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Endoscopic full-thickness resection for a gastric angioleiomyoma

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Dear Editor,

Angioleiomyoma (ALM) is a rare benign tumor which usually appears on the extremities, particularly the lower legs, and seldom involves the digestive tract (1,2). It is composed of varied smooth muscle bundles and vascular channels (3). We describe the first case report of gastric ALM.

Case report

A 63 year old female presented to our hospital due to a three year history of heartburn and abdominal distension. The physical examination and laboratory results were unremarkable. Esophagogastroduodenoscopy showed a 1.5 cm protrusive lesion in the gastric corpus with a smooth overlying mucosa (Fig. 1A), and endoscopic ultrasonography showed that the tumor originated from the muscularis propria layer (MP) (Fig. 1B). Computerized tomography showed no metastasis or lymph node involvement.

Endoscopic full-thickness resection (EFTR) without laparoscopic assistance was
performed as follows (Fig. 1C and F): a) a sub-mucosal injection and precutting of the mucosal and sub-mucosal layer around the lesion; b) a circumferential incision as deep as the MP layer around the lesion using the ESD technique; c) incision into the serosal layer around the lesion; d) full-thickness resection of the tumor including the serosal layer; and e) closure of the gastric wall defect with metallic clips. The procedure was completed without complications and the resected specimen measured 1.8 \times 1.5 \times 1.5 \text{ cm} (Fig. 1G). Histopathological results revealed that the tumor consisted of intersecting fascicles of spindle cells merged into numerous vascular structures with thick proliferated walls (Fig. 1H). Smooth muscle actin (SMA) and CD34 immunohistochemical staining were positive in the spindle cells, and CD34 was also positive in the vascular walls (Fig. 1I and J). Dog-1, Syn and Ki-67 were focally positive in these spindle cells, which was consistent with stomach ALM. There was no disease recurrence during the follow-up of one year.

Discussion

ALM is a rare benign tumor that most commonly occurs in middle-aged people, especially in females. Paroxysmal pain is the most striking clinical presentation (3). ALM is rarely diagnosed preoperatively; immunohistochemical examination is necessary to differentiate it from other mesenchymal tumors. Three types can be distinguished based on pathological features: capillary or solid, cavernous and venous (3). Local excision, which is curative, is often recommended and tumor recurrence is rare (3,4). EFTR is a minimally invasive technique for the resection of gastric submucosal tumors originating from muscularis propria with a high success rate and low complication rate (5).

In this case, the solid ALM was located in the gastric corpus and there were no specific symptoms. It was successfully managed with EFTR and there was no recurrence during follow-up.

References

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Fig. 1. A. Endoscopic view of the lesion in the gastric corpus. B. Endoscopic ultrasonography revealed that the tumor originated from the muscularis propria layer. C. Precut of the mucosal and submucosal layer around the lesion. D. Profile of the lesion. E. Endoscopic full-thickness resection. F. Closure of the gastric wall defect with metallic clips. G. The resected tumor. H. HE staining of the tumor. I. SMA staining of the tumor. J. CD34 staining of the tumor.