Successful endoscopic submucosal dissection of a large cavernous hemangioma in the colon

Endoscopic submucosal dissection (ESD) is regarded as a common treatment for complete resection of early gastrointestinal neoplasms [1]. However, few cases have been reported on ESD for resection of cavernous hemangioma in the digestive tract. Here we present a patient with a globular, pedunculated, cavernous hemangioma in the descending colon that was removed successfully en bloc by ESD without any bleeding (Video 1).

A 50-year-old woman was referred to our hospital for melena. Initial colonoscopy examination revealed a submucosal tumor approximately 20 mm in diameter in the descending colon, mainly characterized by a soft, globular, pedunculated submucosal lesion with a red-purple nodular surface (Fig. 1a, b). Further endoscopic ultrasonography indicated that the lesion originated from the submucosa. The lesion showed high echogenicity, mixed with a small anechogenic area on the inside, and with a decreased blood flow signal (Fig. 1c).

For treatment, we first performed endoscopic incision of the colonic mucosa using a Hybrid knife (Erbe, Tübingen, Germany) after submucosal injection (Fig. 2a). The submucosal dissection was very carefully performed to avoid damage to the body of the cavernous hemangioma and a clear field was maintained. The lesion was then successfully removed from the colon wall by ESD, as described previously (Fig. 2b, c, e). We used three clips (two from Anrei Medical, Hangzhou, China and one from Micro-Tech, Nanjing, China) for closure of the mucosal defect (Fig. 2d). Finally, histological examination of the resected specimen confirmed cavernous hemangioma (Fig. 2f). The patient was discharged with no further symptoms after 2 days of intravenous antibiotic treatment.

In summary, we believe that this is the first published report of a colonic cavernous hemangioma that has been completely removed by ESD.

**Fig. 1** Colonoscopy and endoscopic ultrasonography examination of the submucosal lesion. a, b A submucosal tumor approximately 20 mm in diameter characterized by a soft, globular, pedunculated submucosal lesion with a red-purple nodular surface. c Endoscopic ultrasonography indicated that the lesion originated from the submucosa and showed high echogenicity, mixed with a small anechogenic area on the inside, and with decreased blood flow signal (yellow arrow).
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Competing interests

None

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Fig. 2 Colonic cavernous hemangioma was completely removed by endoscopic submucosal dissection (ESD). a An endoscopic incision of the mucosa was performed after submucosal injection. b, c, e The lesion was successfully removed from the colon wall by ESD. d Closure of the mucosal defect. f Histological examination of the resected specimen.

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