Rescuing the impacted endoscopic suturing device during endoscopic sleeve gastroplasty

A 57-year-old woman underwent endoscopic sleeve gastroplasty using an endoscopic suturing device attached to a single-channel adult gastroscope. During the second bite, both the needle driver opening function and anchor exchange mechanism failed. This resulted in impacton of the device in the gastric wall and a "red-out" that obscured the visual field. An ultra-slim gastroscope was inserted transorally, enabling visualization of the impacted device (Fig. 1, Video 1). A needle knife was passed through the channel port of the endoscopic suturing system and used to resect through the entrapped gastric tissue. Mini-forceps inserted through the ultra-slim gastroscope were used by a second endoscopist to manipulate the needle-knife catheter to extend the incision laterally and down to the level of the needle driver, thereby releasing the impacted device from the gastric wall (Fig. 2).

Ex-vivo examination revealed that the suture needle had become embedded between the anchor exchange catheter and the channel of the endoscopic suturing device (Fig. 3). This caused a misalignment between the needle driver and anchor exchange mechanism.

Fig. 1 Obscured endoscopic views (red-out) following the second bite with the endoscopic suturing device, despite manipulation of the gastroscope and endoscopic suturing device.

Fig. 2 a, b View of the impacted endoscopic suturing device from an ultra-slim gastroscope inserted beside the adult gastroscope. c–e Needle knife inserted through the channel of the endoscopic suturing device, used to resect through entrapped gastric tissue under direct visualization from an ultra-slim gastroscope. f Trailing suture, which was cut with argon plasma coagulation, thereby freeing the entire endoscopic suturing mechanism from the gastric wall.

Video 1 Rescue of an impacted endoscopic suturing device during endoscopic sleeve gastroplasty.
and anchor exchange. Although misalignment occurs in 8.4% of cases [2], it can be salvaged by retracting the anchor exchange a few centimeters before re-engaging the needle driver. In our case, the lodged suture needle created a fixed misalignment that could not be rectified. We show that a needle knife can be used safely to free an impacted device under direct endoscopic visualization, preventing the need for emergency surgical intervention.

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Competing interests

The authors declare that they have no conflict of interest.

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