Transanal submucosal endoscopic resection: a new endosurgical approach to the resection of giant rectal lesions

Fig. 1 Transanal passage of an endoscope and two laparoscopic retractors using the GelPoint Path platform (Applied Medical, Rancho Santa Margarita, California, USA).

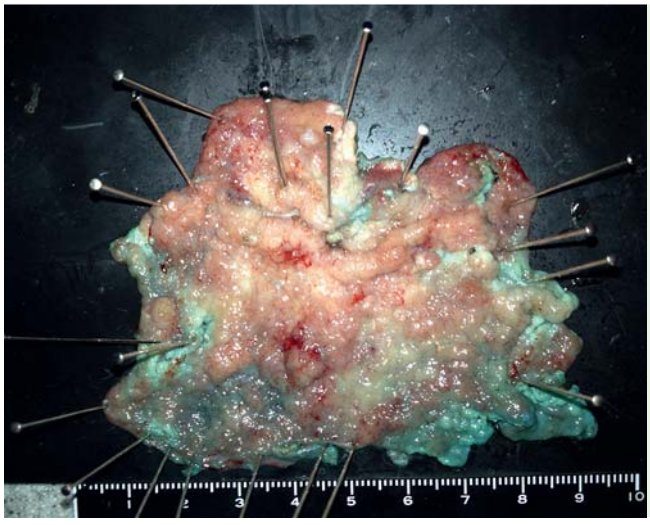

Fig. 2 Pinned out specimen following transanal submucosal endoscopic resection approach.

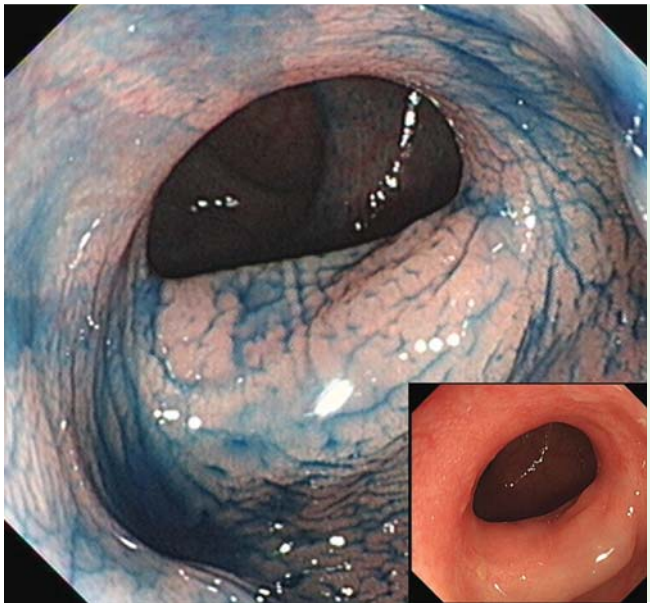

Fig. 3 Post-transanal submucosal endoscopic resection scar, with no residual polyp on white light endoscopy with indigo carmine.

Transanal surgical and advanced endoscopic resection procedures have the potential to provide complete and successful eradication of rectal lesions [1–3]. However, both approaches have limitations in terms of practicability and safety [3–5].

Transanal submucosal endoscopic resection (TASER) is a new endosurgical approach, which combines the advantages of both endoscopic therapy and transanal surgery. It utilizes a three-port channel platform (GelPoint Path; Applied Medical, Rancho Santa Margarita, California, USA), which allows simultaneous transanal passage of an endoscope and two laparoscopic instruments (**Fig. 1**).

We present a video clip demonstrating TASER, where an endoscopic knife is used as the primary cutting tool to resect a (9.4×7.6 cm) circumferential (abutting the dentate line to the upper rectum), benign, nongranular, lateral spreading tumor (**Fig. 2**).

A 2-mm lateral resection margin around the lesion was maintained during circumferential mucosal incision. The GelPoint Path system was then mounted across the anal canal and a surgeon passed two laparoscopic forceps retractors (Johann Forceps 33 cm; Karl Storz, Tuttlingen, Germany) into the rectum, working alongside the endoscopist who passed a gastroscope through the third port; both operators utilized the endoscopic view. Once a tissue flap had been created, the submucosal dissection was rapid, using long sweeping movements of the endoscopic knife (FlushKnife BT, 1.5 mm; Fujifilm, Tokyo, Japan) parallel to the underlying muscle. Repeated injections expanded the submucosal plane and sustained a clear separation of the submucosal and muscle layers. The retractors could be repositioned multiple times and in any direction, providing the endoscopist with a continuous view of the submucosal plane (**Video 1**). The en bloc resection was completed in 182 minutes. Large vessels were coagulated and clipped to prevent delayed bleeding.

After a 6-month interval, a check-up endoscopy showed a healed scar with no signs of recurrence or rectal stricture (**Fig. 3**).

Video 1

Transanal submucosal endoscopic resection: a new endosurgical platform for the en bloc resection of giant, benign, rectal polyps.

The TASER approach appears to be technically easier and fundamentally safer than conventional transanal surgery and advanced endoscopic therapy for the resection of giant (>5 cm) rectal polyps.

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Competing interests: None

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References

1 *Flexer SM*, *Durham-Hall AC*, *Steward MA* et al. TEMS: results of a specialist centre. Surg Endosc 2014; 28: 1874–1878

2 *Albert MR*, *Atallah SB*, *deBeche-Adams TC* et al. Transanal minimally invasive surgery (TAMIS) for local excision of benign neoplasms and early-stage rectal cancer: efficacy and outcomes in the first 50 patients. Dis Colon Rectum 2013; 56: 301–307

3 *Probst A*, *Golger D*, *Anthuber M* et al. Endoscopic submucosal dissection in large sessile lesions of the rectosigmoid: learning curve in a European center. Endoscopy 2012; 44: 660–667

4 *Barendse RM*, *van den Broek FJ*, *Dekker E* et al. Systematic review of endoscopic mucosal resection versus transanal endoscopic microsurgery for large rectal adenomas. Endoscopy 2011; 43: 941–949

5 *Arezzo A*, *Passera R*, *Saito Y* et al. Systematic review and meta-analysis of endoscopic submucosal dissection versus transanal endoscopic microsurgery for large noninvasive rectal lesions. Surg Endosc 2014; 28: 427–438

Bibliography

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