successfully deployed (▶ **Fig. 4**). Biliary decompression was achieved (▶ **Video 1**). The procedure took 30 minutes and no immediate adverse event occurred. The patient was discharged after 4 days. There were no signs of cholangitis 6 weeks later. EUS-guided biliary drainage (EUS-BD) is a procedure that is increasingly used after failure of ERCP [1,2]. A critical point in achieving EUS-BD is the rendezvous step, in which the luminal end of the guidewire is grasped by a snare or biopsy cable, and then withdrawn through the duodeno-

scope channel, with risk of loss of the puncture or guidewire [3,4].

As illustrated by this case, EUS-BD with cannulation by a second guidewire, advanced parallel but in the opposite direction (i.e., “antiparallel”) to the first guidewire, may be considered prior to the conventional technique, because it seems to be easier and safer by avoiding the rendezvous step.

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Competing interests: None

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