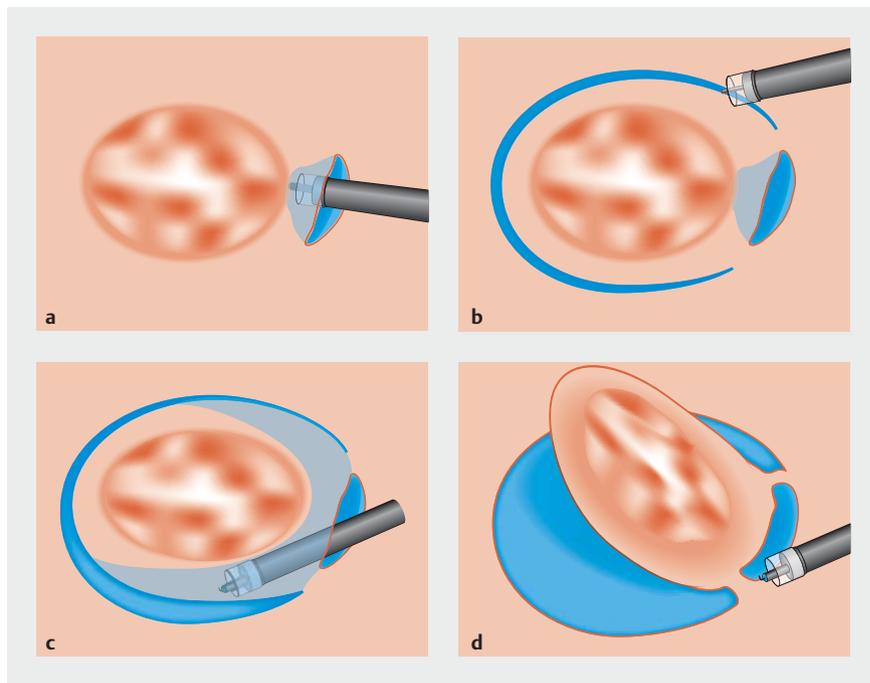


## Colorectal endoscopic submucosal dissection using “mucosal bridges” for local recurrence after endoscopic resection

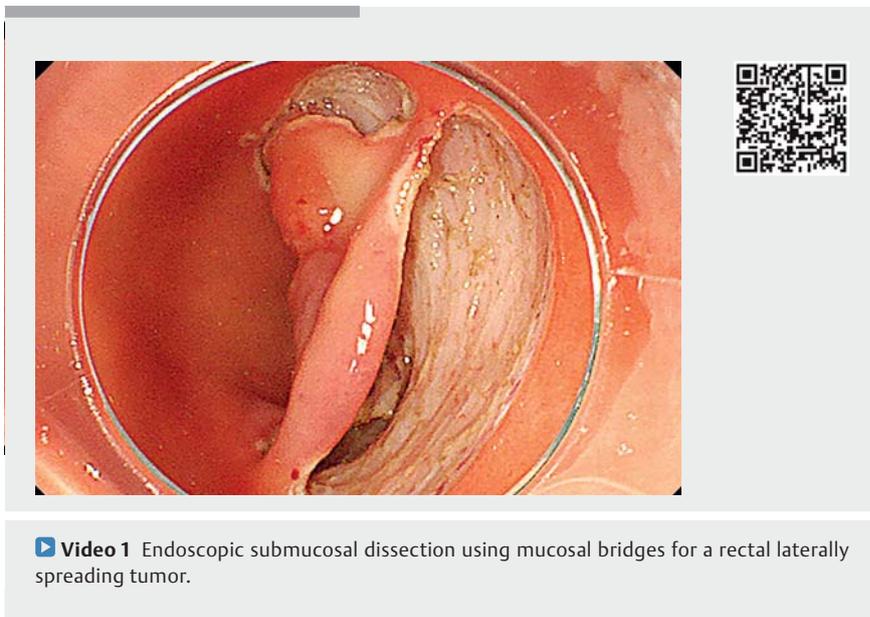
Endoscopic submucosal dissection (ESD) for local recurrence after endoscopic resection can be challenging because of diffuse submucosal fibrosis. Although the pocket-creation method (PCM) is very useful to overcome submucosal fibrosis during colorectal ESD [1–3], identifying the dissecting line amidst diffuse fibrotic submucosa is difficult because the edge of the resected specimen is invisible from inside the pocket. Here, we present a novel strategy for performing ESD using mucosal bridges (► **Fig. 1**, ► **Video 1**).

A 59-year-old woman was diagnosed with a laterally spreading tumor located over the scar of a previous endoscopic mucosal resection in the proximal rectum. The procedure was initiated in the same manner as that for PCM, and thereafter a circumferential incision was made leaving a mucosal margin of several millimetres on both sides of the pocket entrance as mucosal bridges. Submucosal dissection was performed on the lateral sides creating a “V-shaped” tunnel with two exits. The dissecting line could be targeted even in the presence of fibrotic submucosa to connect the two exits of the “V-shaped” tunnel, with sufficient traction provided by the mucosal bridges (► **Fig. 2**). The lesion was resected completely, and histological examination revealed a high grade adenoma with R0 resection.

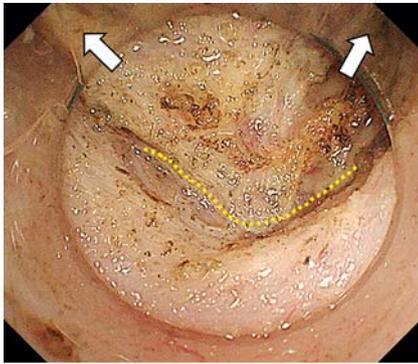
In this case, we could identify the dissecting line by making a “V-shaped” tunnel. The two exits can also serve as drainage outlets for the pooled water or blood in the pocket during submucosal dissection. Mucosal bridges provide sufficient traction and stable maneuverability, and are effective until the latter phase of the procedure. The advantage of this novel strategy using mucosal bridges is that one can switch to it from PCM, even half-way through the submucosal dissection, depending on factors such as submucosal fibrosis, endoscopic approach, and



► **Fig. 1** The sequence of endoscopic submucosal dissection using mucosal bridges. **a** Initial mucosal incision at the distal side of the lesion and creation of a submucosal pocket. **b** Near-circumferential incision, keeping two mucosal bridges. **c** Submucosal dissection inside the “V-shaped” tunnel. **d** Cutting the mucosal bridges and completion of en bloc resection.



► **Video 1** Endoscopic submucosal dissection using mucosal bridges for a rectal laterally spreading tumor.



► **Fig. 2** Endoscopic view during submucosal dissection using mucosal bridges. White arrows show the direction of mucosal bridge traction. Yellow dotted line shows dissecting line.

maneuverability. The adaptability of this strategy to the situation during the procedure can be considered favorable for colorectal ESD.

Endoscopy\_UCTN\_Code\_TTT\_1AO\_2AG

### Competing interests

None

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DOI <https://doi.org/10.1055/a-0889-7230>  
Published online: 9.5.2019  
*Endoscopy* 2019; 51: E241–E242  
© Georg Thieme Verlag KG  
Stuttgart · New York  
ISSN 0013-726X

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