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 injection 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 Endocut 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.).
confined to the mucosa and negative margins (▶ Fig. 3). Follow-up esophagogastroduodenoscopy 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

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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, pVM0).

Bibliography

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