

A Case of Gastric Cancer With a Rare Spreading Pattern Into the Submucosal Layer

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A 65-year-old man was diagnosed with gastric cancer through a biopsy of the stomach's middle body (Figure 1A). Physical examination and laboratory investigations did not reveal any abnormalities. Chromoendoscopy was performed using the acetic acid indigo carmine dye (Figure 1B), and a 6-mm oval-shaped heterogeneous echoic lesion was detected via endoscopic ultrasound (EUS) (Figure 1C). Histologic examination of the specimen obtained through endoscopic submucosal dissection (ESD) showed continuous inverted growth of the mucosal tubular adenocarcinoma in the submucosal lesion from the mucosal layer

into the submucosal layer. Gram-negative bacilli were detected inside the single layer of adenocarcinoma cells surrounded by clusters of lymphocytes in the submucosa, consistent with previous EUS findings (Figure 1D). Since the desmin-stained muscularis mucosa was absent around the lesion (Figure 1E), deep submucosal invasion had to be considered. Neither residual cancer cells nor lymph node metastasis was observed during the subsequent surgery. The presence of the submucosal heterotopic gastric glands (SHG) was confirmed at the ESD scar (Figure 1F). Detection of gram-negative bacilli that had not undergone

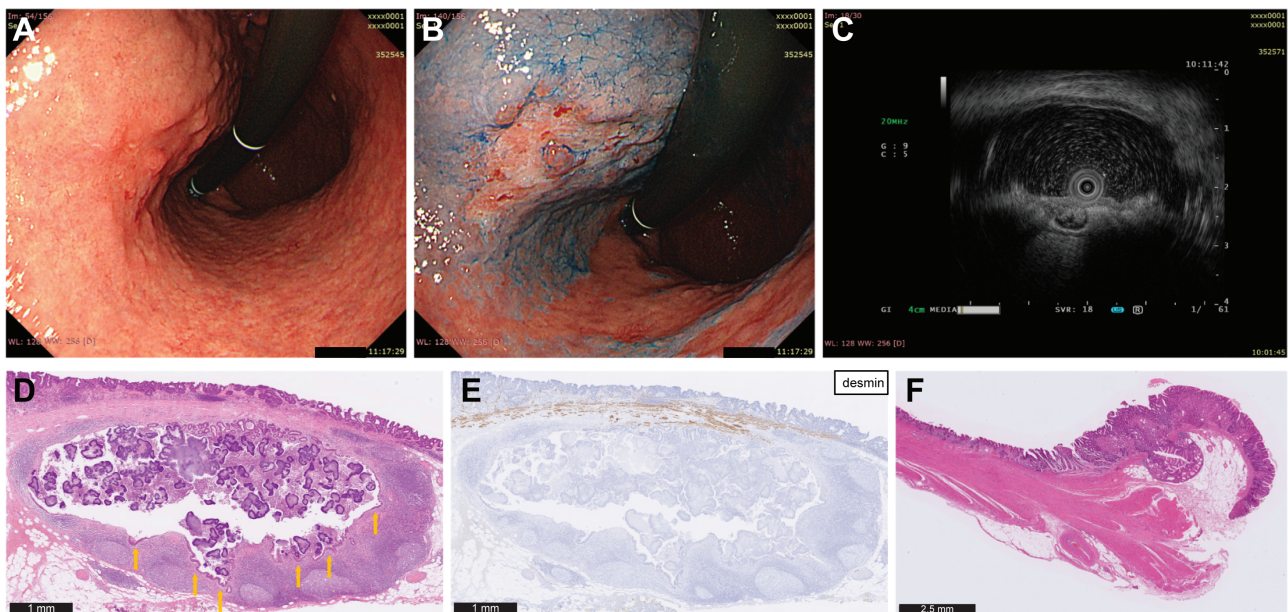


Figure 1. (A) Endoscopy with white light; (B) chromoendoscopy using the acetic acid indigo carmine dye; (C) endoscopic ultrasound; (D) hematoxylin-eosin staining for the ESD specimen. Yellow bars pointed a layer of adenocarcinoma; (E) desmin staining; (F) hematoxylin-eosin staining for the explanted stomach around ESD scar.

phagocytosis in the submucosal cancer lesion indicated direct continuity to the inside of the stomach lumen. The cancer may have spread along the SHG, leading to better prognosis. Patients with submucosal gastric cancer with SHG have reported better prognosis (no lymph metastasis) than those with regular submucosal invasion of gastric cancer (1). EUS assessment before endoscopic resection is useful for detecting SHG; however, identification of the continuity of cancer to the SHG remains challenging.

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Conflict of Interest

The authors declare no conflicts of interest.

Ethics Statement

The requirement for ethical approval was waived by the Institutional Review Board of our institution.

Informed Consent

We obtained a written informed consent for the scientific purpose.

Data Availability

The data generated during this research are included in the present study and are available from the corresponding author upon reasonable request.

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