

[ PICTURES IN CLINICAL MEDICINE ]

## Extraluminal Duodenal Gastrointestinal Stromal Tumor with Arteriovenous Malformation

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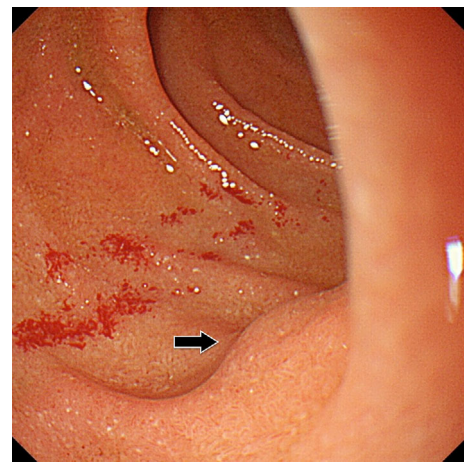
**Key words:** gastrointestinal stromal tumor, arteriovenous malformation, duodenum, endoscopic ultrasound, extraluminal, color Doppler imaging

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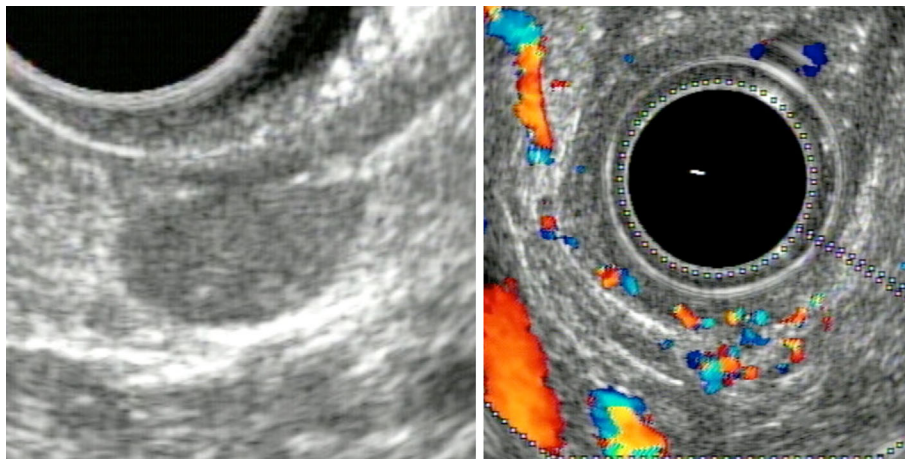
(DOI: 10.2169/internalmedicine.6318-20)



Picture 1.



Picture 2.

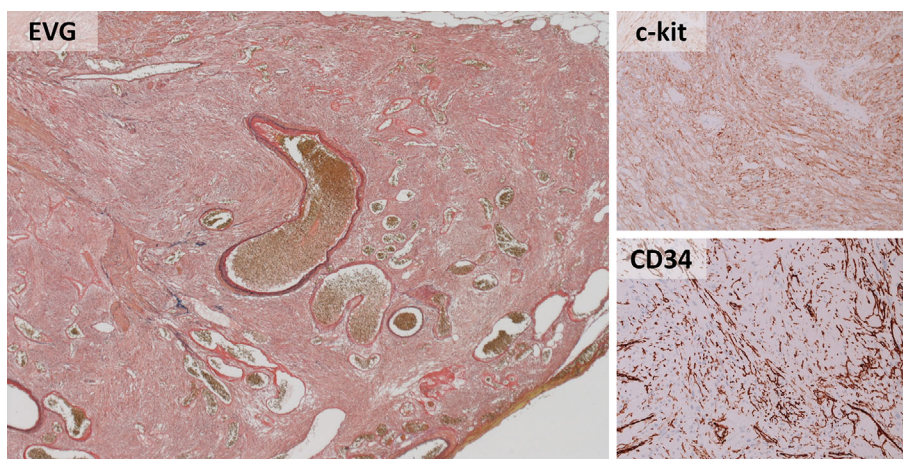


Picture 3.

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**Picture 4.**

A 72-year-old man was admitted for the investigation of a hypervascular lesion in the second part of the duodenum (Picture 1). Esophagogastroduodenoscopy showed a slightly elevated lesion in the duodenum (Picture 2). Endoscopic ultrasound confirmed an 8-mm hypoechoic mass arising from muscularis propria, and color Doppler imaging revealed a turbulent flow in the mass accompanied by arterial inflow and pulsating outflow (Picture 3). A histopathologic examination after partial duodenectomy showed synchronous development of an 8-mm gastrointestinal stromal tumor (GIST) with a mitotic count of 1/50 high-power fields and arteriovenous malformation (AVM) at the same site; immunostaining showed the expression of c-kit and CD34, and elastica-van Gieson staining showed anastomoses of dilated abnormal vessels (Picture 4). Thus far, only a few synchronous occurrences of AVM and GIST have been reported in the literature (1, 2), and this is the first case of an AVM associated with a duodenal GIST.

We declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere. We obtained informed consent from the patient.

**The authors state that they have no Conflict of Interest (COI).**

#### References

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