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. 1 a, 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. 1 c).

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. 2 b, 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.

▶ Video 1  A large cavernous hemangioma in the colon was successfully removed by endoscopic submucosal dissection.

▶ 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).
**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.

**Bibliography**

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