AMSER Case of the Month December 2023

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, Sp02: 98%
Physical Exam:
- Genitourinary: No CVA tenderness
- Gastrointestinal: Soft, lower abdominal tenderness, non-distended, and positive bowel sounds.

Patient Presentation

Labs:

-CBC:

White Blood Cell	Red Blood Cell	Hemoglobin	MCV	Platelets
6.2 (normal)	4.53 (normal)	14.0 (normal)	92 (normal)	209 (normal)

-BMP:

Glucose	BUN	Creatinine	Sodium	Potassium	Chloride	CO2	Calcium	GFR
108 (normal)	8 (normal)	0.63 (normal)	141 (normal)	4.3 (normal)	103 (normal)	26 (normal)	9.4 (normal)	102 (normal)

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 1: **Right lower quadrant pain. Initial imaging.**

Procedure	Appropriateness Category	Relative Radiation Level
CT abdomen and pelvis with IV contrast	Usually Appropriate	☢☢☢
US abdomen	May Be Appropriate	O
US pelvis	May Be Appropriate	O
MRI abdomen and pelvis without and with IV contrast	May Be Appropriate	O
MRI abdomen and pelvis without IV contrast	May Be Appropriate	O
CT abdomen and pelvis without IV contrast	May Be Appropriate	☢☢☢
Radiography abdomen	Usually Not Appropriate	☢☢
Fluoroscopy contrast enema	Usually Not Appropriate	☢☢☢
CT abdomen and pelvis without and with IV contrast	Usually Not Appropriate	☢☢☢☢
WBC scan abdomen and pelvis	Usually Not Appropriate	☢☢☢☢

This imaging modality was ordered by the primary care physician

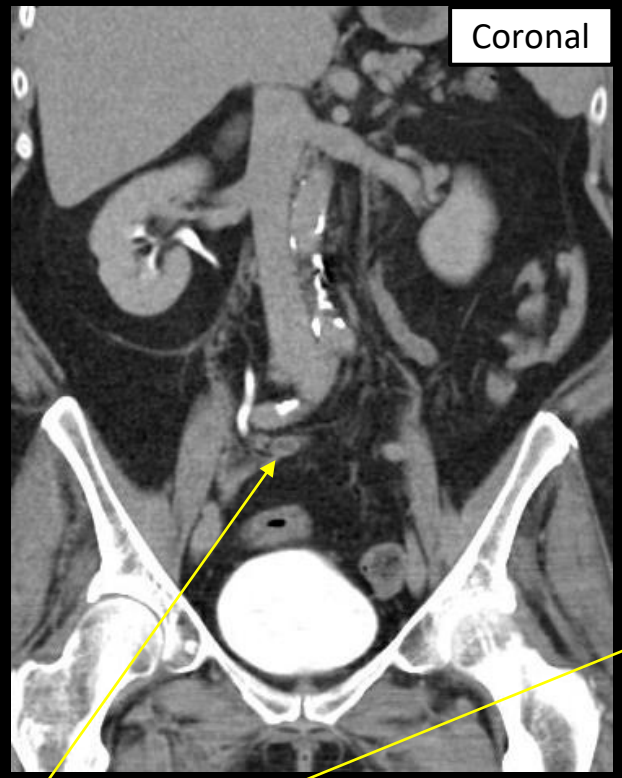
Findings: (unlabeled)

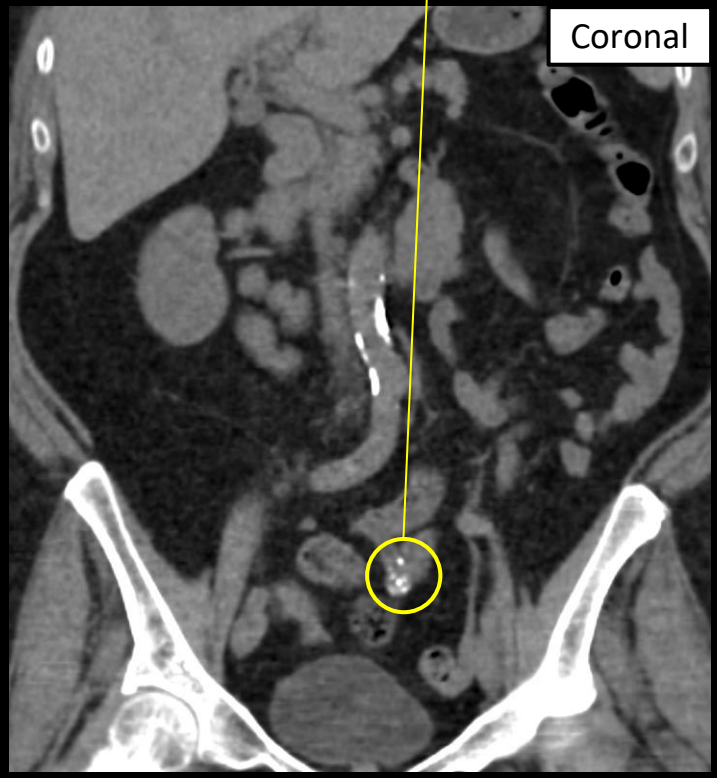



Findings: (labeled)

blind ending pouch originating at the ceum

Punctate and curvilinear wall calcifications within a tubular low attenuating mass continuous with the cecal base.





Cecum

Appendix

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 hemicolectomy 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].

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