Underwater endoscopic mucosal resection of colon hemangiomas compatible with the blue rubber bleb nevus syndrome, following endoscopic ultrasonography

Blue rubber bleb nevus syndrome (BRBNS) is a rare congenital disease with venous malformations on the skin and in the gastrointestinal tract. Gastrointestinal venous malformations frequently cause bleeding and/or iron deficiency anemia [1]. Endoscopic approaches such as endoscopic mucosal resection [2], electrocoagulation, sclerotherapy, and ligation [3] have been reported for the treatment of symptomatic gastrointestinal hemangiomas associated with BRBNS. Recently, underwater endoscopic mucosal resection (UEMR) has rapidly been becoming a game-changing technique for endoscopic polyp resection. UEMR is usually simpler, cheaper, and more reliable than other conventional endoscopic resection techniques. When endoscopic ultrasonography (EUS) is performed prior to UEMR, EUS can allow prediction of the safety and reliability of UEMR because lesion characteristics such as depth, blood vessels, and echo-density are evaluated [4]. We illustrate a case in which colon hemangiomas compatible with BRBNS were resected endoscopically using UEMR.

▶ Video 1 Underwater endoscopic mucosal resection of colon hemangiomas compatible with the blue rubber bleb nevus syndrome, following endoscopic ultrasonography.

▶ Fig. 1 Blue lesion in the transverse colon of a 35-year-old man, examined using magnifying narrowband light colonoscopy. A 10-mm soft, blue, elevated lesion was shown.

▶ Fig. 2 Endoscopic ultrasonography (EUS) of the transverse colon lesion using a 20-MHz miniature probe, showing a 10-mm isoechoic/slightly hyperechoic round submucosal mass and the submucosal layer between the lesion and the muscularis. No dilated blood vessels were seen that would be of concern during resection.

▶ Fig. 3 Sequential endoscopic pictures of the underwater endoscopic mucosal resection (UEMR) of the transverse colon lesion. The lesion became more subpedunculated after water immersion. a The tip of the snare was securely placed on normal mucosa beyond the lesion with a sufficient proximal margin. b The resected specimen. Blood oozed from the stump of the specimen.
A 35-year-old man was referred for evaluation of a blue polyp in the cecum and another in the transverse colon found on colonoscopy after a positive fecal immunochemical test. The patient had undergone surgical resection of skin hemangiomas on his right leg at 1 and 4 years of age. Outpatient colonoscopy in our institution revealed elevated blue lesions, one in the cecum and one in the transverse colon. Magnifying narrowband light examination (EC-760ZP-W/M, Fujifilm, Tokyo, Japan) with a distal attachment (D-201-14304, Olympus, Tokyo, Japan) using blue-light imaging did not show the typical vascular pattern of a neoplasm but showed a normal surface pattern. The characteristics were classified as type 1 (Japan NBI Expert Team classification), consistent with normal mucosa. A hemangioma was localized in the submucosal layer, which is compatible with a gastrointestinal lesion of blue rubber bleb nevus syndrome. The margin of the hemangioma was negative.

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