GETTING THE GIST OF IT: RARE CASE OF GIST IN ASCENDING COLON

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Background

- Gastrointestinal stromal tumors (GIST) are the most common mesenchymal tumor of the gastrointestinal (GI) tract.
  - Stomach (50 – 60%)
  - Small intestine (30 – 40%)
  - Colon (5-10%).
- We describe a unique case of an ascending colon GIST requiring advanced endoscopic dissection to confirm the diagnosis.

Case Description

- 78-year-old male presented with generalized abdominal discomfort associated with heartburn and for colon cancer screening.
- Colonoscopy revealed a 4 cm subepithelial lesion in the ascending colon (Fig 1).
- Traditional endoscopic ultrasound (EUS) using a linear or forward viewing scope was not possible given the redundant sigmoid colon, leading to significant scope-looping.
- Miniprobe Ultrasound catheter was advanced through the working channel of the colonoscope in water-filled lumen to assess the lesion.
- Heterogenous, hypoechoic 4 by 3 cm lesion arising from the muscularis propria, suggestive of a mesenchymal tumor (Fig 2).

Case Continued

- Needle-knife dissection was used to obtain biopsy of the muscularis propria (Fig 3).
- A clip was placed due to the small increased risk of delayed bleeding and perforation.
- Further imaging of chest, abdomen, pelvis did not show metastatic disease.
- Due to size and heterogeneous appearance on EUS and colonic origin, the patient underwent a right hemicolectomy.
- Post operative period was uneventful, and he was discharged home. He did not require adjuvant imatinib.

Discussion

- Tumor size, mitotic rate, and location have been studied and used as prognostication factors to predict degree of malignancy potential in GIST but is only validated in gastric and small intestinal tumors.
- Knowledge is limited regarding colonic tumors versus antral tumors since occurrence is rare.
- Current data suggest colonic tumors are more malignant.
- Due to the unusual location of the subepithelial lesion and redundant colon, traditional EUS would not work to biopsy the lesion.
- Needle knife dissection assists in identifying and finding cancerous lesions in challenging situations.

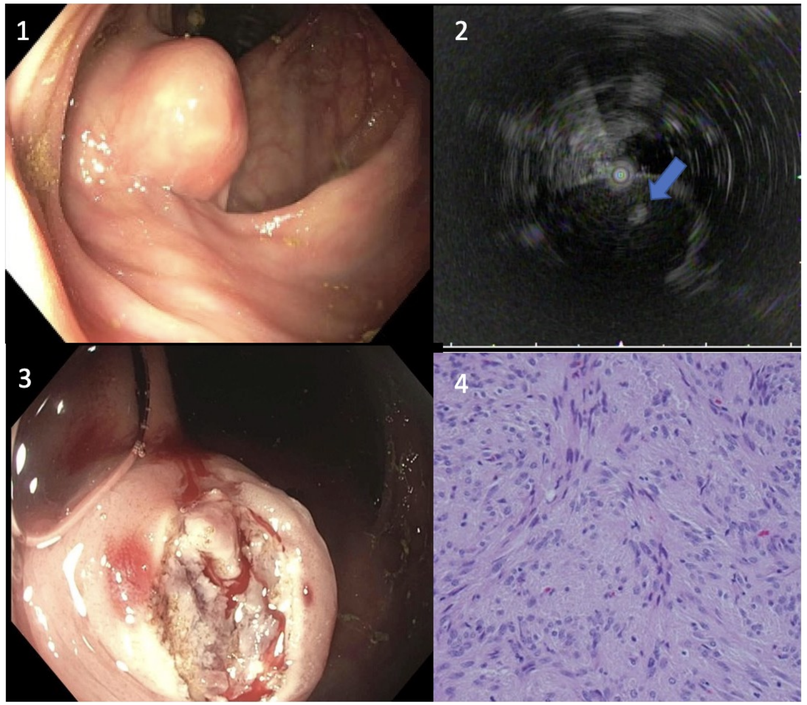

Figure 1. Endoscopic image of colonic subepithelial lesion

Figure 2. EUS demonstrates hypoechoic lesion with small hyperechoic area (blue arrow) in the center of the lesion

Figure 3. Post needle-knife dissection and biopsy

Figure 4. Histopathology reveals spindle cell morphology, and positive positive for CD117, DOG-1, CD34, and h-caldesmon and stains negative for S100, GFAP, and SMA confirming GIST along with correlating diagnostic stains on H&E stain.