Successful endoscopic submucosal dissection for early gastric cancer involving the pyloric ring using a combination of water and gel immersion with the tunneling method

When performing endoscopic submucosal dissection (ESD) for gastric cancer that straddles the pyloric ring, it can be difficult to dissect the distal side of the lesion and visualize the submucosal layer. Although several techniques have been reported [1–3], no consensus has been reached as to the best method. Recently, endoscopic treatment with water or gel immersion has become popular [4,5]. This has several advantages, including improving the visual field, providing buoyancy, and maintaining the lumen at a low pressure. Herein, we describe successful ESD for early gastric cancer involving the pyloric ring using a combination of water and gel immersion in low-pressure endoscopy with a tunneling method (▶ Video 1).

The patient was an 84-year-old woman with early gastric cancer (25 mm in diameter) involving the pyloric ring (▶ Fig. 1 a–c). The distal side of the lesion could not be observed in the antegrade position (▶ Fig. 1 d, e), or with retroflexion at the duodenal bulb (▶ Fig. 1 f). We removed the gas from the lumen and filled it with water, and the distal side of the lesion became visible under the low-pressure conditions (▶ Fig. 2 a, b). First, a mucosal incision was made at the distal side to create an end point (▶ Fig. 2 c–e). Unexpected bleeding occurred during the mucosal incision, and complete hemostasis was achieved under gel immersion. Second, a tunnel was created from the proximal side of the lesion toward the end point using a mixture of water and gel immersion (▶ Fig. 2 f, g). The view of the tunnel was clear, which was also because of the presence of water and gel. Finally, submucosal dissection was performed to widen the tunnel, and this was followed by en bloc resection (▶ Fig. 2 h–j).

The tunneling method using low-pressure endoscopy with water and gel immersion overcomes the difficulties experienced in this situation. This method with its low pressure stabilizes the patient’s condition, improves operability, and enables safe resection of lesions that are straddling the pyloric ring.
Competing interests

The authors declare that they have no conflict of interest.

The authors

Takahiro Muramatsu1, Tomoaki Tashima1, Tsubasa Ishikawa1, Rie Terada1, Tomonori Kawasaki2, Takao Ito3, Shomei Ryozawa1
1 Department of Gastroenterology, Saitama Medical University International Medical Center, Saitama, Japan
2 Department of Pathology, Saitama Medical University International Medical Center, Saitama, Japan
3 Department of Gastroenterology and Hepatology, Tokyo Medical University Hospital, Tokyo, Japan

References


Bibliography

Endoscopy 2023; 55: E874–E875
DOI 10.1055/a-2106-5470
ISSN 0013-726X
© 2023, The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited.
(https://creativecommons.org/licenses/by/4.0/)
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany