

Magnifying narrow-band imaging endoscopy for the diagnosis of gastric primary extramedullary plasmacytoma: a first case report



Fig. 1 A 25-mm diameter uneven and irregular protrusion, which appeared discolored and was classified as Stage IIa, was observed in the greater curvature of the middle gastric body.



Fig. 2 Moderately magnifying narrow-band imaging endoscopy did not show any abnormal mucosal microstructure in the discolored protrusion.

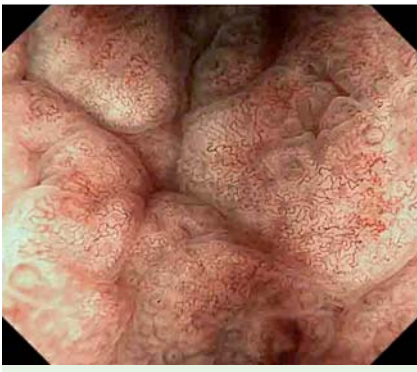


Fig. 3 Highly magnifying narrow-band imaging endoscopy showed tortuous superficial vessels in the discolored protrusion. However, caliber irregularity and distension were not observed.

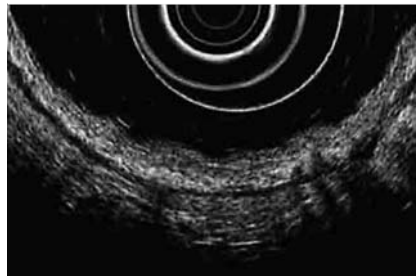


Fig. 4 On endoscopic ultrasonography, the tumor was found to exist in the submucosal layer.

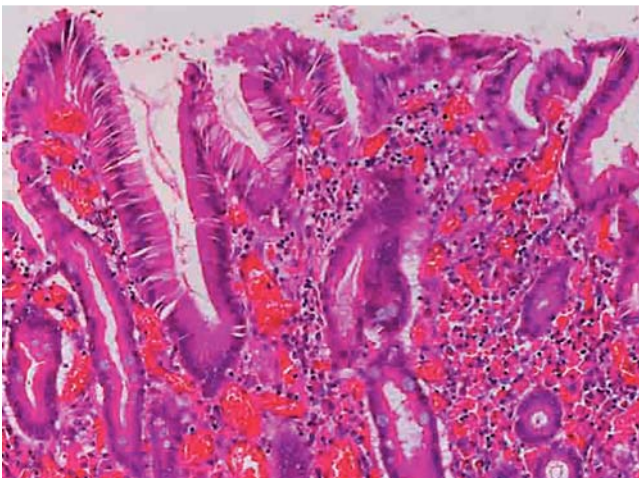


Fig. 5 Hematoxylin and eosin staining of a biopsy tissue specimen collected from the protrusion showed plasma cells filled with Russell bodies. Plasmacytoma was present in the submucosal layer.

Magnifying narrow-band imaging (NBI) endoscopy has been increasingly used in the diagnosis of early gastric cancer and is regarded as an effective diagnostic approach. This technique has been used to classify gastric cancer according to the tumor surface structure and microvessels [1,2]. We obtained a magnified NBI image that clearly showed the characteristics of gastric primary extramedullary plasmacytoma [3,4], and treated it successfully using endoscopic submucosal dissection (ESD).

A female patient aged in her 60s and with hepatitis C cirrhosis underwent an esophagogastroduodenoscopy. The examination revealed a 25-mm diameter uneven and irregular protrusion in the greater curvature of the middle gastric body, which was characterized by discolored nodule aggregation and classified as Stage IIa (▶ Fig. 1). Magnifying NBI endoscopic findings of the lesion showed tortuosity and outgrowth of capillaries; however, the loop-shaped microvascular patterns and microsurface were regular (▶ Fig. 2 and ▶ Fig. 3). These findings were strongly indicative that a nonepithelial tumor existed under the mucous epithelium.

