Usefulness of magnifying endoscopy with narrow-band imaging for identification of early gastric cancer around an ulcer scar

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A 60-year-old man with familial colonic polyposis presented for screening upper GI endoscopy; he had previously undergone pancreato-duodenectomy because of Vater’s papilla cancer and total colectomy. Conventional white light endoscopy (C-WLE) revealed an ulcer scar with converting folds located in the upper remnant stomach; a gastric tumor was not detected (Fig. 1). Subsequently, magnifying endoscopy with narrow-band imaging (NBI-ME) was performed for detailed assessment of the ulcer scar, including the surrounding mucosa, and demonstrated a carcinoma with a demarcation line (DL) (Fig. 2) and an irregular micro-vascular pattern (Fig. 3) based on the VS (vessel plus surface) classification system (1) on the anal side of the ulcer scar. C-WLE shows a concordant line demarcated by NBI-ME (Fig. 4). The determination of DL by C-WLE appeared to be difficult. Informed consent for endoscopic submucosal dissection (ESD) treatment was received from the patient.

After the lesion was circumferentially marked using NBI-ME, standard ESD was completed without complications. Histology
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revealed curative resection of a well-differentiated adenocarcinoma in adenoma corresponding to the demarcation line drawn preoperatively using NBI-ME (Fig. 5); the lesion exhibited mucosal invasion depth around benign ulcer scar (Fig. 6).

Discussion

Recently, the development of NBI-ME has enabled us to differentiate between benign and malignant tumors and to determine the horizontal extent of gastric cancers (1,2). Moreover, some authors have described NBI-ME is more accurate than C-WLE in the diagnosis of gastric mucosal cancer (3). With C-WLE, the identification of early gastric cancer around an ulcer scar can be difficult because of morphological mucosal changes, severe gastritis in the background, and the lack of a color change (4).

Although the utility of NBI-ME in the detection of early gastric cancer around an ulcer scar remains unclear, this case suggests that NBI-ME may be more useful than C-WLE in this clinical scenario.

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References