

## Use of adrenaline for specimen fixation after endoscopic submucosal dissection

To judge how likely an endoscopic submucosal dissection (ESD) is to have been curative and the necessity for additional treatment, accurate histological diagnosis is critical. The resected specimen is stretched and fixed, mucosal side up, onto a rubber or cork plate, so that the mucous membrane surrounding the lesion is evenly flattened and the mucous membrane surface can be observed. The resected specimen often curls up (► **Fig. 1 a**), so fixing of the specimen can be difficult and stressful.

► **Video 1** shows that, when adrenaline is dropped onto the specimen, it becomes relaxed (► **Fig. 1 b**). Adrenaline has the effect of relaxing intestinal smooth muscle and thereby makes it easier to fix the specimen onto a plate (► **Fig. 1 c**).

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### Competing interests

None

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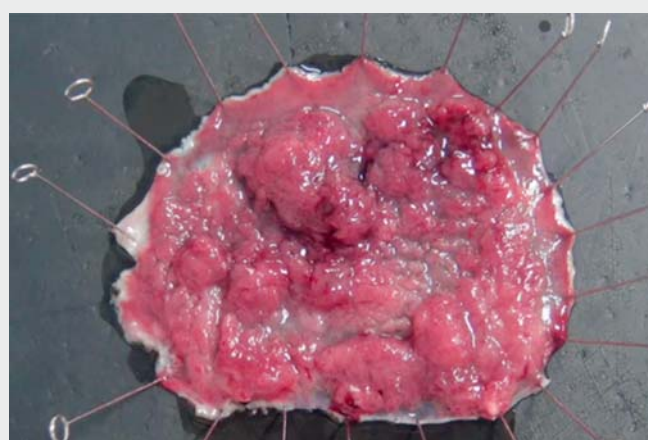
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► **Video 1** A resected specimen after endoscopic submucosal dissection curls up, so fixing onto a plate is difficult; adrenaline is dropped onto the specimen; the specimen becomes relaxed; the resected specimen can now be easily fixed mucosal side up onto a plate.



► **Fig. 1** Photographs showing: **a** a resected specimen curling up after endoscopic submucosal dissection; **b** the specimen becoming relaxed after adrenaline is dropped onto it; **c** the resected specimen fixed mucosal side up onto a plate, which is now easily achievable.