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LETTER TO THE EDITOR – REED

Title: Endoscopic Ultrasound-guided Choledochoduodenostomy (EUS-CDS) as first-line treatment for malignant distal biliary obstruction

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Dear Editor,

In patients with malignant distal biliary obstruction, drainage via Endoscopic Ultrasound-guided Choledochoduodenostomy (EUS-CDS) is indicated in clinical guidelines following a failed endoscopic retrograde cholangiopancreatography (ERCP) procedure[1]. However, its role as a first-line treatment is currently under evaluation. We present a case report illustrating this scenario.

The case involves a 75-year-old female with biliary obstruction due to unresectable pancreatic adenocarcinoma. While ERCP was initially considered for biliary drainage, a duodenal deformity potentially impeding duodenoscope positioning and a dilated common bile duct (14 mm) led us to perform an EUS-CDS as the primary therapeutic option. From the duodenal bulb, the bile duct proximal to the obstruction was punctured using a 22G needle, followed by cholangiography with contrast injection (Figure 1A-B). A lumen-apposing metal stent (HotAxios 8x8 mm) was placed using the freehand technique, confirming bile flow through it (Figure 1C-D). A coaxial double pigtail plastic stent (7F/5 cm) was also inserted (Figure 1E-F)[2]. No immediate complications were observed, and bilirubin levels progressively decreased, allowing the initiation of chemotherapy.

Recently, two randomized multi-center clinical trials have provided evidence on the role of EUS-CDS as a first-line treatment in this clinical setting. In the study by Chen *et al.*[3], 144 patients were randomized to EUS-CDS (73) or ERCP (71). No significant differences were observed in technical success, stent dysfunction at one year, adverse events, or oncological outcomes between the two techniques, although the procedure duration was shorter in the EUS-CDS group (14 [11.4] vs. 23 [15.6] minutes, $p<0.01$). Similarly, Teoh *et al.*[4] (EUS-CDS 79, ERCP 76) reported no significant differences in one year stent patency, clinical success, adverse events, or mortality between techniques. However, the technical success rate was higher in the EUS-CDS group (96.2% vs. 76.3%, $p<0.001$), with a shorter procedure time (10 [5–18] vs. 25 [14–40] minutes, $p<0.001$).

Both studies support EUS-CDS as a first-line treatment for malignant distal biliary obstruction. The technical and clinical success rates of EUS-CDS, similar or even

superior to ERCP, the shorter procedure time, and the ability to access the biliary tract in patients with duodenal stenosis or tumor infiltration suggest that it should be considered earlier in the treatment pathway at specialised centers.

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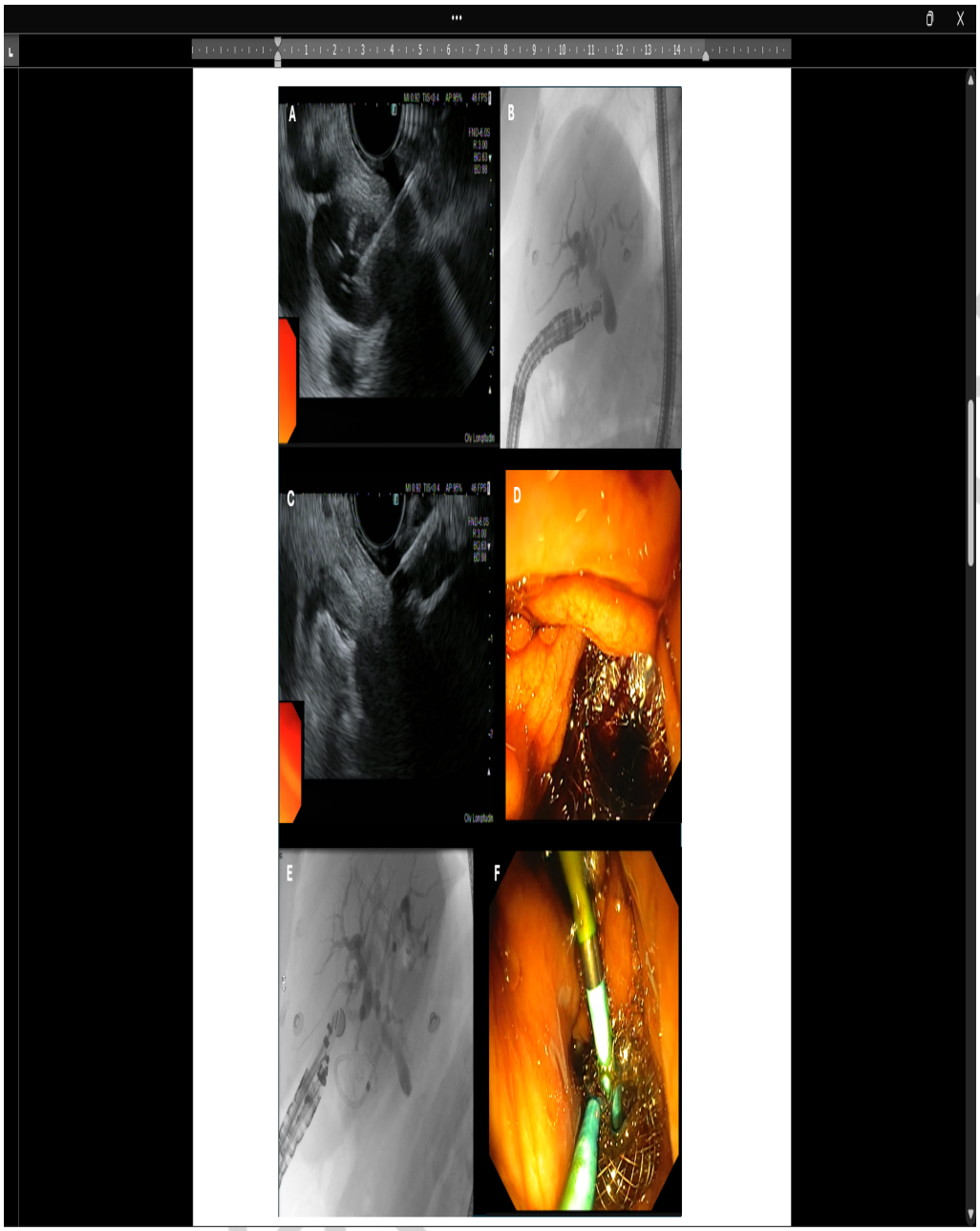

Figure 1. A) Ultrasound-guided puncture of the common bile duct, which appears visibly dilated. B) Cholangiography. C) Ultrasound-guided placement of the lumen-apposing stent: the distal end inside the common bile duct. D) Bile flow through the stent. E and F) Final radiological and endoscopic images of the lumen-apposing stent and the coaxial double pigtail stent.