

A novel method for closure of a persistent gastrostomy feeding site fistula

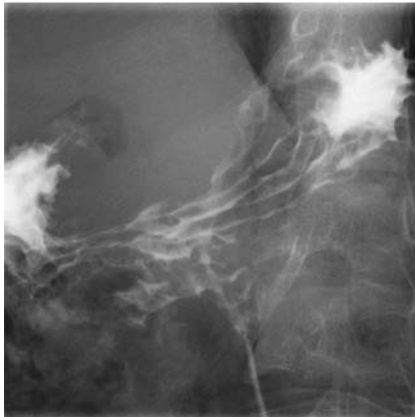


Fig. 1 Contrast study of a persistent gastrostomy site fistula in a 22-year-old man presenting with leaking gastric contents 24 months after the removal of a gastrostomy.

A 22-year-old man with congenital intestinal malrotation and autoimmune enterocolitis, previously requiring enteral nutritional support for many years, presented with persistently leaking gastric contents 24 months after the removal of a gastrostomy. Attempted closure with three endoscopic clips at the internal opening 8 months earlier had been unsuccessful.

A contrast study confirmed persistent fistula with a short tract (▶ **Fig. 1**). While the patient was under general anesthesia, a further procedure was performed comprising closure with silver nitrate cauterization and a 10-mm hexagonal nitinol clip (Padlock-G Clip; Aponos Medical, Kingston, New Hampshire, USA). The internal opening was identified endoscopically (▶ **Fig. 2a**). The external opening was infiltrated with 7 mL of 1% lignocaine as a local anesthetic. The tract just allowed passage of a 3-mm-diameter silver nitrate (75% w/w) stick for cauterization, with the depth confirmed endoscopically (▶ **Fig. 2b**). The inner opening and surrounding tissue were drawn into a deployment pod attached to a standard esophagogastroduodenoscope (Olympus, Tokyo, Japan) (▶ **Fig. 2c**). The 10-mm hexagonal nitinol clip with six inner prongs was then deployed over this pod, with good im-

