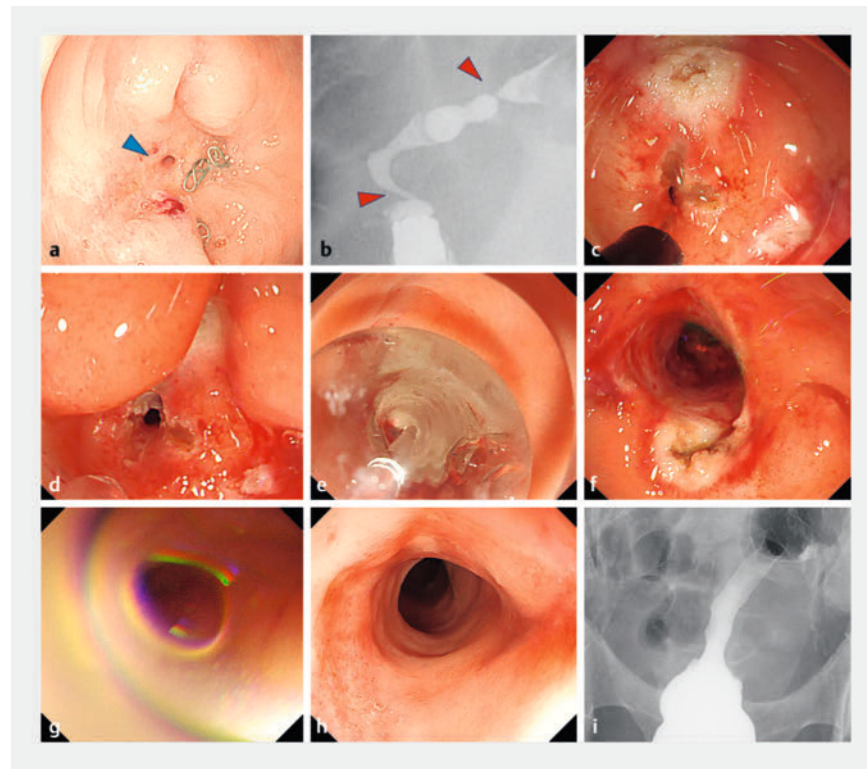


Radial incision and balloon dilation with triamcinolone filling for the severe rectal anastomotic stricture

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► Fig. 1 Sequential endoscopic and radiographic findings during rectal anastomotic stricture treatment. **a** A pinhole-like anastomotic stricture after rectal cancer surgery (blue arrow) with exposed staples. **b** Contrast enema revealed a 5-cm tortuous anastomotic stricture with two severe narrowings at the anal and oral ends. **c** After staple removal using a HookKnife, radial incisions were made in the anal-side stricture. **d** Four radial incisions were created. **e** Balloon dilation was performed to a diameter of 15 mm at 8 atm. **f** Multiple mucosal lacerations allowed scope passage through the anal-side stricture, and the same procedure was applied to the oral side. **g** The lumen was filled with 80 mg of triamcinolone acetate solution to prevent restenosis. **h** An endoscopic view at 7 weeks showing complete epithelialization with adequate scope passage. **i** Contrast enema at 7 weeks demonstrating marked improvement of the stricture compared with baseline.



► Video 1 Radial incision and balloon dilation with triamcinolone filling for the severe rectal anastomotic stricture.

same procedure was subsequently applied to the oral-side stricture, resulting in successful resolution of both strictures (**► Fig. 1 f**). Finally, 80 mg of triamcinolone acetate (TA) solution was instilled into the lumen to prevent restenosis (**► Fig. 1 g**). The procedure was repeated once at 3 weeks for the anal side stricture and at 5 weeks for the oral side stricture, respectively. By 7 weeks, complete epithelialization without the recurrent stricture was confirmed both by endoscopy (**► Fig. 1 h**) and contrast enema (**► Fig. 1 i**), after which stoma closure was performed.

