

# Interesting Body Case

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# Case Presentation

**HPI** - A 68 year old female presented to the emergency department with a 2-3 day history of worsening, intermittent, sharp, stabbing, and non-radiating abdominal pain. She reported seeing some “blood” in her dialysate that day.  
(add history of peritonitis)

**PMH** - End stage renal disease secondary to autosomal dominant polycystic kidney disease, peritoneal dialysis since 2003, coronary artery disease, myocardial infarction, polycystic ovaries (among other things and prior episodes of peritonitis)

**Medications** - CAPD Peritoneal dialysis 2.5 mEq/L with 1.5% dextrose

**Social History** - Never smoked or used smokeless tobacco. Denies alcohol consumption and recreational drug use.

# Case Presentation

## Vitals

B/P 148/71, Pulse 85, Temp 97 °F, Resp 18, Ht 5'6, Wt 103 kg (226 lb), SpO2 100%, BMI 36.48 kg/m<sup>2</sup> (mention vitals were in normal limits and mention she is obesity and no fever)

## Physical Exam

General: Not in acute distress.

Cardiovascular: Normal rate and regular rhythm. Normal pulses. Normal heart sounds.

Abdominal: Abdomen is soft and flat. Bowel sounds are normal. There is distension. There is generalized abdominal tenderness. Dialysate catheter in left lower quadrant.

## Pertinent Labs (mention abnormal labs)

CBC: WBC 9.3, RBC 3.21, Hb 10.4, Hct 31.4, Plt 266

CMP: Na 133, Potassium 2.5, Chloride 93, BUN 33, Creatinine 15, Albumin 3.3

Troponin: 0.01

# Hospital Course

## Day one

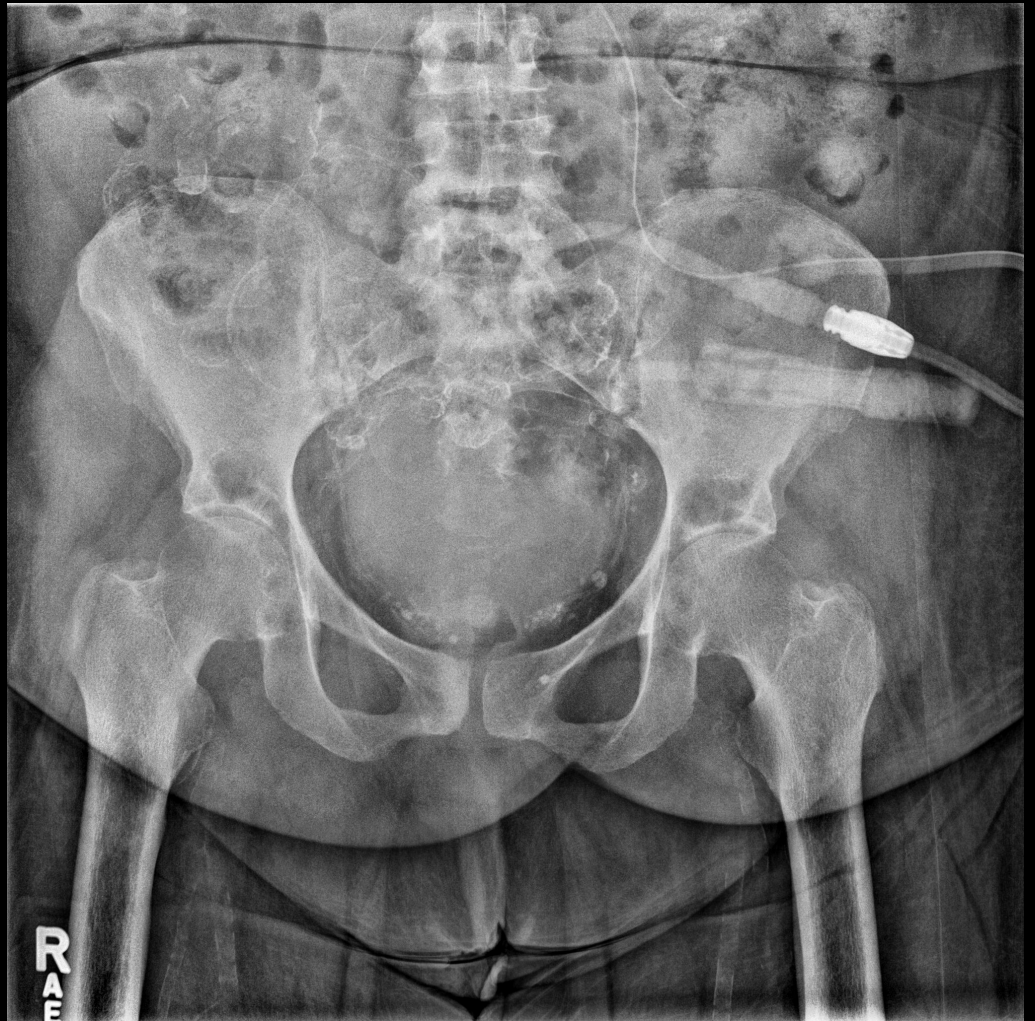
- IV antibiotics and proton pump inhibitor were prescribed
- Ordered Pelvic X-ray and CT of abdomen and pelvis

