Endoscopic submucosal dissection of early gastric cancer in a patient with situs inversus totalis

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Situs inversus totalis (SIT) is defined as the complete mirror-image transposition of the thoracic and abdominal viscera. It is a relatively rare congenital anomaly with an incidence of approximately 1 per 4000 to 8000 persons.1

Endoscopic submucosal dissection (ESD) is widely performed as a treatment for early gastric cancer. This strategy uses the effective countertraction produced by gravity, which enables dissections to be performed quickly and safely. However, in patients with SIT, this conventional method is difficult to perform because of the inverted position of the stomach. Previously, Miyaoka et al2 reported the usefulness of an inverted overtube in patients with SIT, but this overtube is not currently available because it has been discontinued. Herein, we report a patient with SIT and gastric cancer who underwent ESD.

A 74-year-old man with SIT presented to our hospital for further evaluation of suspected gastric cancer identified on screening EGD performed at another hospital. We performed EGD using a magnifying endoscope (GIF-H290Z; Olympus, Tokyo, Japan), and an 8-mm reddish, depressed lesion was observed on the posterior wall of the antrum. The demarcation line was identified clearly by indigo carmine dye (Figs. 1A and B). Magnifying narrow-band imaging displayed an irregular microsurface and microvascular patterns surrounded by the demarcation line. No metastatic lesions were displayed on CT (Figs. 2A and B). Early-stage gastric cancer was strongly suspected on the basis of the endoscopic findings. The entire procedure of ESD is shown in Video 1d, available online at www.VideoGIE.org. When the patient was positioned in the left decubitus position, the lesion was hidden by gastric fluid because it was located on the gravitational side. Furthermore, a clear endoscopic view and good countertraction could not be obtained in this position (Fig. 3). Therefore, we performed ESD with the patient in the right lateral decubitus position, and the operator stood on the opposite side (Fig. 4).

A mixture of glycerol and indigo carmine was used for the submucosal injection. An electrosurgical generator (VIO 300D; ERBE Elektromedizin GmbH, Tubingen, Germany) was set at endocut I (effect 3, duration 3, interval 3) for mucosal incision and forced coagulation and at effect 3, 50 W for submucosal dissection. A circumferential mucosal incision was performed with a 2.0-mm dual knife (KD-650L; Olympus) and an insulated-tip knife (KD-611L;...
Olympus). First, the lesion’s lateral margins were marked with a dual knife in forced coagulation mode (effect 3, 30 W). A mucosal incision was made as a pre-cut on the distal side using a dual knife. Next, an insulated-tip knife was inserted into the incision, and circumferential dissec-

tion was performed. Submucosal dissection was then performed with an insulated-tip knife.

In the right lateral decubitus position, a clearer endoscopic view and good traction were obtained during
ESD, and the tumor was successfully removed en bloc in 15 minutes. There were no procedure-associated adverse events. Histopathologic examination of the resected specimen led to the diagnosis of L, Gre, 25 × 25 mm, Type 0-IIc; 8 × 8 mm, tub1, T1a (M), pUL0, Ly0, V0, pHM0, pVM0, according to the Japanese classification of gastric carcinoma (Figs. 5-7).3

In conclusion, ESD in the right lateral decubitus position for patients with SIT is a simple, effective method that does not require other traction devices.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviations: ESD, endoscopic submucosal dissection; SIT, situs inversus totalis.

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