

Hybrid-biopsy endoscopic mucosal resection: an effective and simple technique for flat colorectal lesions

Hybrid resection techniques (endoscopic mucosal resection [EMR] and endoscopic submucosal dissection [ESD]) [1–5] have been described to facilitate complete removal of flat lesions. They may be useful in challenging cases where the snare slips, such as in laterally spreading lesions of the nongranular type (LST-NG), fibrosis due to previous resection attempts, and submucosal fatty tissue, among other factors. However, endoscopists not experienced in ESD may not feel confident performing circumferential incision with a dedicated knife or the tip of a snare, and indeed would be unsafe if

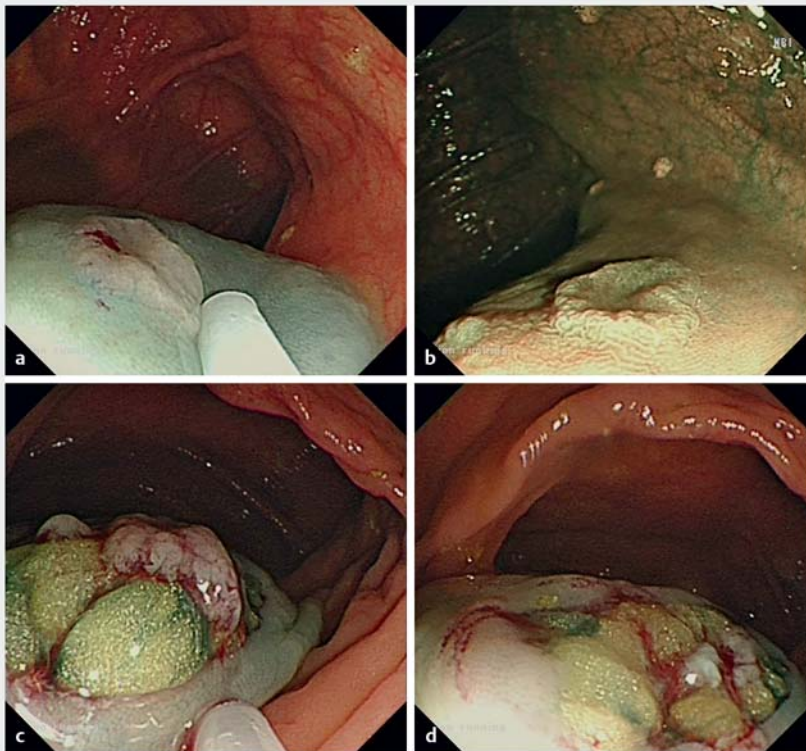
they were inexperienced in this technique.

Here we report a novel hybrid EMR technique that is especially useful when the snare slips while performing polypectomy. After submucosal injection, a circumferential incision is made using a standard biopsy forceps, with subsequent bites around the target lesion. This incision facilitates entrapment of the polyp by the snare, preventing slippage when the snare is closed. The lesion is finally cut with cold or hot technique. We have applied this technique to three colonic polyps.

1. A 7-mm flat lesion in the ascending colon, where slippage of the snare was probably related to abundant submucosal fatty tissue (► **Fig. 1**, ► **Video 1**).
2. A 15-mm LST-NG flat lesion in the transverse colon (► **Fig. 2**).
3. A 15-mm recurrent lesion (IIa Paris classification) in the sigmoid colon, where slippage was related to fibrosis secondary to a previous incomplete ESD. In this case, a semi-circumferential incision was made with the tip of a K-snare (Pentax, Tokyo, Japan), and completed with a biopsy forceps; finally, a piecemeal resection using a cold snare was successfully completed (► **Fig. 3**).

Histology in all cases showed tubular adenomas with low grade dysplasia. Hybrid-biopsy EMR is a simple method to completely remove flat lesions. The devices required are widely available and inexpensive, and the procedure can be performed safely by inexperienced ESD endoscopists. Improving the design of biopsy forceps to make them rotatable could make this technique even easier to apply.

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► **Fig. 1** A 7-mm IIa Paris classification polyp located in the ascending colon. **a** IIa + IIc polyp after submucosal injection. **b** Narrow-band imaging view. **c** Circumferential biopsy forceps bites showing abundant submucosal fatty tissue. **d** Resected view after hybrid-biopsy endoscopic mucosal resection.



