

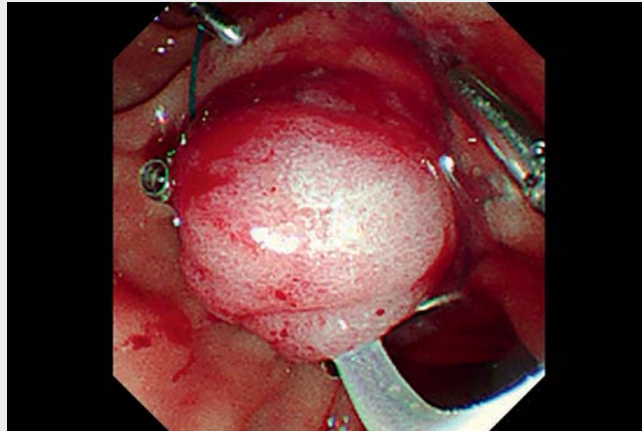
Preemptive purse-string suturing technique-assisted endoscopic papillectomy of ampullary adenoma



Endoscopic papillectomy has been recommended by the European Society of Gastrointestinal Endoscopy for the treatment of ampullary adenomas without intraductal extension [1]; however, it is a challenging procedure that is associated with serious adverse events [2], such as bleeding, which occurs in 11%–30% of cases [3]. Techniques used to manage bleeding and perforation include clip closure, but there is no agreement on a standard method [4]. Inspired by the endoscopic purse-string suturing (EPSS) method used for the closure of large gastrointestinal defects or perforations [5], we present a preliminary case of EPSS to facilitate the efficacy and safety of endoscopic papillectomy (► **Video 1**).

A 68-year-old man with ampullary tumor (► **Fig. 1 a**) and absence of intraductal extension was referred for endoscopic treatment at our institution. The purse-string structure was created with an endoloop and several clips anchored to the normal mucosa 1.5 cm from the tumor boundary (► **Fig. 1 b**). After the tumor was firmly and completely encircled by the snare, it was resected en bloc leaving a large mucosal defect (► **Fig. 1 c**). We immediately extracted the specimen and placed a 7Fr biliary stent. During subsequent cannulation and insertion of a 5Fr plastic stent into the pancreatic duct, the defect started to bleed. Therefore, we slowly tightened the endoloop until the entire defect was closed and the bleeding stopped instantly (► **Fig. 1 d**). The resected specimen was confirmed as having adequate margins of normal mucosa (► **Fig. 1 e**).

At follow-up 2 weeks later, we removed the purse-string structure and the plastic stents, and confirmed healing by the presence of a neat scar around the major papilla.



► **Video 1** The purse-string suturing technique during endoscopic papillectomy of ampullary adenoma.

EPSS-aided endoscopic papillectomy not only guarantees en bloc resection of the tumor but also prevents severe complications. With the prepared purse-string structure guarding the operative field, the tumor can be thoroughly resected with adequate negative margins. In addition, with the purse-string structure being tightened after endoscopic papillectomy, the risk of bleeding and perforation can be greatly reduced.

Endoscopy_UCTN_Code_TTT_1AR_2AD

Competing interests

The authors declare that they have no conflict of interest.

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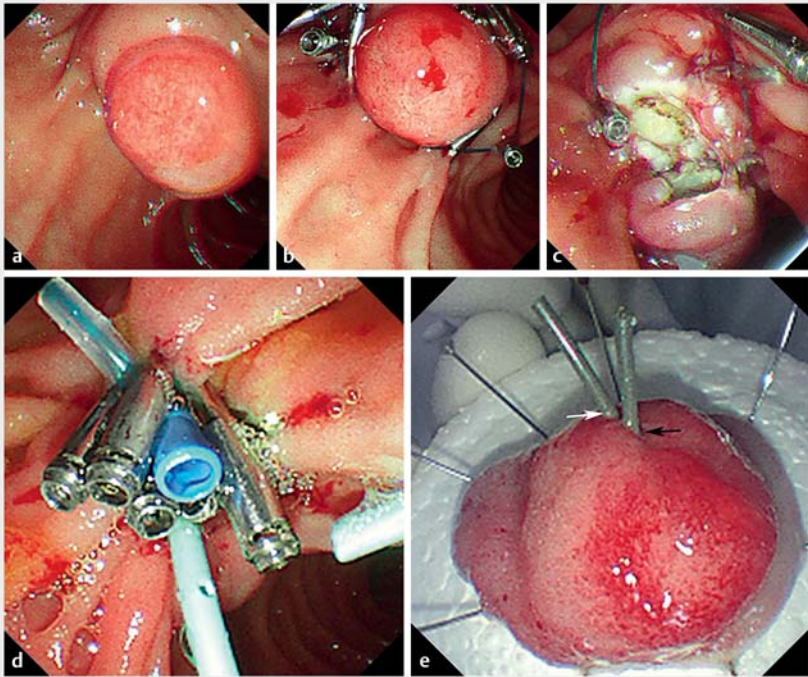
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► **Fig. 1** Endoscopic view of the endoscopic purse-string suturing method during endoscopic papillectomy. **a** Ampullar lesion in white-light mode. **b** The endoloop was anchored to the normal mucosa with clips surrounding the tumor. **c** After the tumor was completely encircled by the snare, en bloc endoscopic papillectomy was carried out. **d** After the plastic stents were inserted into the common bile duct and main pancreatic duct, the mucosal defect was closed by slowly tightening the endoloop to control the bleeding. **e** The resected specimen was flattened and fixed onto a foam board, and confirmed to include adequate margins of normal mucosa.

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Endoscopy 2023; 55: E167–E168

DOI 10.1055/a-1948-1931

ISSN 0013-726X

published online 28.10.2022

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