

EMR with an over-the-scope clip for superficial nonampullary duodenal epithelial tumor with fibrosis

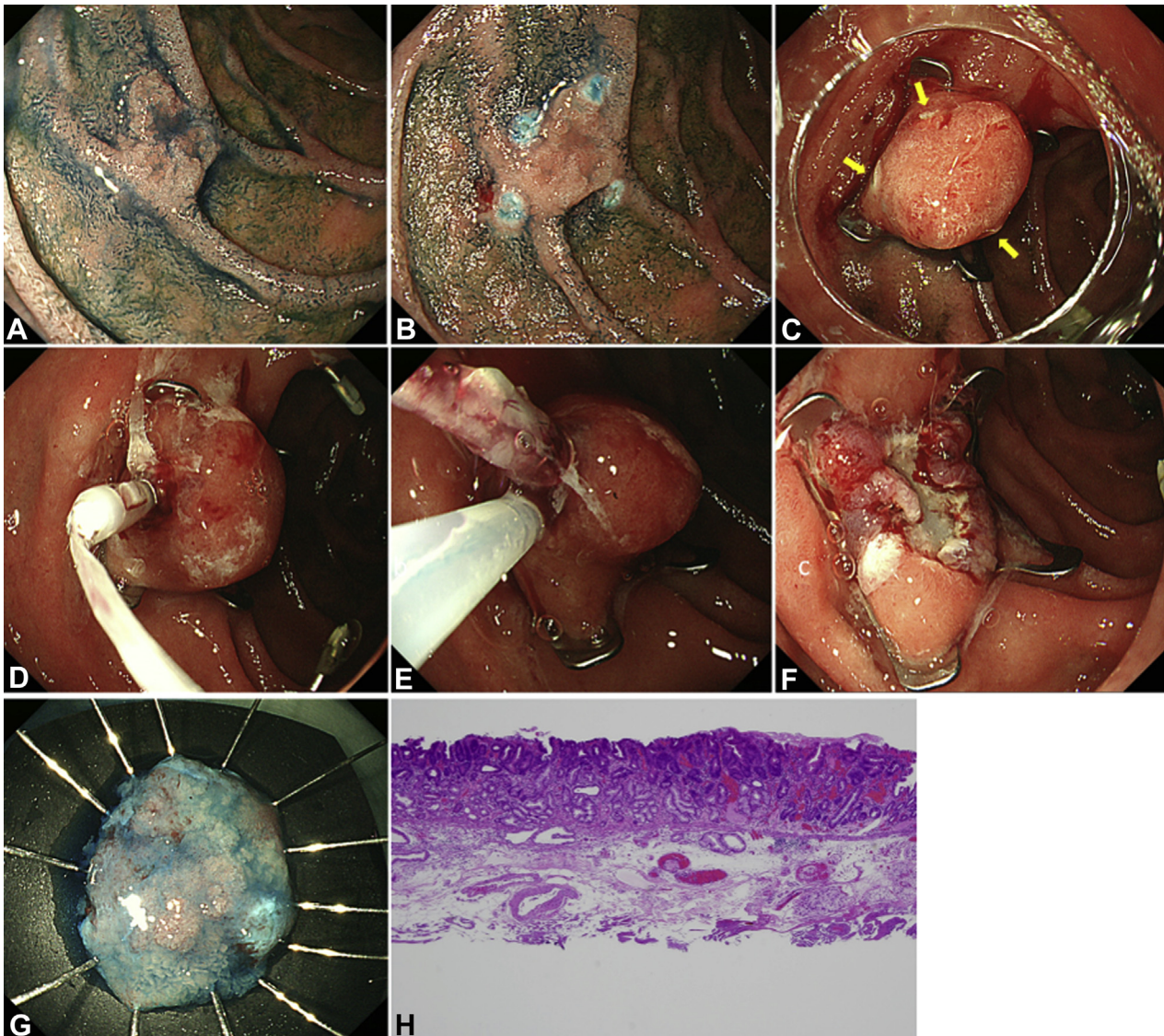


Figure 1. Strategy for EMR with use of an over-the-scope clip (OTSC) (EMRO). **A**, Chromoendoscopic image with indigo carmine dye. **B**, Marking of the border of the target lesion with the tip of an electrosurgical snare. **C**, Successful deployment of the OTSC outside marking (*yellow arrows*). Pseudoprotruding polyps above the OTSC. **D**, Deployment of endoscopic clip with dental floss near the marking. **E**, Resection with an electrosurgical snare above the OTSC. **F**, Post-EMRO defect without perforation or overt bleeding. **G**, Resected specimen. The lateral margin is free from tumor cells. **H**, Histopathologic examination revealing the tumor as a high-grade intraepithelial neoplasia with negative resection margins (H&E, orig. mag. $\times 100$).

Endoscopic resection for superficial nonampullary duodenal epithelial tumors (SNADETs) is technically challenging because of the high risk of severe adverse events, including perforation and bleeding. In particular,

endoscopic resection of SNADETs that cannot be lifted because of pronounced fibrosis associated with preoperative biopsy sampling is very difficult. There is also a higher risk of perforation in these cases. Recently, the

Written transcript of the video audio is available online at www.VideoGIE.org.

use of an over-the-scope clip (OTSC) system was reported to be safe and effective for endoscopic closure of iatrogenic GI perforations or hemostasis. Therefore, we developed a novel method for endoscopic resection of SNADETs with fibrosis, in which adverse events such as those mentioned above are avoided by the insertion of an OTSC at the base of the target tumor before tumor resection; we call this method EMRO (EMR using OTSC). Herein, we report our first case of EMRO for a SNADET (Video 1, available online at www.VideoGIE.org).

A 52-year-old man was found to have a flat-elevated tumor measuring approximately 10 mm in diameter in the second part of the duodenum (Fig. 1A). First, the border of the target lesion was marked by use of the tip of an electrosurgical snare (SnareMaster: 15 mm diameter; Olympus Medical Systems Co, Tokyo, Japan) (Fig. 1B). Then, the endoscope was mounted with a 9-mm OTSC (Ovesco Endoscopy GmbH, Tübingen, Germany), and the lesion, including the marking, was suctioned sufficiently into the cap. The OTSC was successfully deployed outside the marking, creating a pseudopolyp of the target lesion (Fig. 1C). Then, an endoscopic clip with dental floss was driven into a region near the marking (Fig. 1D) with the target lesion held together with the floss to prevent the resected specimen from flowing toward, and getting lost in, the small bowel. Finally, the lesion was resected en bloc above the OTSC

by an electrosurgical snare, with use of the Endo Cut mode on the electric generator (ICC200; ERBE Elektromedizin, Tübingen, Germany) without adverse events (Figs. 1E-G). The patient was discharged on day 2 after the operation. Histopathologic examination revealed the lesion to be high-grade intraepithelial neoplasia (Fig. 1H).

In summary, EMRO can be considered a safe and effective treatment modality for relatively small (≤ 10 mm in diameter) SNADETs with fibrosis.

DISCLOSURE

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