Endoscopic curative resection of undifferentiated early gastric cancer

High definition endoscopy has improved the diagnosis of early gastric cancer but still has a miss rate of 20%–25%. Magnification endoscopy with narrow-band imaging (NBI) helps to further characterize histology in early gastric cancer [1–3].

A 62-year-old woman attended screening esophagogastroduodenoscopy, and white-light endoscopy showed a slightly depressed lesion of size 10×5 mm (Paris type 0-IIc) on the anterior wall of the stomach in the antrum. NBI showed a line of demarcation with absent microsurface pattern and irregular microvascular pattern [4]. Near focus showed a dilated and tortuous corkscrew type of microvascular pattern and intralobular

loop type 2 pattern (► **Fig. 1**), as described by Nakayoshi et al., which was suggestive of poorly differentiated adenocarcinoma [1,5]. Biopsies showed a signet cell type of carcinoma.

Intramucosal undifferentiated type adenocarcinoma of size ≤2 cm is a candidate for endoscopic resection under expanded criteria in Japanese guidelines 2018. Circumferential marking was done using a noninsulation-tipped endoscopic submucosal dissection knife under Forced Coag mode (► **Video 1**). Submucosal in-

jection using a 25-gauge needle with indigo carmine was performed to lift the lesion (► **Fig. 2a**). An initial mucosal incision was performed on the proximal side of the lesion with the same knife and incision was completed using Endo-cut I (► **Fig. 2b**). Bleeding was controlled using Coagrasper. Dissection was completed using the ITknife2 (Olympus Corp., Tokyo, Japan) (► **Fig. 2c**).

The resected specimen measured 40×25×2 mm and revealed a signet ring cell carcinoma, with the deepest invasion

► **Fig. 1** Magnification narrow-band imaging. Line of demarcation, irregular/absent microsurface pattern, and corkscrew microvascular pattern.

► **Video 1** Endoscopic curative resection of undifferentiated early gastric cancer.

► **Fig. 2** Resection of the lesion. **a** Submucosal lift using indigo carmine mixed with (0.9%) normal saline solution. **b** Submucosal dissection using the Dualknife 'J' (Olympus Corp. Tokyo, Japan). **c** Dissection was completed using the ITknife2 (Olympus Corp.).

► **Fig. 3** Histological analysis. **a** Periodic acid–Schiff–Alcian blue staining showed a poorly differentiated adenocarcinoma, with muscularis mucosae free from tumor invasion. **b** Signet ring cells infiltrated the lamina propria. **c, d** Specimen showed tumor-free vertical and horizontal margins (respectively 1.6 and 5.7 mm; Type 0 IIc, pT1a ULO, Ly0 V0, pHM0, pVMO).

confined to the mucosa and negative margins (► **Fig. 3**). Follow-up esophago-gastroduodenoscopy after 1 year showed resolution of the lesion with no recurrence.

Magnification endoscopy with NBI is a useful modality that helps to characterize and manage early gastric carcinoma, and in our case prevented gastrectomy.

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Competing interests

The authors declare that they have no conflict of interest.

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