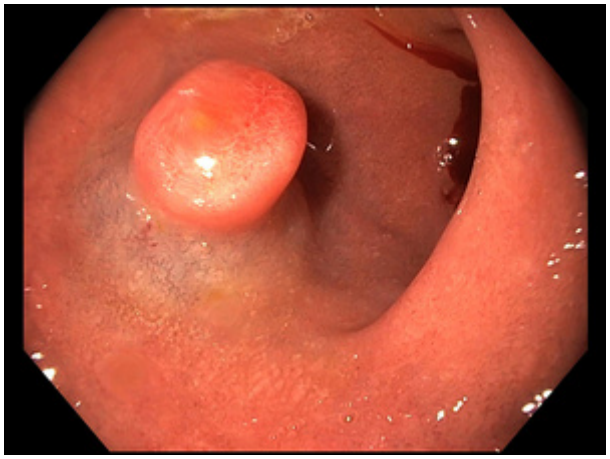
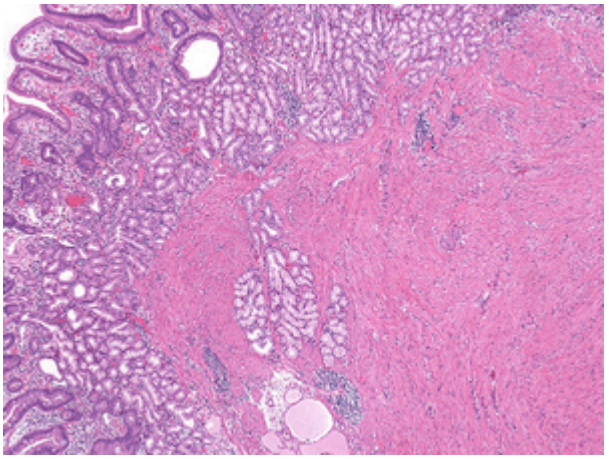
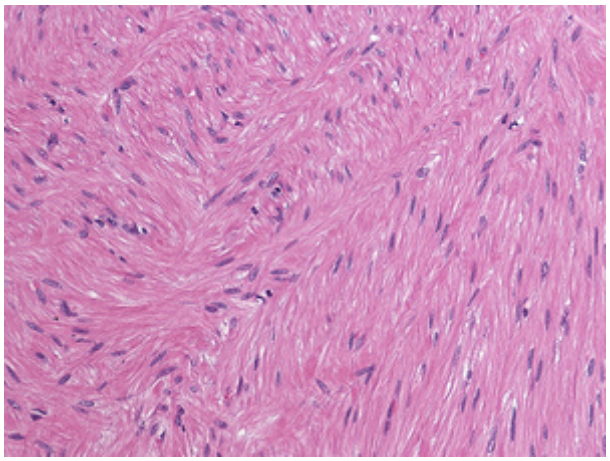
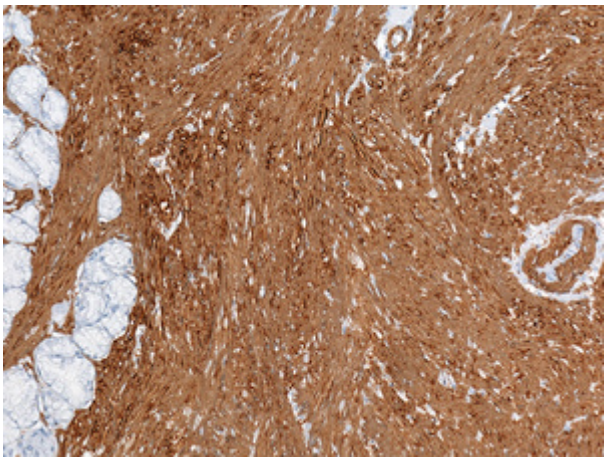
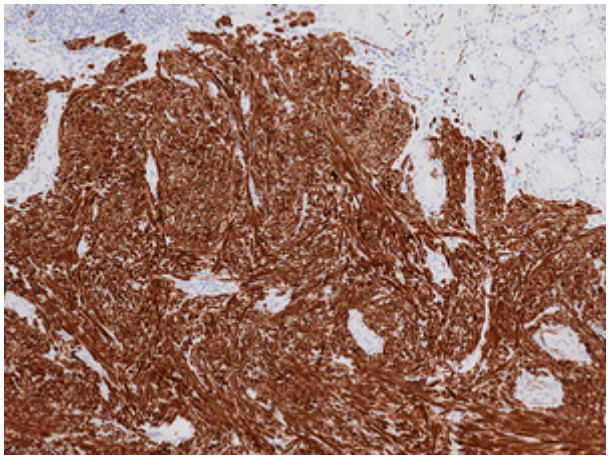
September 2016

Duodenal polyp of a 79-year-old woman.

What is your diagnosis?

Diagnosis:

Polypoid leiomyoma.

Comment:

A 79-year-old woman was referred for unspecific abdominal discomfort and reflux symptoms. Endoscopic examination of her upper gastrointestinal proved the diagnosis of reflux disease, but it also disclosed a well circumscribed sessile polypoid lesion within the duodenal bulb that was covered by normal looking mucosa

(Panel A). The polyp was resected by snare polypectomy and submitted to pathology. Upon histology, the lesion was composed of interlacing fascicles of bland-looking cells that closely resembled normal smooth muscle cells (Panel B). The neoplastic proliferation originated from the muscularis mucosae. On high magnification, the cells showed eosinophilic cytoplasm and characteristic blunt-ended cigar-shaped nuclei (Panel C). Immunoreactivity for smooth muscle actin (Panel D) and desmin (Panel E) proved the leiomyomatous nature of the lesion, while staining for CD177 (KIT), DOG-1 and S-100 protein constantly rendered negative results. The final diagnosis was polypoid leiomyoma of the duodenal bulb (originating from the muscularis mucosae).

For sure, the most common mesenchymal neoplasm of the GI tract is the gastrointestinal stromal tumor (GIST), this does account also for the duodenum, but there are important differential diagnoses, here and at other sites. Leiomyomas are benign and represent the most common smooth muscle neoplasms occurring within the gastrointestinal tract. Still, they are relatively rare.

In the upper GI tract, they typically originate from the muscularis propria (being most common in the esophagus), while in the lower GI tract they typically originate from the muscularis mucosae (being most common in the rectosigmoid).

This superficial location causes the classical polypoid aspect of leiomyomas occurring at this site (in contrast to their appearance within the esophagus). Within the duodenum, leiomyomas are exceedingly rare. They are usually asymptomatic and found incidentally during investigative procedures for other reasons (like in our case). Treatment is done by endoscopic removal, and recurrence is rare. Malignant transformation has not been reported.

For further reading:

- Miettinen M, Kopczynski J, Makhlouf HR, et al. Gastrointestinal stromal tumors, intramural leiomyomas, and leiomyosarcomas in the duodenum: a clinicopathologic, immunohistochemical, and molecular genetic study of 167 cases. Am J Surg Pathol. 2003; 27: 625-41.
- Wiech T, Walch A, Werner M. Histopathological classification of nonneoplastic and neoplastic gastrointestinal submucosal lesions. Endoscopy. 2005; 37: 630-4.
- Agaimy A, Wünsch PH. True smooth muscle neoplasms of the gastrointestinal tract: morphological spectrum and classification in a series of 85 cases from a single institute. Langenbecks Arch Surg. 2007; 392: 75-81.
- Rittershaus AC, Appelman HD. Benign gastrointestinal mesenchymal BUMPS: a brief review of some spindle cell polyps with published names. Arch Pathol Lab Med. 2011; 135: 1311-9.

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