Colorectal gel immersion endoscopic submucosal dissection using the tunneling method

Colorectal endoscopic submucosal dissection (ESD) is now widely used for the treatment of colorectal tumors using several strategies. The effectiveness of the pocket-creation method combined with saline immersion has been reported with an improved endoscopic visual field and submucosal approach due to the buoyancy of the lesion and reduced the amount of submucosal injection. Its disadvantages include a poor visual field during bleeding and dissipation of coagulation ability with monopolar devices [1, 2]. However, gel immersion ESD has been reported to overcome these issues [3–5]. As the colorectum has a large lumen and may cause difficulties for gel immersion, it is assumed that a closed lumen such as a pocket or tunnel would facilitate gel immersion; therefore, the strategy of performing gel immersion ESD in combination with the tunneling method was devised.

Herein, we report a combination of gel immersion ESD and tunneling in a colorectal tumor (Video 1). A 71-year-old woman presented with a 50-mm laterally spreading, granular-nodular, mixed-type tumor located in the ascending colon (Fig. 1). Mucosal incision and submucosal dissection during gel immersion ESD were performed using a new electrosurgical knife (GoldKnife T-type 1.5 mm; Micro-Tech Co., Ltd, Nanjing, China), which allowed local injection of hyaluronic acid solution. A suitable approach to the submucosal layer and smooth creation of the tunnel were achieved owing to the buoyancy of the gel (Fig. 2a). Bleeding in the tunnel was clearly visible in the gel, and hemostasis could be quickly and easily secured. After tunnel penetration, mucosal incision and dissection on both sides of the tunnel were also performed smoothly (Fig. 2b, c). The tumor was completely excised without perforation (Fig. 2d). Colorectal gel immersion ESD using the tunneling method may be an alternative approach.

Competing interests

The authors declare that they have no conflict of interest.

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