

## Successful closure of anastomotic dehiscence after colon–rectal cancer resection using the Apollo overstitch suturing system

Anastomotic dehiscence is the most common cause of postoperative morbidity and mortality. The Overstitch endoscopic suturing system (Apollo Endosurgery, Austin, Texas, USA) is a disposable, single-use suturing device that is mounted onto a double-channel therapeutic endoscope and allows placement of either running or interrupted full-thickness sutures. Several reports have described endoscopic suturing as a treatment option for management of gastrointestinal defects and for stent anchorage [1–5]. To our knowledge, there is no report on the closure of colonic anastomotic dehiscence with this device.

We describe the case of a 70-year-old man who underwent left colectomy for colon cancer. On the seventh postoperative day, fecal material appeared from his abdominal drain, but he had no signs of fever or peritonitis. A computed tomography (CT) scan of his abdomen confirmed the clinical suspicion of anastomotic dehiscence. We then performed an endoscopic evaluation, which confirmed the presence of a large anastomotic dehiscence (► Fig. 1).

We decided to treat the lesion with the Apollo Overstitch device. The procedure was carried out using CO<sub>2</sub> insufflation, with the patient under conscious sedation. Initial tissue preparation prior to closure was done by creating a surgical surface using argon plasma coagulation at the immediate perimeter of the leak; subsequently, running sutures were placed with a distal to proximal technique, attempting to create a full-thickness suture (► Video 1). The procedure was successful with no complications occurring over the following days. However, because radiological follow-up performed a week later showed the persistence of a minimal leak at the site of the dehiscence, we decided to repeat the procedure with the Apollo device.



► Fig. 1 Endoscopic view showing the anastomotic dehiscence.



► Fig. 2 Repeat endoscopy at 6 months confirmed closure of the anastomotic dehiscence.

At 1 month after the second procedure, no complications or symptoms were reported; moreover, no further fecal material and no contrast leakage on radiological follow-up had been observed. Repeat endoscopic evaluation at 6 months showed complete closure of the dehiscence (► Fig. 2).

This clinical report demonstrates the effectiveness of an endoscopic suturing device for closure of postoperative colorectal leakage.

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► Video 1 Successful closure of an anastomotic dehiscence after colon – rectal cancer resection using the Apollo Overstitch suturing system.



## Competing interests

None

## The Authors

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## Bibliography

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