AMSER Case of the Month
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HPI 60 year old female presenting with lower abdominal pain

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Patient Presentation

**HPI:** 60 year old female presenting with lower abdominal pain.

**PMH:** Hypertension, Irritable Bowel Syndrome, Osteopenia, Pancreatitis, and Ulcerative Colitis.

**Medications:** amlodipine and sulfasalazine

**Vitals:** BP: 138/80, Pulse: 70, Resp: 16, SpO2: 98%

**Physical Exam:**
- Genitourinary: No CVA tenderness
- Gastrointestinal: Soft, lower abdominal tenderness, non-distended, and positive bowel sounds.
Patient Presentation

Labs:

- **CBC:**

<table>
<thead>
<tr>
<th>White Blood Cell</th>
<th>Red Blood Cell</th>
<th>Hemoglobin</th>
<th>MCV</th>
<th>Platelets</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2 (normal)</td>
<td>4.53 (normal)</td>
<td>14.0 (normal)</td>
<td>92 (normal)</td>
<td>209 (normal)</td>
</tr>
</tbody>
</table>

- **BMP:**

<table>
<thead>
<tr>
<th>Glucose</th>
<th>BUN</th>
<th>Creatinine</th>
<th>Sodium</th>
<th>Potassium</th>
<th>Chloride</th>
<th>CO2</th>
<th>Calcium</th>
<th>GFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>108 (normal)</td>
<td>8 (normal)</td>
<td>0.63 (normal)</td>
<td>141 (normal)</td>
<td>4.3 (normal)</td>
<td>103 (normal)</td>
<td>26 (normal)</td>
<td>9.4 (normal)</td>
<td>102 (normal)</td>
</tr>
</tbody>
</table>
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>
</tr>
</thead>
<tbody>
<tr>
<td>CT abdomen and pelvis with IV contrast</td>
<td>Usually Appropriate</td>
<td>⭐⭐⭐⭐⭐</td>
</tr>
<tr>
<td>US abdomen</td>
<td>May Be Appropriate</td>
<td>⭐</td>
</tr>
<tr>
<td>US pelvis</td>
<td>May Be Appropriate</td>
<td>⭐</td>
</tr>
<tr>
<td>MRI abdomen and pelvis without and with IV contrast</td>
<td>May Be Appropriate</td>
<td>⭐</td>
</tr>
<tr>
<td>MRI abdomen and pelvis without IV contrast</td>
<td>May Be Appropriate</td>
<td>⭐</td>
</tr>
<tr>
<td>CT abdomen and pelvis without IV contrast</td>
<td>May Be Appropriate</td>
<td>⭐⭐⭐⭐⭐</td>
</tr>
<tr>
<td>Radiography abdomen</td>
<td>Usually Not Appropriate</td>
<td>⭐⭐</td>
</tr>
<tr>
<td>Fluoroscopy contrast enema</td>
<td>Usually Not Appropriate</td>
<td>⭐⭐⭐⭐⭐</td>
</tr>
<tr>
<td>CT abdomen and pelvis without and with IV contrast</td>
<td>Usually Not Appropriate</td>
<td>⭐⭐⭐⭐⭐⭐</td>
</tr>
<tr>
<td>WBC scan abdomen and pelvis</td>
<td>Usually Not Appropriate</td>
<td>⭐⭐⭐⭐⭐⭐</td>
</tr>
</tbody>
</table>

This imaging modality was ordered by the primary care physician.
Findings: (unlabeled)
Findings: 

- blind ending pouch originating at the cecum
- Punctate and curvilinear wall calcifications within a tubular low attenuating mass continuous with the cecal base.
Final Dx:

Appendiceal Mucocele
Case Discussion: appendiceal mucocele

Appendiceal mucocele is distention of the appendix due to mucous accumulation in the lumen. It is a general term used to describe its appearance on radiological findings, and has many possible causes [1].

**Presentation:** Patient may experience abdominal pain, tenderness to palpation, nausea, vomiting, and/or fever [2, 3]. A quarter of patients are asymptomatic. Hematuria and urinary dysfunction, quite rare, can also be seen [4].

**Imaging:** On radiograph, appears as mass in right iliac fossa with peripheral calcifications. CT shows spherical mass with well-defined edges that shares border with cecum [1].

**Pathology:** Common causes include mucus retention cyst from obstruction of mucous sac, serrated polyp, and mucinous neoplasms [1]. There are three main types of histological groups consisting of mucinous cystadenocarcinoma, mucinous cystadenoma, and nonneoplastic mucocele.
Case Discussion: appendiceal mucocele

Pathology cont: Mucinous cystadenocarcinoma has glandular and stromal invasion and is similar to mucinous colonic tumors [5].

Epidemiology: Appendiceal mucocele is a rare condition found only 0.2-0.3% of the time at appendectomy [1, 2, 3]. It appears in middle-aged populations the most [1]. Patients are six times more likely to develop an adenocarcinoma [7].

Management: Treated with surgery; a hemicolecctiony is done if malignancy is suspected [1, 6]. Surgery has good long-term prognosis [6].

Complications: Can cause internal bleeding, obstruction, melena, or pyonephrosis [6]. Pseudo-myxoma peritonei syndrome occurs when there is extra appendicular spread into the peritoneal cavity. It consists of gelatinous material composed of a combination of mucin, mucinous epithelium, and adenocarcinoma.
Case Discussion: appendiceal mucocele

Complications cont: The composition of the gelatinous material will be ultimately diagnosed as peritoneal adenomucinosis (benign) versus peritoneal mucinous carcinomatosis, which originates from appendiceal mucinous adenocarcinoma. There is a intermediate category which contains both histologies. The 5 year survival rate for patients with pseudo-myxoma peritonei syndrome is 84% for adenomucinosis, 37.5% for the intermediate category, and 6.7% for mucinous carcinomatosis [8].
References:


