Early duodenal cancer successfully treated by endoscopic submucosal dissection with an ultra-thin endoscope in spite of severe esophageal stricture

We report a case of early duodenal cancer successfully treated by endoscopic submucosal dissection (ESD) using an ultra-thin endoscope in a patient with severe stricture caused by photodynamic therapy (PDT) for esophageal cancer. An 84-year-old man with a history of recurrent esophageal cancer treated by PDT subsequently developed a 10-mm 0-IIc lesion on the anterior wall of the duodenal bulb (▶Fig. 1). Pathology showed a well-differentiated adenocarcinoma. Esophageal stenosis secondary to PDT was present, requiring more than 10 endoscopic balloon dilations, and conventional scopes could not traverse it (▶Fig. 2). Thus, to perform resective ESD, we selected an ultra-thin endoscope (EG-L580NW7; Fujifilm, Tokyo, Japan) with a tip attachment originally created from an Argyle universal bubble tube (Covidien, Tokyo, Japan). We also prepared ORISE ProKnife (Boston Scientific Japan, Tokyo, Japan) and Endosaber Fine (Sumitomo Bakelite, Tokyo, Japan) ESD knives, RAICHO hemostatic forceps (Kaneka Medics, Tokyo, Japan), and SAIKEI clips (Kaneka Medics, Tokyo, Japan). After these preparations, we performed duodenal ESD (▶Video 1).

We initially used a ProKnife, which can generate water flow (▶Fig. 3a, b). However, since its sheath was too inflexible for the procedure, we alternated with the Endosaber Fine to complete the ESD (▶Fig. 3c, d) and sutured the post-ESD ulcer with SAIKEI clips (▶Fig. 4). The total procedure time was 75 minutes. Pathology showed a well-differentiated tubular adenocarcinoma localized in the mucosa and a curative resection was obtained.

There have been two reports of ESD of the esophagus and stomach with esophageal stenosis using ultra-thin endoscopes [1,2] but none of duodenal ESD. We demonstrated the feasibility of ESD with an ultra-thin endoscope for early duodenal cancer in a patient with esophageal stenosis impassable by standard scopes.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Acknowledgments

The authors would like to thank Dr. Bryan J. Mathis of the University of Tsukuba International Medical Center for English language revision.
Competing interests

The authors declare that they have no conflict of interest.

The authors

Toshiaki Narasaka1,2, Tsubasa Onoda1, Mariko Kobayashi1, Shintaro Akiyama1, Taku Sakamoto1,2, Hideo Suzuki1, KIICHIRO Tsuchiya1
1 Department of Gastroenterology, University of Tsukuba, Ibaraki, Japan
2 Division of Endoscopic Center, University of Tsukuba Hospital, Ibaraki, Japan

Corresponding author

Toshiaki Narasaka, MD
Department of Gastroenterology, University of Tsukuba, 2-1-1 Amakubo, Tsukuba, Ibaraki 305-8576, Japan
tnarasaka@md.tsukuba.ac.jp

References


Bibliography

Endoscopy
DOI 10.1055/a-1978-7979
ISSN 0013-726X
published online 2022
© 2022. The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

---

Fig. 3  a Incision with ProKnife. b Dissection with ProKnife. c Incision with Endosaber Fine. d Dissection with Endosaber Fine.

Fig. 4  The ulcer after endoscopic submucosal dissection was sutured with 5 SAIKEI clips.