

Lymphangioma of the anal canal: first description of the endoscopic features

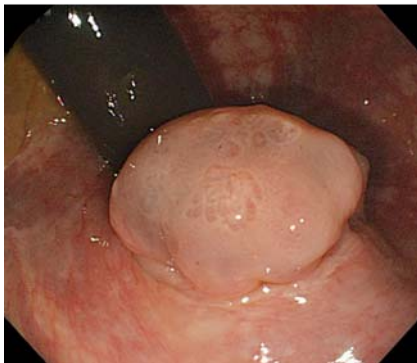


Fig. 1 Endoscopic image showing a 20-mm, smooth, translucent, lustrous submucosal tumor on the left lateral wall of the anal canal, distal to the dentate line.

A 42-year-old woman was referred to our hospital for the work-up of iron deficiency anemia. Esophagogastroduodenoscopy (EGD) did not reveal a bleeding source. The appearances on total colonoscopy were normal except for a 20-mm submucosal tumor in the left lateral anal canal (● **Fig. 1**). The tumor could be compressed with the endoscope, indicating that it was soft. It was also translucent and lustrous. The tumor and the mucosa surrounding its base were lined with stratified squamous epithelium.

Narrow-band imaging (NBI) revealed scattered bullous-like transparent areas on the tumor surface (● **Fig. 2a**). Magnifying endoscopy with narrow-band imaging (ME-NBI) of these areas demonstrated elongated, dark-brown, looping capillary vessels, without dilatation or caliber change, in the superficial layers (● **Fig. 2b**). In addition, small blood vessels were observed in the deeper subepithelial layers (● **Fig. 2c**). The tumor was totally removed using endoscopic submucosal dissection (ESD) and was diagnosed histologically as a lymphangioma (● **Fig. 3**).

Lymphangiomas of the anal canal are extremely rare. To the best of our knowledge, there are only two previous cases reported, and neither of these included detailed endoscopic findings [1,2]. Here, we present the notable epithelial and microvascular findings on ME-NBI of an anal lymphangioma for the first time. By com-

paring the endoscopic and histological findings, we presume that the continuous stretching by distended lymphatic channels resulted in the thinning of the overlying squamous epithelium. This probably caused mucosal transparency and capillary elongation, resulting in the visualization of deeper stromal microvessels.

In a case report of esophageal lymphangioma [3], very similar ME-NBI findings were described as being characteristic features. Because the anal canal and esophagus are both covered with stratified squamous epithelium, the ME-NBI diagnostic criteria used for esophageal lymphangioma may also be applicable to anal lymphangioma, as is the case with squamous cell carcinoma [4,5]. We consider that these unique endoscopic findings might be characteristic of lymphangioma of the anal canal and could be useful in making this diagnosis.

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Competing interests: None

Tomohiko Mannami¹, Satoru Seno¹, Hiroshi Sonobe², Genyo Ikeda¹, Takeshi Kambara³, Yasuyuki Ohtawa³, Toshihiko Waku³

- ¹ Department of Internal Medicine, Chugoku Central Hospital, Fukuyama, Japan
- ² Department of Laboratory Medicine and Pathology, Chugoku Central Hospital, Fukuyama, Japan
- ³ Department of Surgery, Chugoku Central Hospital, Fukuyama, Japan

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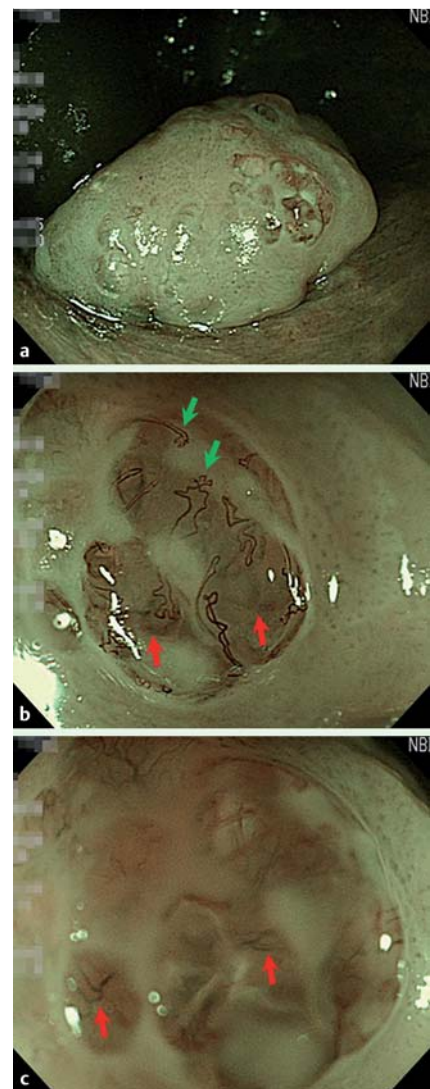


Fig. 2 Endoscopic appearances on: **a** narrow-band imaging (NBI) showing round-to-oval, bullous-like transparent areas scattered in spots on the tumor surface; **b** magnifying endoscopy showing elongated dark-brown looping capillaries on the surface of the transparent areas (green arrows), along with more indistinct deeper blood vessels (red arrows); **c** magnified view demonstrating small blood vessels deep within the transparent epithelium (red arrows).

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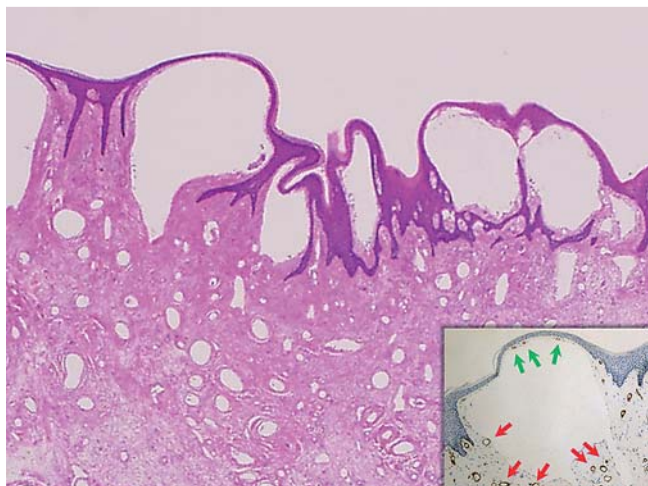


Fig. 3 Histopathology of an area of the resected lesion corresponding to the endoscopically transparent epithelium showing dilated lymphatic channels of different sizes beneath the thin squamous epithelium (hematoxylin and eosin [H&E] stained, original magnification $\times 10$). **Inset** Immunohistochemical staining for CD34 showing positive staining of the small blood vessels as they run in the stroma (red arrows) and just beneath local regions of thinned and slightly protruding squamous epithelium (green arrows; original magnification $\times 40$).

Bibliography

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Corresponding author

Tomohiko Mannami, MD, PhD
 Department of Internal Medicine
 Chugoku Central Hospital
 148-13, Kamiwanari, Miyuki,
 Fukuyama 720-0001
 Japan
 Fax: +81-84-9728843
 tmannami-gi@umin.ac.jp