

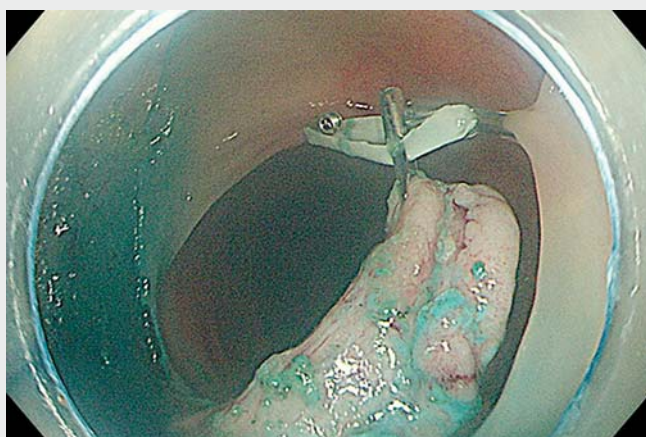
Endoscopic submucosal dissection of giant colorectal lesion using the “multiple-clip-facilitated rubber-band method”

Colorectal endoscopic submucosal dissection (ESD) is considered to be one of the most challenging procedures. To perform colorectal ESD safely and efficiently, clear visualization of the submucosal layer is essential, especially for giant lesions. Various traction methods have been developed to improve the visibility of the submucosal layer [1–3]; however,

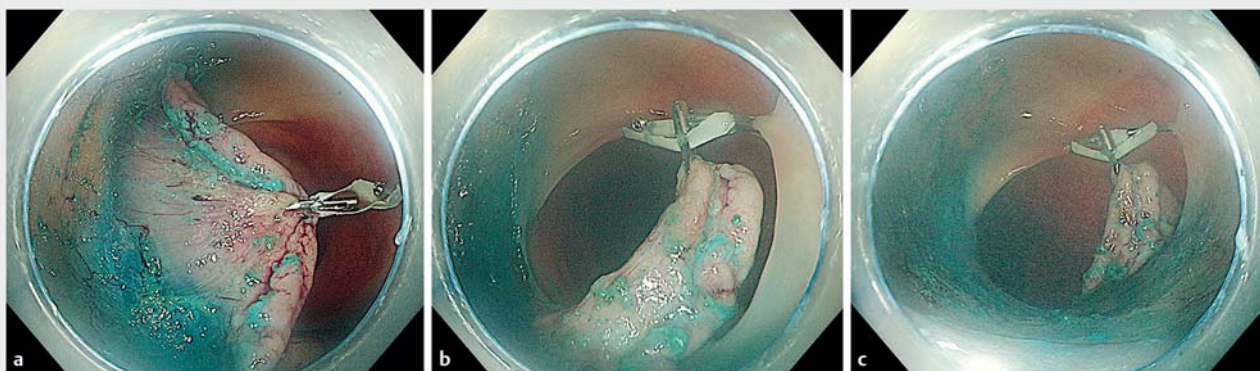
few can offer continuous traction with changeable direction. Recently, we modified the rubber-band method and called the new traction method the “multiple-clip-facilitated rubber-band method” (MCRM).

A 73-year-old man with a 50-mm giant nongranular laterally spreading tumor in the transverse colon was treated with

ESD using the MCRM. First, a semicircumferential incision was made around the lesion and semicircumferential dissection of the mucosa was performed. Second, we attached a rubber band to a clip, which was then passed through the operative channel and fixed beneath the lesion. Afterwards, the rubber band was affixed with another clip to the contralateral colonic wall. These first two clips enabled the primary traction (► Fig. 1 a). After partial submucosal dissection, the primary traction became insufficient. We then applied a third clip, attaching the rubber band to the opposite site of the remnant lesion (► Fig. 1 b). In this way, continuous traction was obtained and the remnant submucosal fibers were tensioned for rapid and safe completion of the procedure, with a perfect view of the submucosal space (► Fig. 1 c; ► Video 1). If needed, a fourth or fifth clip could have been applied to give further traction. The resected lesion was fixed with a clip to the hanging rubber band, from which it was then easily removed with cutting forceps.



► **Video 1** Colorectal endoscopic submucosal dissection using the multiple-clip-facilitated rubber-band traction method for a 50-mm laterally spreading tumor in the transverse colon.



► **Fig. 1** Colonoscopic views showing: **a** countertraction with the first two clips and the rubber band producing good exposure of the submucosal space; **b** the third clip used to attach the rubber band to the opposite site of the remnant lesion, giving a perfect view of the submucosal layer again; **c** the giant lesion being rapidly and safely dissected using this new method, with the dissected lesion then being removed from the hanging rubber band with cutting forceps.

We have found this MCRM traction method to be very useful for giant colonic superficial neoplasia, enabling a rapid and safe ESD procedure.

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Competing interests

None

The authors

Guan Yi Liu, Long Rong, Yun Long Cai, Wei Dong Nian

Endoscopy Center, Peking University First Hospital, Beijing, China

Corresponding author

Long Rong, MD

Endoscopy Center, Peking University First Hospital, Beijing, China

Fax: +86-86-572437

ronglong8@vip.sina.com

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