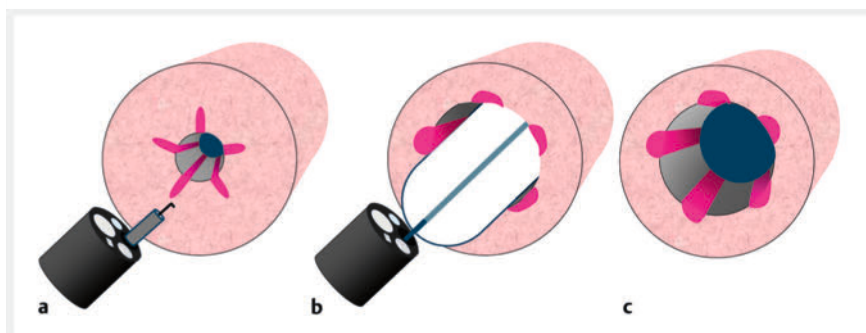
Radial incision allows balloon dilation to create multiple lacerations, providing effective expansion while avoiding excessive focal stress on a single site and thereby reducing the risk of perforation. Although TA injection after balloon dilation is generally considered effective [1], in this case, the stricture was long and firm, making local injection difficult; therefore, we applied the TA filling method previously reported by our group in the esophagus [2–4], which resulted in a favorable outcome.

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A man in his 60s underwent open low anterior resection with diverting ileostomy for advanced rectal cancer. Six months later, colonoscopy revealed a pinhole-like anastomotic stricture (**► Fig. 1 a**), and contrast enema demonstrated a 5-cm tortuous stenosis extending proximally, with narrowings at both the anal and oral sides (**► Fig. 1 b**). Because conventional balloon dilation was considered to carry a high risk of perforation and recurrence, we treated the stricture using a combined radial in-

cision and balloon dilation technique (**► Video 1**), with a schematic overview of the procedure provided in **► Fig. 2**.

First, exposed staples were removed with a HookKnife (Olympus, Tokyo, Japan). Second, multiple radial mucosal incisions were created (**► Fig. 1 c, d**). Third, balloon dilation was performed with a wire-guided through-the-scope balloon (CRE PRO GI; Boston Scientific, Marlborough, MA, USA) to a diameter of 15 mm at 8 atm (**► Fig. 1 e**), which allowed smooth passage of the endoscope (**► Fig. 1 f**). The



► **Fig. 2** Schematic of radial incision and balloon dilation for the severe anastomotic stricture. **a** Radial incisions were created using a high-frequency knife. **b** Balloon dilation was performed to a diameter of 15 mm at 8 atm. **c** Multiple lacerations created by the incisions allowed effective stricture expansion while minimizing the risk of perforation.

Contributors' Statement

Yusuke Takahashi: Conceptualization, Investigation, Visualization, Writing – original draft. Kotaro Shibagaki: Methodology, Writing – review & editing. Yui Fukada: Writing – original draft. Satoshi Kotani: Writing – review & editing. Tomotaka Yazaki: Writing – review & editing. Norihisa Ishimura: Writing – review & editing. Shunji Ishihara: Writing – review & editing.

Conflict of Interest

The authors declare that they have no conflict of interest.

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References

- [1] Hanaoka N, Ishihara R, Motoori M et al. Endoscopic Balloon Dilation Followed By Intraleisional Steroid Injection for Anastomotic Strictures After Esophagectomy: A Randomized Controlled Trial. *Am J Gastroenterol* 2018; 113: 1468–1474. doi:10.1038/s41395-018-0253-y
- [2] Shibagaki K, Ishimura N, Oshima N et al. Esophageal triamcinolone acetonide-filling method: a novel procedure to prevent stenosis after extensive esophageal endoscopic submucosal dissection (with videos). *Gastrointest Endosc* 2018; 87: 380–389. doi:10.1016/j.gie.2017.08.016
- [3] Kotani S, Shibagaki K, Yuki T et al. A multicenter retrospective study of the esophageal triamcinolone acetonide-filling method in patients with extensive esophageal endoscopic submucosal dissection. *Scand J Gastroenterol* 2021; 56: 647–655. doi:10.1080/00365521.2021.1910998
- [4] Shibagaki K, Yuki T, Taniguchi H et al. Prospective multicenter study of the esophageal triamcinolone acetonide-filling method in patients with subcircumferential esophageal endoscopic submucosal dissection. *Dig Endosc* 2020; 32: 355–363. doi:10.1111/den.13496

Bibliography

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