

**Title:**

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## Endoscopic segmentalized drainage of biliary tract obstruction complicated with duodenal stenosis

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### Abstract:

Biliary obstruction is a common gastrointestinal disorder with many etiological factors, such as benign and malignant diseases of the biliary tract, pancreas, and liver.<sup>[1]</sup>Endoscopic ultrasound guided biliary drainage provides a new method for the treatment of biliary obstruction when ERCP cannula fails.

**Key words:** Endoscopic ultrasound guided biliary drainage. EUS-BD. EUS-CDS.

Dear Editor,

A 77-year-old male patient was admitted to hospital with yellow skin and sclera staining for 7 days. In the past, biliary stent implantation was performed 3 years ago due to " duodenal ampullae occupying", and ERCP stent replacement was performed 1 year ago, and duodenal stenosis was found by ERCP examination in April.

Therefore, ERCP was performed again, and it was found that the duodenal bulb and descending junction were narrow, and it was difficult to pass the duodenoscope.

EUS-BD was used to puncture the dilated bile duct of the left lobe of the liver with a

19G puncture needle near the cardia in the upper part of the stomach, and bile was extracted. The left hepatic bile duct was developed, the remaining bile duct was not developed, and the guide wire was difficult to enter the common bile duct. So we put a double pigtail bile duct stent through the guide wire, and we can see bile outflow. Endoscopic ultrasonography continued to be attempted to enter the duodenum, but it was still difficult to pass the duodenal bulb and descending junction. Ultrasound scan in the duodenal bulb showed that the bile duct was blocked by hypoechoic space in the upper part of the common bile duct. Therefore, the bile duct of the hilar part was punctured in the duodenal bulb. The contrast showed that the intrahepatic and extrahepatic bile duct was developed, while the lower part of the common bile duct was not developed. Abdominal CT examination on the second day showed reduced bile duct dilation and good stent position.

## **DISCUSSION**

Biliary stenting through ERCP is the gold-standard for drainage of obstructive jaundice.<sup>[2]</sup> However, endoscopic ultrasound biliary drainage is no longer limited to passing through duodenal papilla, but selecting suitable puncture points from gastric cavity and duodenal cavity.<sup>[3]</sup> When the bile duct dilatation is not obvious, especially when the biliary stricture is benign. Successful rate of EUS-BD will obviously decrease, and it is closely related to the technical level of operators.<sup>[4]</sup> In this case, EUS-BD and EUS-CDS were used to perform puncture and catheterization on different parts of the obstructed biliary tract, and segmented drainage of the obstructed biliary tract was realized.

## **CONFLICT OF INTEREST**

The author declares that there is no conflict of interest in this article.

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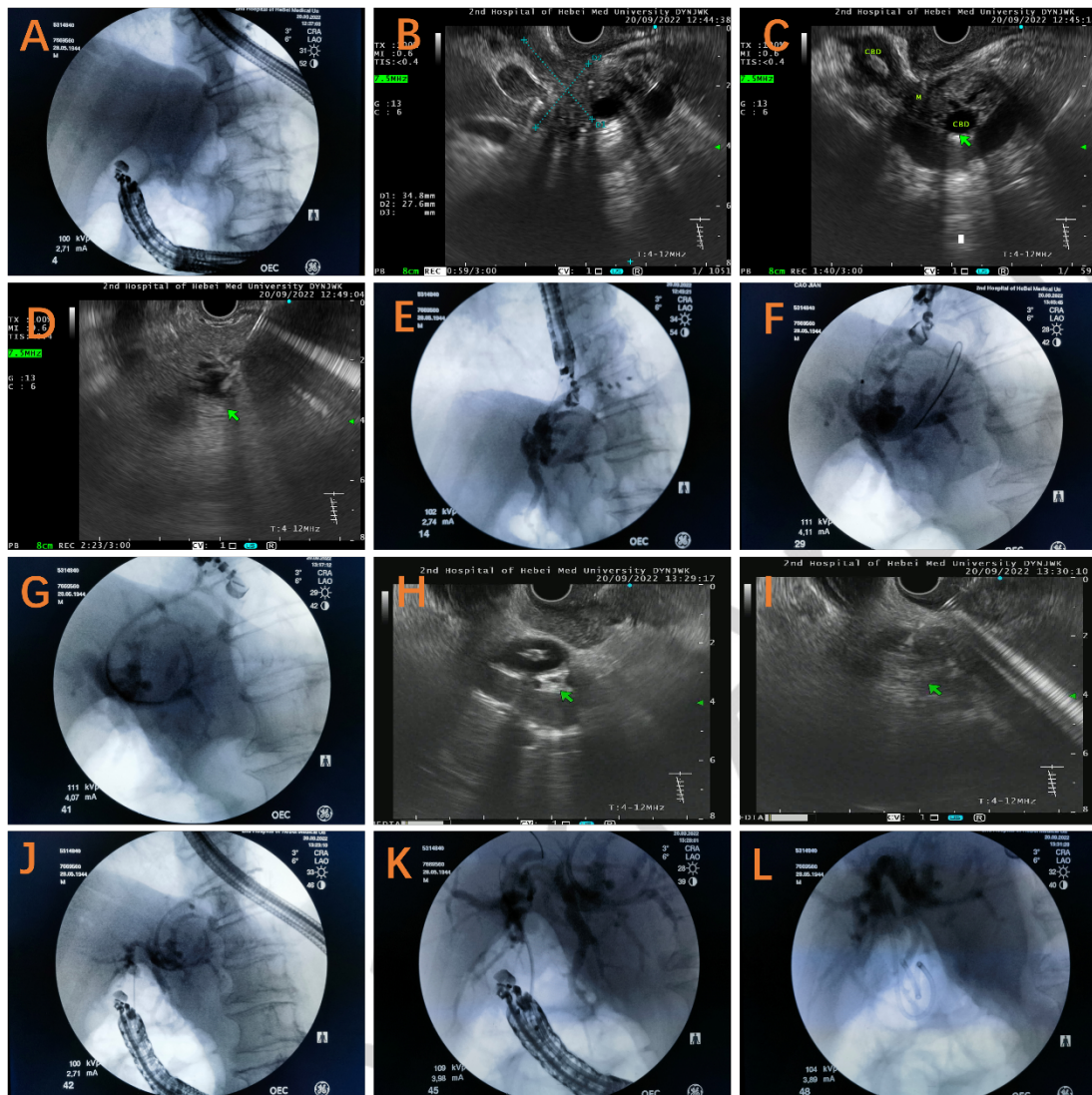


FIG. 1. A: It was difficult for endoscopic ultrasound to enter the duodenum, so ultrasound scan was performed in the stomach. B: Endoscopic ultrasonography showed mass in the common bile duct; C: dilated bile duct; D: Puncture the dilated bile duct; E-G: left hepatic bile duct development was observed, and the guide wire was difficult to enter the common bile duct, and the stent was inserted. H-I: punctured dilated bile duct; J-L: Intrahepatic and extrahepatic bile duct was developed, the lower common bile duct was not developed, and stent was inserted.