Usefulness and safety of colorectal precutting EMR and hybrid endoscopic submucosal dissection for sessile serrated polyps with use of a novel multifunctional snare

Yuzuru Tamaru, MD, PhD,1 Toshio Kuwai, MD, PhD,1 Kazutaka Kuroki, MD,1 Hiroshi Kohno, MD, PhD,1 Saud Ishaq, FRCP2

Precutting EMR (defined as a technique in which snaring is done without dissecting the submucosal layer after the circumference of the lesion alone is incised by using a knife or the tip of a snare) and hybrid endoscopic submucosal dissection (ESD) (defined as a technique in which the submucosal layer is dissected and snaring is carried out after the ESD procedure by use of a knife for ESD or the tip of a snare) have the advantages of decreased procedure time and decreased perforation risk over conventional ESD.1-4 Recently, a novel multifunctional snare (MFS) (Souten; Kaneka Medics, Tokyo, Japan) (Fig. 1) was introduced to enable easy and time-efficient hybrid ESD.4 The MFS combines an 18.5-mm snare loop with a 1.5-mm needle-knife and a knob-shaped tip attached to the top of the snare loop. The advantages of this snare are that the knob-shaped tip allows the needle-knife to stabilize and place tension on the resected surface during circumferential incision and/or partial submucosal dissection, and all the procedures can be completed by use of a single device. Sessile serrated polyps (SSPs) are increasingly being implicated as significant contributors to the epidemiologic burden of colorectal cancer; therefore, en bloc resection of SSPs is important to ensure accurate and reliable histopathologic assessment of the resected specimen.5

We present 2 cases of precutting EMR/hybrid ESD involving circumferential incision and partial dissection followed by snare resection by use of the MFS (Video 1, available online at www.VideoGIE.org) A high-frequency generator (VIO300D; Erbe, Tubingen, Germany) was used with endocut I settings of effect 2, duration 2, interval 2, and swiftcoag setting of effect 3 (45 W).

PATIENT 1

In a 70-year-old man, a 20-mm white, flat, elevated lesion (0-IIa) between the folds in the ascending colon was resected by hybrid ESD with the use of MFS (Fig. 2A). After injection of 0.4% sodium hyaluronate into the submucosal layer, a circumferential incision was made with a needle-knife tip. Subsequently, partial submucosal dissection was performed with the same tip. Then, the same snare was placed in the dissected plane for

Figure 1. A, A novel multifunctional snare (Souten), designed to perform precutting EMR and hybrid endoscopic submucosal dissection. B, Part of an 18.5-mm snare. C, Part of a 1.5-mm needle-knife and a knob-shaped tip attached to the top of the snare loop.
complete resection of the polyp, with no adverse events (Fig. 2B). Histologic findings revealed a horizontal margin-negative SSP (R0).

PATIENT 2

In a 62-year-old woman, a 20-mm white, flat, elevated lesion in the ascending colon was resected by precutting EMR using MFS in the same fashion without submucosal dissection (Fig. 3). After injection of 0.4% sodium hyaluronate into the submucosal layer to elevate the lesion, the MFS was used to make an incision in the surrounding normal mucosa. After a circumferential incision was completed, the remaining portion of the lesion was snared by use of the MFS. Histologic findings revealed a horizontal margin-negative SSP (R0).

The precutting EMR/hybrid ESD procedure has the advantage of decreased procedure time and is useful for resecting colorectal tumors. However, the en bloc resection rate by precutting EMR/hybrid ESD is not as high as expected; moreover, adverse events are reported after the use of this technique. Therefore, SSPs in particular would be a good indication in colorectal tumors for precutting EMR/hybrid ESD because of sufficient submucosal swelling after injection for the submucosal layer.

DISCLOSURE

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Abbreviations: ESD, endoscopic submucosal dissection; MFS, multifunctional snare; SSP, sessile serrated polyp.
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Department of Gastroenterology, National Hospital Organization, Kure Medical Center and Chugoku Cancer Center, Kure, Japan (1), Gastroenterology Department, Dudley Group Hospitals, Dudley, Birmingham City University, Birmingham, United Kingdom, St. George’s University, Grenada West Indies (2).

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