AMSER Case of the Month
February 2021

80-year-old Female Presenting with Nonlocalized Abdominal Pain

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Patient Presentation

**HPI:** 80-year-old female presented to the emergency department with a two day history of lower abdominal pain and vomiting. Patient had a similar episode one year ago.

**PMHx:** Appendectomy. History was limited due to language barrier.

**PE:** Vital signs within normal limits. Abdominal tenderness in right lower quadrant, suprapubic area, and left lower quadrant. The abdominal exam was otherwise negative for CVA tenderness and the Murphy, Rovsing and Mcburney signs.
Pertinent Labs

CBC with differential, and CMP were within normal limits
## ACR Appropriateness Criteria

**Variant 4:** Acute nonlocalized abdominal pain. Not otherwise specified. Initial imaging.

<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>Usually Appropriate</td>
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<tr>
<td>MRI abdomen and pelvis without and with IV contrast</td>
<td>Usually Appropriate</td>
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<tr>
<td>US abdomen</td>
<td>May Be Appropriate</td>
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<tr>
<td>Radiography 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>
<td>🌟🌟🌟🌟</td>
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<tr>
<td>WBC scan abdomen and pelvis</td>
<td>Usually Not Appropriate</td>
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<tr>
<td>Nuclear medicine scan gallbladder</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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<tr>
<td>Fluoroscopy contrast enema</td>
<td>Usually Not Appropriate</td>
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</table>
Axial Contrast-Enhanced CT
Axial Contrast-Enhanced CT

No calcified gall stones, pneumobilia, portal venous gas, nor biliary duct dilatation

Multiple radiopaque foci with central gas with positive transition point

Dilated small bowel 3.5 cm
Axial Contrast-Enhanced CT

Soft tissue attenuation engulfing radiopaque foci in proximal colon

Additional radiopaque foci, some containing central gas
Coronal Contrast-Enhanced CT

- Soft tissue attenuation engulfing radiopaque foci in proximal colon
- Dilated small bowel 3.5 cm
- More radiopaque foci with some containing central gas
DDX

- Seed phytobezoar
- Foreign body ingestion
- Colon Carcinoma
- Gallstone ileus
Gross specimen: resected ascending colon, ileum, omentum, and extracted cherry/olive bezoars.

Pathology Dx: Cecal Adenocarcinoma, moderately differentiated, invading 4 cm through muscularis propria. Metastatic carcinoma involving 1 of 25 lymph nodes (4 mm focus).
Final Dx:

Gastrointestinal seed bezoars and cecal adenocarcinoma causing partial small bowel obstruction
Case Discussion

Pathophysiology: Bezoars are retained aggregates of indigestible material that accumulate in the gastrointestinal tract. There are four types of bezoars: phytobezoar (fruit and vegetable), pharmacobezoar (medications), trichobezoar (hair), and lactobezoar (milk). Although obstruction is rare, majority occurs at the rectum. Though atypical, this case demonstrated seed phytobezoars trapped near the ileocecal valve due to an obstructing cecal neoplasm.

Epidemiology: The composition of phytobezoars are generally specific to various geographic regions. Majority of cases are from Eastern Mediterranean Basin.
Case Discussion

**Imaging characteristics:** Phytobezoars may mimic gallstones due to a process called scarification which is a mechanical, thermal, and chemical process that encourage germination by making the seed coat more permeable to water and gases.

**Medical management:** Endoscopic removal is treatment of choice if obstruction occurs. Laparotomy or laparoscopic removal can be performed if endoscopic removal is unsuccessful. There have been cases of acute abdomen secondary to phytobezoars.

