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Three synchronous lesions with different historical types diagnosed by endoscopic submucosal dissection in one patient

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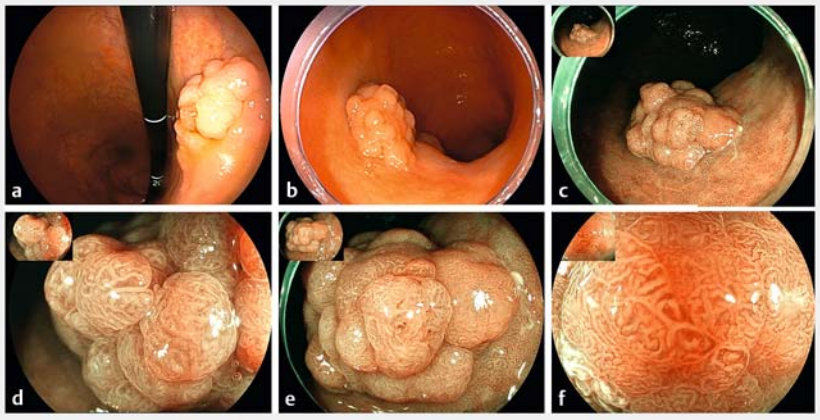
A 69-year-old man underwent gastroscopy owing to intermittent abdominal distension for over 4 months. The gastroscopy revealed two distinct lesions in the lower stomach body, which was highly atrophied (O-3) [1], and the background mucosa was infected with *Helicobacter pylori*. Lesion 1, labeled as 0-Is + IIa [2], measured 40 × 20 mm and had a nodular mixed-type appearance on the posterior wall of the stomach body (▶ **Fig. 1 a, b**). Lesion 2, labeled as 0-IIb, measured 15 × 10 mm and was adjacent to lesion 1 on the oral side (▶ **Fig. 2 a**). Biopsy pathology of both lesions showed atypical cells.

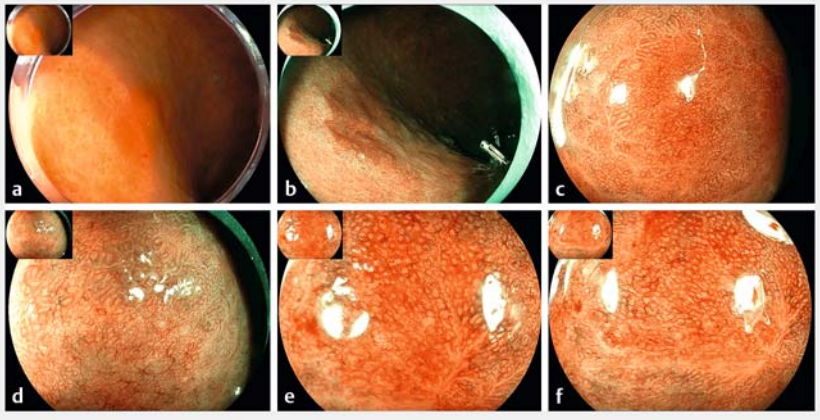
Further investigation using magnifying endoscopy with blue-laser imaging (ME-BLI) revealed that lesion 1 had a distinct boundary and mimicked a colonic laterally spreading tumor with a villous surface pattern (▶ **Fig. 1 d, e**). ME-BLI also revealed that the area of the lesion presenting noticeable redness had an intensive and irregular vascular pattern (▶ **Fig. 1 f**). Lesion 2 also had a distinct boundary and presented a brownish area. ME-BLI further revealed an irregular vascular pattern and white globe appearance (▶ **Fig. 2 d, e**). Both lesions were removed completely by endoscopic submucosal dissection (ESD). The histological diagnosis was intestinal adenoma with partial high-grade intraepithelial neoplasia for lesion 1 and crawling-type adenocarcinoma [3] (tub2) for lesion 2 (▶ **Fig. 3**, ▶ **Fig. 4 b, c**).

The patient underwent a follow-up gastroscopy after 10 months, which revealed a 15 × 10-mm 0-IIc lesion (▶ **Fig. 5**) with a clear boundary in the gastric antrum. Lesion 3 showed light redness, and further ME-BLI revealed increased density of the glandular ducts with an irregular surface and vascular pattern (▶ **Fig. 5 d, e**). It was also removed by ESD and the final diagnosis was well-differentiated tubular adenocarcinoma (tub1) (▶ **Fig. 4 e, f**).

This case highlights the detection of three synchronous gastric lesions with different pathologic types (▶ **Video 1**). Each one had a different macroscopical appearance.



▶ **Fig. 1** Features of lesion 1 under white light endoscopy and magnifying endoscopy with blue-laser imaging (ME-BLI).

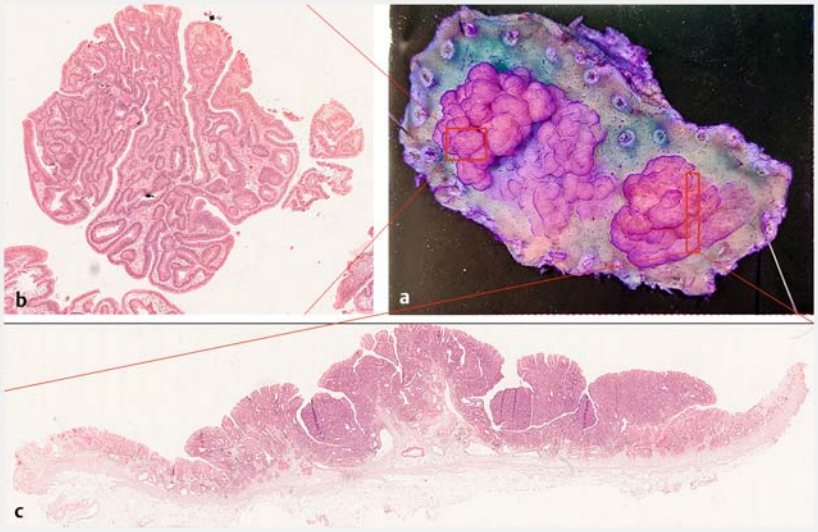


▶ **Fig. 2** Features of lesion 2 under white light endoscopy and ME-BLI.

Endoscopy_UCTN_Code_CCL_1AB_2AD_3AB

Competing interests

The authors declare that they have no conflict of interest.



▶ **Fig. 3** Postoperative specimen and hematoxylin and eosin (H&E) stain of lesion 1. **a** Endoscopic submucosal dissection specimen. **b** H&E stain of the red area. **c** H&E stain of the anal side.

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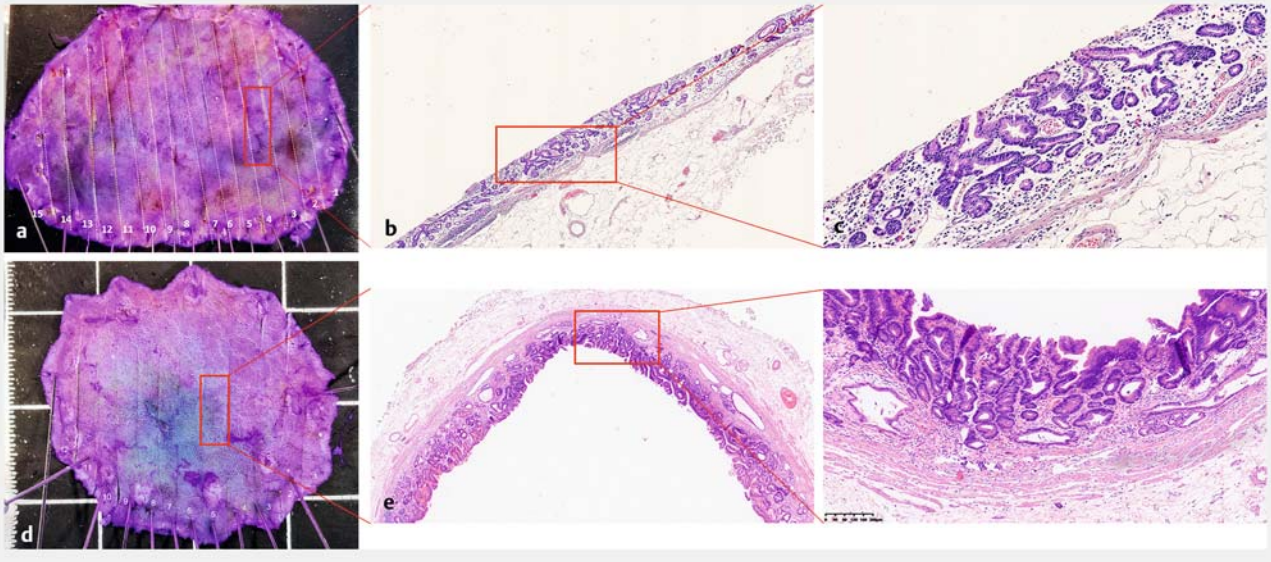
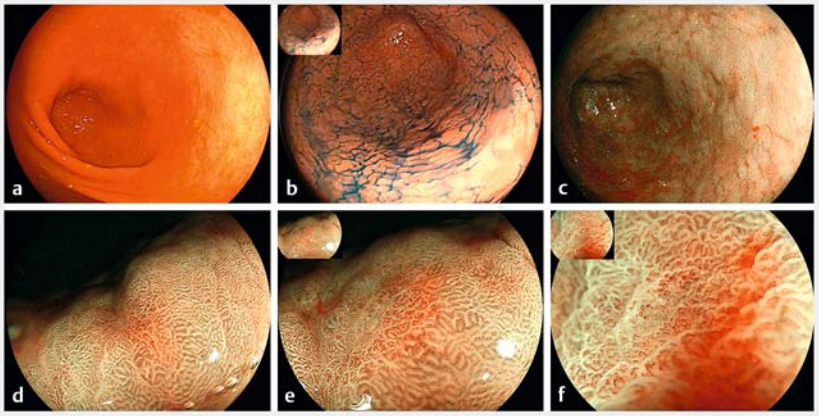
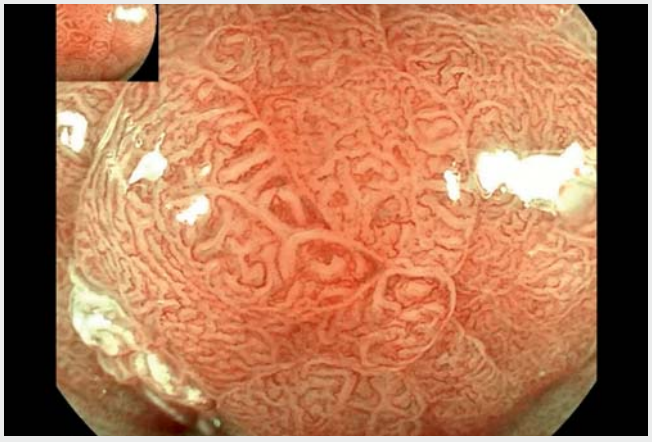


▶ **Fig. 4** Postoperative specimen and H&E stain of lesions 2 and 3.



▶ **Fig. 5** Features of lesion 3 under white light endoscopy and ME-BLI.



Video 1 Three synchronous lesions with different historical types diagnosed by endoscopic submucosal dissection in one patient.