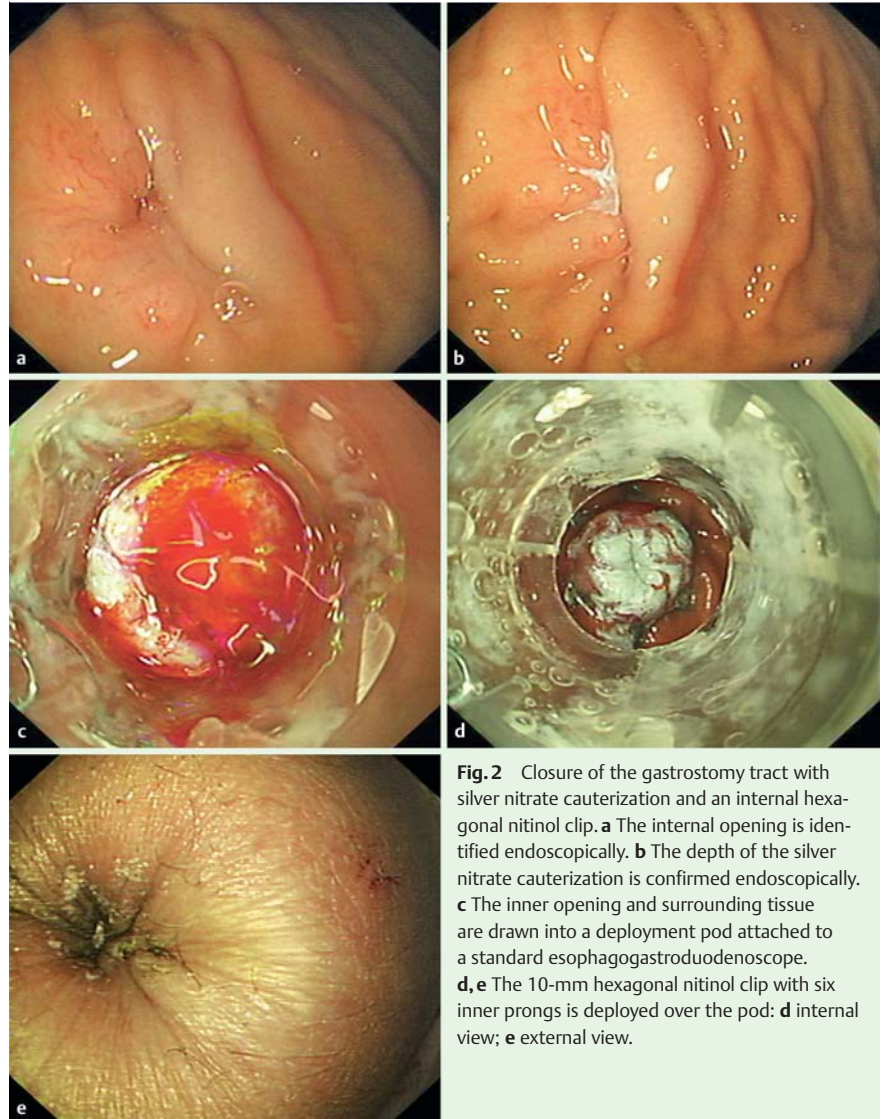


Fig. 2 Closure of the gastrostomy tract with silver nitrate cauterization and an internal hexagonal nitinol clip. **a** The internal opening is identified endoscopically. **b** The depth of the silver nitrate cauterization is confirmed endoscopically. **c** The inner opening and surrounding tissue are drawn into a deployment pod attached to a standard esophagogastroduodenoscope. **d, e** The 10-mm hexagonal nitinol clip with six inner prongs is deployed over the pod: **d** internal view; **e** external view.

mediate effect (▶ **Fig. 2d**, ▶ **Fig. 2e**). The patient reported mild, self-limiting discomfort at the site for 3 days after the procedure, but there was no persistent drainage or abdominal pain at follow-up at 6 months.

Persistence of a gastrocutaneous fistula, defined as the leakage of gastric contents for at least 1 month after the removal of a gastrostomy tube, occurs in up to 34% of patients [1]. Previously, surgical closure was required, but more recently, multiple endoscopic methods with varying efficacy

have been described. These include chemical or electrical cauterization in combination with clip closure [2], endoscopic suturing [3], fibrin glue placement [4], and over-the-scope clip placement [5]. This is the first report to describe the use of a 10-mm hexagonal nitinol clip in combination with silver nitrate cauterization as an effective option for the closure of persistent gastrocutaneous fistula at a gastrostomy site. Apart from causing transient discomfort, the method appears to be safe.

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**Mayur Garg¹, Ana Wilson^{1,2},
Simon Gabe^{2,3}, Brian P. Saunders^{1,2},
Siwan Thomas-Gibson^{1,2}**

¹ Wolfson Unit for Endoscopy, St. Mark's Hospital, Watford Road, Harrow, Middlesex, United Kingdom

² Imperial College, London, United Kingdom

³ Lennard-Jones Intestinal Failure Unit, St. Mark's Hospital, Watford Road, Harrow, Middlesex, United Kingdom

References

- 1 Janik TA, Hendrickson RJ, Janik JS et al. Analysis of factors affecting the spontaneous closure of a gastrocutaneous fistula. *J Pediatr Surg* 2004; 39: 1197–1199
- 2 Teitelbaum JE, Gorcey SA, Fox VL. Combined endoscopic cautery and clip closure of chronic gastrocutaneous fistulas. *Gastrointest Endosc* 2005; 62: 432–435
- 3 Eskaros S, Ghevariya V, Krishnaiah M et al. Percutaneous endoscopic suturing: an effective treatment for gastrocutaneous fistula. *Gastrointest Endosc* 2009; 70: 768–771
- 4 Gonzalez-Ojeda A, Avalos-Gonzalez J, Mucino-Hernandez MI et al. Fibrin glue as adjuvant treatment for gastrocutaneous fistula after gastrostomy tube removal. *Endoscopy* 2004; 36: 337–341
- 5 Singhal S, Changela K, Culliford A et al. Endoscopic closure of persistent gastrocutaneous fistulae, after percutaneous endoscopic gastrostomy (PEG) tube placement, using the over-the-scope-clip system. *Ther Adv Gastroenterol* 2015; 8: 182–188

Bibliography

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Corresponding author

Siwan Thomas-Gibson, MD

Wolfson Unit for Endoscopy
St. Mark's Hospital
Watford Road
Harrow, UK HA13UJ
United Kingdom
Fax: + 44-208-423-3588
s.thomas-gibson@nhs.net