AMSER Case of the Month
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19-year-old female presenting with melena

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Patient Presentation

• History of present illness: unintentional weight loss and 3-day history of melena
• Past medical history: Pneumonia with empyema requiring decortication
• Physical examination: Tachycardia. Unremarkable abdominal exam
• Vitals: Afebrile, 122/75, HR 145, RR 24, SpO2 on room air 100%
• Labs: pancytopenia
What Imaging Should We Order?
Select the applicable ACR Appropriateness Criteria

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Appropriateness Category</th>
<th>Relative Radiation Level</th>
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</thead>
<tbody>
<tr>
<td>CT abdomen and pelvis with IV contrast</td>
<td>Usually Appropriate</td>
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<tr>
<td>CT abdomen and pelvis without IV contrast</td>
<td>May Be Appropriate</td>
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<tr>
<td>MRI abdomen and pelvis without and with IV contrast</td>
<td>May Be Appropriate</td>
<td>⬜️</td>
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<tr>
<td>US abdomen</td>
<td>May Be Appropriate</td>
<td>⬜️</td>
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<tr>
<td>FDG-PET/CT skull base to mid-thigh</td>
<td>Usually Not Appropriate</td>
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<tr>
<td>WBC scan abdomen and pelvis</td>
<td>Usually Not Appropriate</td>
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<tr>
<td>Radiography abdomen</td>
<td>Usually Not Appropriate</td>
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<td>Nuclear medicine scan gallbladder</td>
<td>Usually Not Appropriate</td>
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<td>Fluoroscopy contrast enema</td>
<td>Usually Not Appropriate</td>
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<tr>
<td>Fluoroscopy upper GI series with small bowel follow-through</td>
<td>Usually Not Appropriate</td>
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</table>

This imaging modality was ordered by the ER physician.
Findings (unlabeled)
Contrast-enhanced CT of the abdomen and pelvis demonstrates diffuse wall thickening of the small bowel (orange arrows), numerous enlarged mesenteric lymph nodes (green arrows), and hazy peritoneal thickening and stranding (blue arrows).
Final Dx:

Intestinal and peritoneal tuberculosis
Intestinal and Peritoneal Tuberculosis

• An immunocompromised state increases the likelihood for extrapulmonary tuberculosis.
  • The abdomen is the most common site for extrapulmonary disease.

• Abdominal tuberculosis can present with a variety of imaging findings, including but not limited to:
  • Lymphadenopathy
  • Peritonitis
  • Gastrointestinal tract and solid organ involvement
Intestinal and Peritoneal Tuberculosis

- Peritoneal tuberculosis has classically been classified as “wet” (with ascites), “dry”, and “fixed-fibrotic”.
- Gastrointestinal tuberculosis typically demonstrates ileocecal involvement.
Intestinal and Peritoneal Tuberculosis

• Imaging features include:
  • Bowel wall thickening
  • Skip areas with luminal narrowing
  • Abdominal lymphadenopathy
  • Ascites, loculated collections, peritoneal thickening

• Differential diagnosis may include:
  • Inflammatory disease, including Crohn’s disease, sarcoidosis
  • Neoplastic disease, including peritoneal carcinomatosis, lymphoma, mesothelioma
  • Other infections disease, including peritoneal paragonimus

• Diagnosis:
  • Clinical suspicion based on imaging appearance and caseating granulomas on tissue sampling are beneficial for diagnosis.
References:


