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



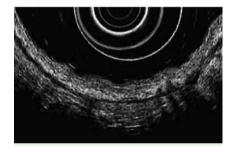
**Fig. 1** A 25-mm diameter uneven and irregular protrusion, which appeared discolored and was classified as Stage IIa, was observed in the greater curvature of the middle qastric body.



**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.

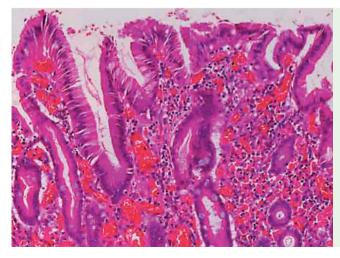


Fig. 5 Hematoxylin and eosin staining of a biopsy tissue specimen collected from the protrusion showed plasma cells filled with Russell bodies. Plasmacytoma was present in the submucosal layer.

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 (FSD).

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 re-

sected 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].

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Competing interests: None

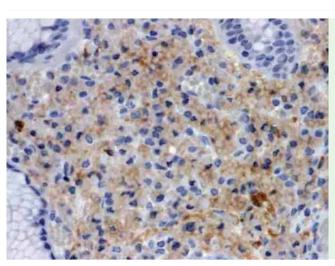


Fig. 6 The kappachain immunostaining of a biopsy tissue specimen revealed kappa-chain-predominant staining.

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### **Bibliography**

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