It was necessary to distinguish the lesion from a mucosa-associated lymphoid tissue (MALT) lymphoma. A diagnosis of plasmacytoma was obtained following pathological examination of the biopsy specimen. No findings suggestive of systemic disease were obtained on several examinations. Consequently, a diagnosis of gastric primary extramedullary plasmacytoma was made. Endoscopic ultrasonography was performed to determine the therapeutic strategy, and as findings suggestive of submucosal invasion were obtained (▶ Fig. 4), ESD was conducted.

Pathohistological examination of the resected specimen revealed invasion of kappa-chain-predominant atypical plasma cells filled with Russell bodies, and gene rearrangement of the lamina propria in the submucosal layer (▶ Fig. 5 and ▶ Fig. 6). Achievement of radical cure was confirmed by a negative resection stump.

The NBI findings described here suggested the presence of gastric primary extramedullary plasmacytoma and could be clearly distinguished from the NBI findings that are characteristic of MALT lymphoma [5].

Endoscopy_UCTN_Code_CCL_1AB_2AD_3AB

Competing interests: None

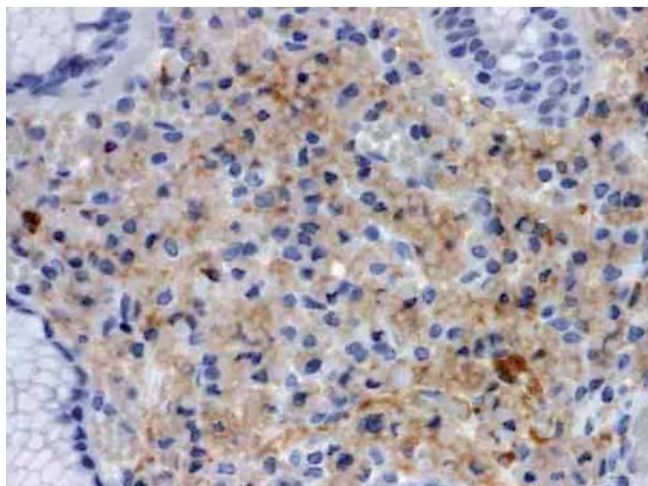


Fig. 6 The kappa-chain immunostaining of a biopsy tissue specimen revealed kappa-chain-predominant staining.

Satoshi Harada¹, Shinya Fukunishi¹, Toshihisa Takeuchi¹, Kazuhiro Ota¹, Sugi Kazunori², Makoto Sanomura³, Kazuh de Higuchi¹

¹ 2nd Department of Internal Medicine, Osaka Medical College, Osaka, Japan

² 2nd Department of Internal Medicine, Sugi Clinic, Osaka, Japan

³ Department of Gastroenterology, Hokusetsu General Hospital, Osaka, Japan

References

- 1 Yao K, Anagnostopoulos G, Ragnath K. Magnifying endoscopy for diagnosing and delineating early gastric cancer. *Endoscopy* 2009; 41: 462–467
- 2 Yamada S, Doyama H, Yao K et al. An efficient diagnostic strategy for small, depressed early gastric cancer with magnifying narrow-band imaging: a post hoc analysis of a prospective randomized controlled trial. *Gastrointest Endosc* 2014; 79: 55–63

3 Nolan KD, Mone MC, Nelson EW. Plasma cell neoplasms. Review of disease progression and report of a new variant. *Surg Oncol* 2005; 14: 85–90

4 Kim JW, Kim HS, Lee JH et al. Complete endoscopic resection of very early stage gastric plasmacytoma. *Gut Liver* 2010; 4: 547–550

5 Nonaka K, Ishikawa K, Shimizu M et al. Gastric mucosa-associated lymphoma presented with unique vascular features on magnified endoscopy combined with narrow-band imaging. *J Gastroenterol Hepatol* 2009; 24: 1697

Bibliography

DOI <http://dx.doi.org/10.1055/s-0034-1377428>
Endoscopy 2014; 46: E435–E436
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

Shinya Fukunishi, MD
 2-7 Daigaku-machi
 Takatsuki
 Osaka 569-8686
 Japan
 Fax: +81-726-846532
 in2104@poh.osaka-med.ac.jp