Endoscopic features of primary amyloidosis of the stomach

A 72-year-old-woman, with a history of resection of tracheal (AL) amyloidosis at age 61 and biopsy-based diagnosis of gastric amyloidosis at age 68, was admitted to our hospital. No amyloid deposits had been detected in any other organ and multiple myeloma had been excluded. Gastroscopy showed several findings, including ulcerative lesions mimicking advanced cancer, submucosal tumor-like lesions, intramural hematomas, and flat elevations in the stomach. Fig. 1a shows an ulcerative lesion resembling advanced gastric cancer in the proximal stomach. Fig. 1b illustrates an elevated lesion with ulcer, similar to the submucosal tumor in the antrum. Fig. 1c depicts intramural hematomas and flat elevations in the middle stomach. Fig. 1d shows a small, shallow ulcer surrounded by erythema in the middle stomach. The presence of residual food suggested gastroparesis.

Fig. 1a: Endoscopic view of a gastric lesion resembling advanced cancer.
Fig. 1b: Elevated lesion with ulcer, similar to submucosal tumor in the antrum.
Fig. 1c: Intramural hematomas and flat elevations in the middle stomach.
Fig. 1d: Small, shallow ulcer surrounded by erythema in the middle stomach.

With narrow-band imaging (NBI) enhancement, the mucosa surrounding the ulcer appeared grayish-green in color (Fig. 2). Endoscopic ultrasonography (EUS) revealed hypoechoic thickening of the mucosa and submucosa, with the loss of the normal sonographic layers (Fig. 3). Histological examination with Congo red staining revealed amorphous eosinophilic infiltrates, which also showed positive immunostaining for both kappa and lambda light chains, but not amyloid A, validating the diagnosis of gastric primary (AL) amyloidosis. Endoscopic examination and biopsy samples ruled out lesions in other gastrointestinal locations. However, there was massive bleeding on biopsy of the ulcerative lesion and blood transfusion was required.

Endoscopic findings in gastric amyloidosis are nonspecific, including a variety of features such as erosions, fine granular-
appearing mucosa, mucosal friability, enlarged folds, hematoma, polyps, ulcers, and submucosal tumor-like lesions [1,2]. Regarding EUS findings in gastric amyloidosis, thickening of mucosa and submucosa and loss of the normal layered structure have been reported [3,4]. EUS may be helpful for assessing the extent and areas of amyloid deposition, especially in cases presenting with prominent folds and/or a poorly distensible stomach with normal-appearing mucosa [3]. Recently, the usefulness of NBI for diagnosing rectal amyloidosis has been highlighted [5]. In the present case, the erythematous area surrounding the ulcer also appeared grayish-green in color with NBI, indicating clinical applicability of the method in gastric amyloidosis. Although it is sometimes difficult to distinguish amyloid lesions from malignancies, both EUS and NBI may help avoid biopsies with their attendant risk of hemorrhage as was seen in our case.

References
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