Endoscopic closure of cecal fistula using purse-string suture after plombage with polyglycolic acid sheets and fibrin glue

An 86-year-old man with a postappendectomy abscess and fistula was treated with antibiotics and percutaneous drainage for 5 weeks, but the fistula did not close (Fig. 1, Fig. 2a). We report successful fistula closure using a modified endoscopic closure technique (Video 1).

Polyglycolic acid (PGA) sheets (Neoveil; Gunze, Kyoto, Japan) were cut into 5 × 5-mm pieces and delivered into the fistula through the working channel of an endoscope using biopsy forceps. Then, five pieces of PGA sheet were inserted into the fistula, and fibrin glue (Beriplast P Combi-Set; CSL Behring Pharma, Tokyo, Japan) was sprayed via a tube inserted into the fistula. Finally, the endoscope was changed to a two-channel endoscope. A detachable snare (Endoloop; Olympus, Tokyo, Japan) was anchored with clips to the mucosa around the fistula and tightened to prevent the PGA sheet pieces from falling into the cecal lumen. Radiography showed improvement of the abscess cavity at the beginning of oral feeding on postoperative day 5 (Fig. 2b).

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oscopic purse-string suture with an endo-loop and clips closes large mucosal defects or perforations [5] but cannot close fistulas because of the fibrosis surrounding the orifice. Our modified technique combining the above two methods, which complement each other, resulted in complete closure of this patient’s refractory lower GI fistula. This technique is a viable and effective alternative option for closing a cecal fistula.

Acknowledgements

We are deeply grateful to Dr. Shuichi Miyamoto (Karlstad Central Hospital) and Dr. Yoshiko Nakano (Kyoto Medical Center) for giving us insightful advice. And we would like to thank Editage (www.editage.com) for English language editing.

Competing interests

The authors declare that they have no conflict of interest.

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Endoscopy
DOI 10.1055/a-1738-9176
ISSN 0013-726X
published online 2022 © 2022. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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Acknowledgements

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