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Modified technique for deployment of a lumen-apposing metal stent during endoscopic ultrasound-guided choledochoduodenostomy in minimally dilated duct

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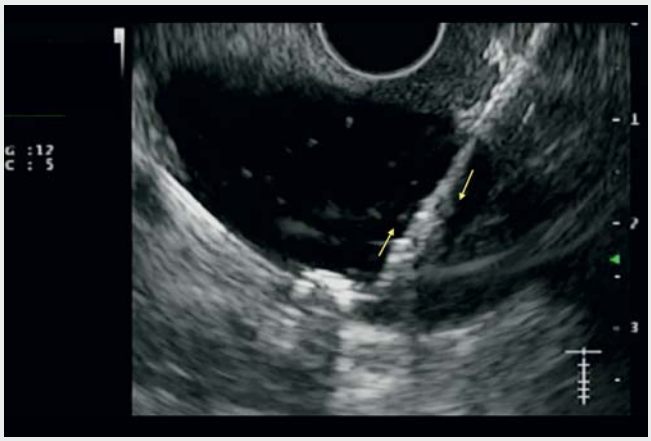
Electrocautery-enhanced lumen-apposing metal stent (EC-LAMS) has been routinely used for endoscopic ultrasound (EUS)-guided choledochoduodenostomy (CDS) with high technical and clinical success [1]. One of the major factors that determines technical success is common bile duct (CBD) diameter. CBD size < 15 mm is associated with a high risk of technical failure and maldeployment of the distal flange [2, 3]. Correct deployment of the distal flange inside the CBD is one of the most crucial steps of the procedure and, in cases of a marginally dilated duct, there is little space for opening of the distal flange, which increases the risk of maldeployment.

Here, we describe a modified technique for deployment of the Hot-AXIOS stent (Boston Scientific, Marlborough, Massachusetts, USA) in such marginally dilated CBDs. Although stent deployment only requires a single operator and both locks (catheter lock and stent lock) should not be open simultaneously, in our technique we have modified both these aspects [4].

After puncturing the bile duct, initial deployment of the distal flange is performed as per the standard procedure. Once the distal flange has been deployed halfway, the assistant opens the catheter lock (at this step both locking systems are open) and gradually pushes the catheter more distally (which gives extra room for deployment of the distal flange), while the main operator simultaneously deploys the distal flange (▶ **Video 1**).

A 76-year-old woman who was diagnosed with locally advanced adenocarcinoma presented with acute moderate cholangitis with prior failed ERC. EUS-CDS using EC-LAMS (Hot-Axios; 8 × 8 mm) was planned. EUS-CDS was performed with a free-hand technique using guidewire and a preloaded Hot AXIOS stent. As the CBD was marginally dilated (10.4 mm), we used the technique described above for deployment of the distal flange, followed by intrachannel deployment of the proximal flange. Immediately after drainage, free flow of bile was observed. The patient improved after the procedure and was discharged after 24 hours. This technique ensures correct deployment of the distal flange, even in the presence of a marginally dilated CBD, resulting in technical success.



Video 1 Modified technique for deployment of a lumen-apposing metal stent during endoscopic ultrasound-guided choledochoduodenostomy in minimally dilated common bile duct.

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Competing interests

The authors declare that they have no conflict of interest.

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References

[1] Krishnamoorthi R, Dasari CS, Thoguluva Chandrasekar V et al. Effectiveness and safety of EUS-guided choledochoduodenostomy using lumen-apposing metal stents (LAMS): a systematic review and meta-analysis. Surg Endosc 2020; 34: 2866–2877

[2] Di Mitri R, Amata M, Mocciaro F et al. EUS-guided biliary drainage with LAMS for distal malignant biliary obstruction when ERCP fails: single-center retrospective study and maldeployment management. Surg Endosc 2022; 36: 4553–4569

[3] Jacques J, Privat J, Pinard F et al. Endoscopic ultrasound-guided choledochoduodenostomy with electrocautery-enhanced lumen-apposing stents: a retrospective analysis. Endoscopy 2019; 51: 540–547

[4] Binmoeller KF, DeSimio T, Donovan R. Design considerations of the AXIOS stent and electrocautery enhanced delivery system. Tech Innov Gastrointest Endosc 2020; 22: 3–8

Bibliography

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