Successful endoscopic treatment of an appendicocutaneous fistula using endoloops

An appendicocutaneous fistula is a rare complication of appendectomy [1]. Moreover, the fistula can persist [2]. A 52-year-old man presented to our department with a 3-month history of purulent abdominal wall sinus that developed after appendectomy 3 months ago. Abdominal wall radiography revealed an abdominal wall fistula connecting with the ileocecal region (Fig.1). Under colonoscopy, we identified the swollen and purulent appendix stump with black stitching residue (Video 1). After repeated washing of the appendix stump (Video 1), milky pus remained around the stitching residue (Fig.2). Using grasping forceps, we easily removed the stitching residue (Video 1). Saline solution with methylene blue was injected from the ostium of the abdominal wall fistula, and the inlet of the fistula was detected at the appendix stump (Fig.3). Normal saline was then injected repeatedly from the abdominal outlet of the sinus to wash the fistula (Video 1). After washing, we released a nylon ring into the ileocecal region (Video 1). Eight clips were used to fasten the nylon ring around the inlet of the fistula at the appendix stump (Video 1). We then

Fig. 1 Abdominal wall radiograph showing the abdominal wall fistula connected with the ileocecal region.

Video 1 Appendicocutaneous fistula treated using endoscopic endoloops.

Fig. 2 Milky pus around the stitching residue.

Fig. 3 Inlet of the fistula at the appendix stump.

Fig. 4 Closing of the fistula inlet using endoloops.

Fig. 5 Inlet of the fistula healing 2 weeks after treatment.
tightened and released the nylon ring (Fig. 4). Methylene blue dye was again injected from the abdominal wall sinus outlet (Video 1); the dye was refluxed back, and the ileocecal region did not show methylene blue. We found two outlets of the fistula (Video 1). Two drainage tubes were placed at the outlets (Video 1). Two weeks later, we noted that the inlet and the outlets of the fistula were healing (Fig. 5). The use of endoscopic endoloops is a new strategy to promote healing of an appendicocutaneous fistula without surgery.

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Competing interests
The authors declare that they have no conflict of interest.

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