▶ **Video 1** Hybrid-biopsy endoscopic mucosal resection of a flat lesion in the ascending colon.

Competing interests

None

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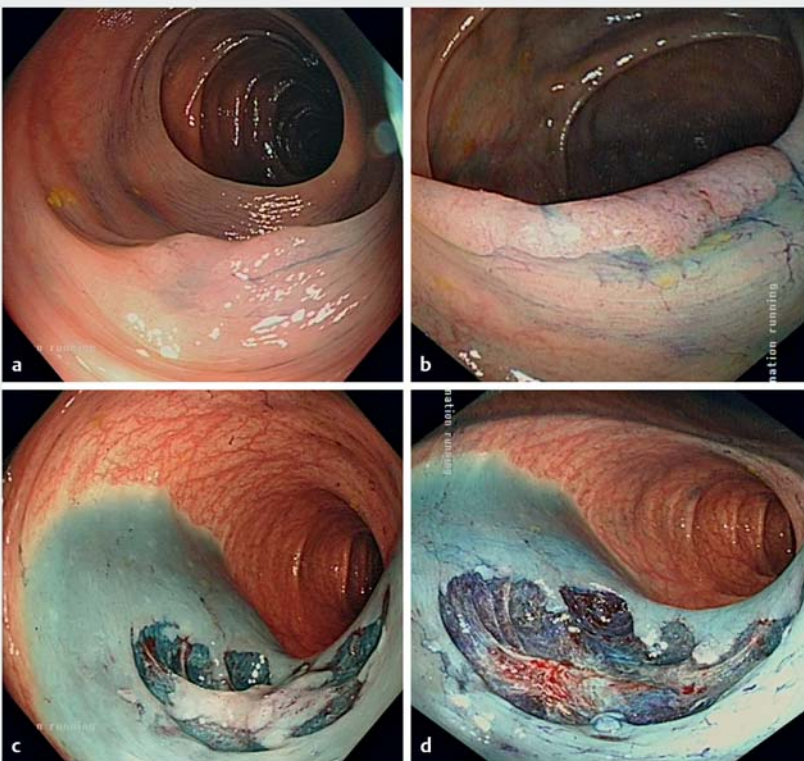
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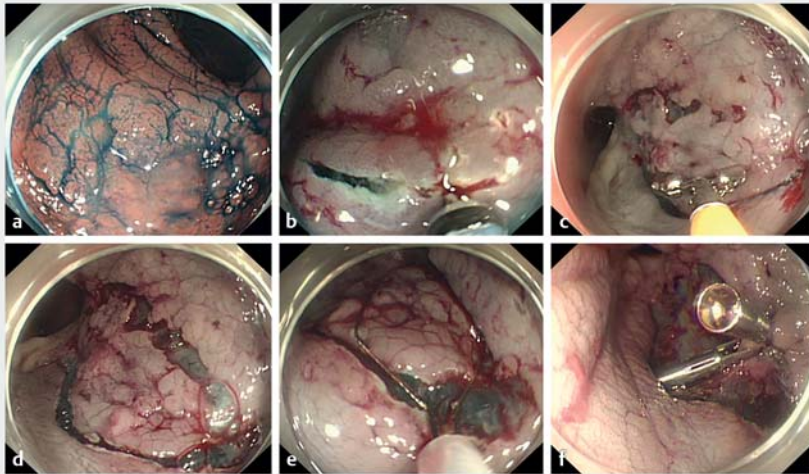
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▶ **Fig. 2** A 15-mm laterally spreading nongranular lesion located in the transverse colon. **a** Before the procedure. **b** After submucosal injection. **c** After circumferential biopsy forceps bites. **d** Scar after hybrid-biopsy endoscopic mucosal resection.



► **Fig. 3** A 15-mm residual polyp (IIa Paris classification) located in the sigmoid colon. **a** Polyp assessment under indigo carmine. **b** Semi-circumferential incision with K-snare (Pentax, Tokyo, Japan). **c** Incision completed with biopsy forceps in severely fibrotic area. **d** Final circumferential incision: left side K-snare, right side biopsy forceps. **e** Piecemeal cold snare resection fitting the snare in the incision. **f** Final view after resection.

Bibliography

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