A RARE CASE OF PRIMARY LEIOMYOSARCOMA OF THE COLON VERSUS METASTASIS

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Introduction

We present the case of a patient who was found to have a colonic polyp with increased mitotic activity and ultimately diagnosed with metastatic leiomyosarcoma (LMS). This is an aggressive soft tissue tumor that is rare in the GI tract.

The Case

72 yo F with history of uterine fibroids post hysterectomy underwent a routine screening colonoscopy.

- diminutive polyp in the hepatic flexure
- pathology: smooth muscle neoplasm with increased mitotic activity

Follow up colonoscopy (6 months later)

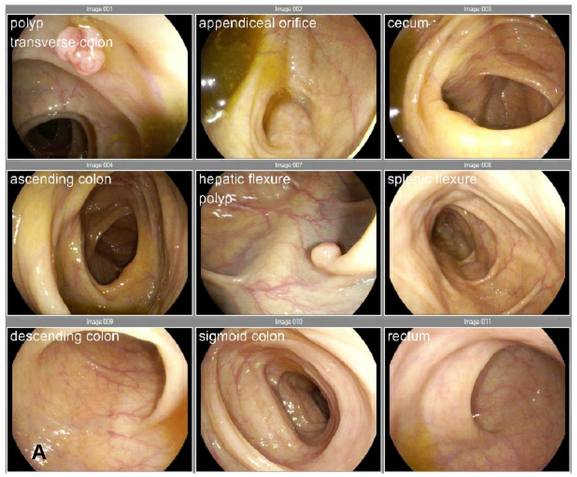
- polyp with smooth muscle neoplasm with high mitotic activity
  - (2-3 per one high-power field)
- IHC staining on both polyps showed positive SMA and negative GIST markers
- Proliferation index (Ki-67) was 20%.

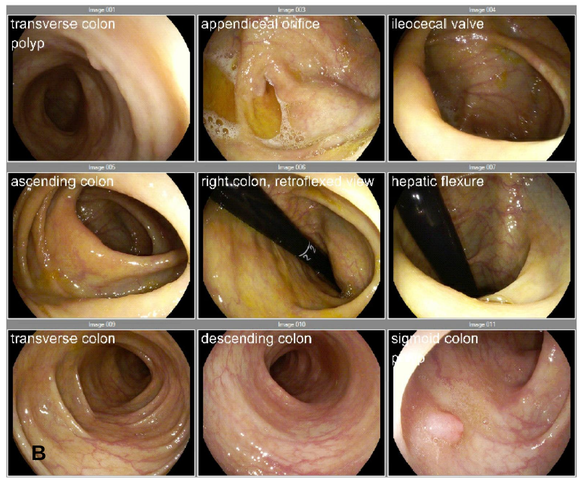
Differential Diagnosis:

- primary leiomyosarcoma vs mets
- abdominal and pelvis imaging with CT and MRI nonrevealing
- lung mass and bone metastasis identified as LMS.

Treatment:

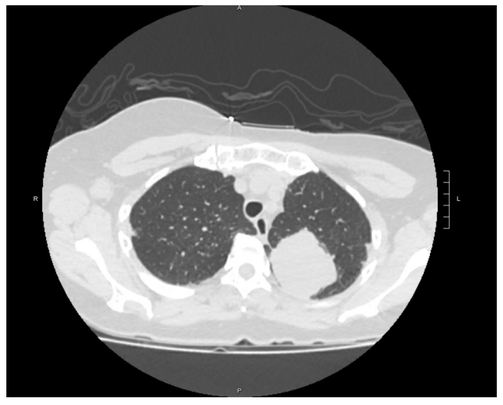
- multiple chemotherapy agents
- anastrozole after tumor hormone staining was estrogen receptor positive.





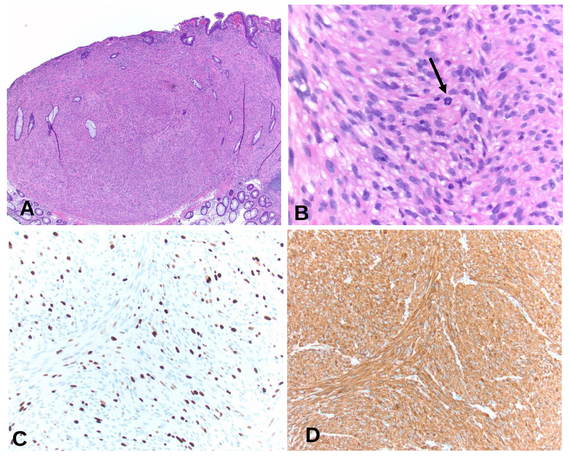
Colonoscopy Findings

A) Initial colonoscopy showing a transverse colon polyp that was inflamed vascular granulation tissue associated with lymphoid aggregates without evidence of neoplastic polyp. Also a hepatic flexure poly that was a smooth muscle neoplasm showing increased mitotic activity measuring 4 mm in diameter involving the lamina propria. B) Colonoscopy 6 months later with colonic smooth muscle tumor with lamina propria involvement and mucosal ulceration.



Evidence of Metastatic Disease

CT showing left upper lobe 6 cm lung mass consistent with lung neoplasm. Few nodules in the left upper lobe, indeterminate but suspicious for ipsilateral disease. Lytic lesion of the left third rib with associated cortical erosion and extraosseous soft tissue component as well as enlarged right axillary 2.8 x 2.9 cm lymph node. Additional nondisplaced fracture of the right eighth rib with pathologic fracture not excluded.



Pathology

A) Elongated, abundant eosinophilic cytoplasm with well-defined cell borders and prominent perinuclear vacuoles. B) Mitotic figure identified by arrow. C) Tumor cells are immunoreactive for desmin and actin as well as negative for *KIT* and *DOG1* (not shown), distinguishing them from a gastrointestinal stromal tumor (GIST). D) Staining confirms the smooth muscle nature of this neoplasm as tumor cell are positive for SMA.

Leiomyosarcoma

Extremely rare and highly invasive tumors arising from muscularis propria of the GI tract. Very uncommon to find in the colon.

Malignant sarcomas are very rare (1% of all adult malignancies).

Approximately 14,000 to 15,000 sarcomas are diagnosed in the United States every year (3,000 bone sarcomas and 11,000 to 12,000 soft tissue sarcomas).

Before 1998 and before KIT stating was available, every tumor from mesenchymal cells was mistakenly classified as LMS.

LMS vs GIST

LMS is positive for SMA, desmin
Negative for GIST markers (CD117, CD34, DOG1.1)

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