## Day four

- Discharged in good condition with her abdominal pain improved

# Imaging

Radiograph of the pelvis demonstrates fine curve linear calcifications predominantly on the right side and central pelvis.



# Imaging

Axial CT demonstrates diffuse visceral peritoneal thickening and calcifications can be observed along the small bowel walls outlined by ascites.



# Imaging

Axial CT demonstrates diffuse visceral peritoneal thickening and calcifications can be observed along the small bowel walls.



# Imaging

Coronal CT demonstrates diffuse calcifications that can be observed along the small bowel walls.





# Differential Diagnosis

## Encapsulated Peritoneal Sclerosis

Known secondary causes include history of peritoneal dialysis and recurrent bacterial peritonitis<sup>1</sup>

- Our patient has been on peritoneal dialysis for over 20 years
- She has had four prior episodes of peritonitis that were positive for *Streptococcus Viridans* and complicated by *Staphylococcus Epidermidis* bacteremia

**Imaging findings:** CT demonstrates fine diffuse calcifications along the small bowel walls. Diffuse visceral peritoneal thickening - the encasing of the peritoneum has been described as “cocoonlike”<sup>1</sup>

## Peritoneal carcinomatosis

- Arises in patients with a history of ovarian or gastrointestinal malignancies<sup>2</sup>
  - Our patient has no prior history
- Imaging would reveal a nodular thickening with omental nodularity which is absent

## Peritoneal amyloidosis

- Presents with nonspecific abdominal pain and gastrointestinal symptoms
- Organ specific findings (i.e. abnormal labs, splenomegaly)<sup>3</sup>
  - Our patient had isolated peritoneal findings with no other organ involvement and absent lab findings

# Encapsulated Peritoneal Sclerosis Background

Rare and fatal condition that characteristically presents with encapsulation of bowel in fibrocollagenous peritoneal membrane

Common predisposing factors include: long-term peritoneal dialysis, bacterial peritonitis, and tuberculosis

Clinical presentation is generally nonspecific

Specific radiological findings can aid in early diagnosis

- Ultrasound and computed tomography

# Encapsulated Peritoneal Sclerosis Background

Diagnosis can be made presumptively with clinical presentation and imaging findings. Diagnosis is confirmed with laparotomy or laparoscopy<sup>4</sup>

Current treatment options<sup>4</sup>

- Medications: Immunosuppressive agents, corticosteroids, tamoxifen
- Taking patients off of peritoneal dialysis and starting hemodialysis
- Supportive care due to risk of malnutrition
- Surgical interventions for patients at risk of acute obstruction due to adhesions

Thank you

# References

1. Singhal M, Krishna S, Lal A, Narayanasamy S, Bal A, Yadav TD, Kochhar R, Sinha SK, Khandelwal N, Sheikh AM. Encapsulating Peritoneal Sclerosis: The Abdominal Cocoon. *Radiographics*. 2019;39(1):62-77.
2. Szadkowska MA, Pałucki J, Cieszanowski A. Diagnosis and treatment of peritoneal carcinomatosis – a comprehensive overview. *Pol J Radiol*. 2023;88:e89-e97.
3. Özcan HN, Haliloğlu M, Sökmensüer C, Akata D, Özmen M, Karçaaltıncaba M. Imaging for abdominal involvement in amyloidosis. *Diagn Interv Radiol*. 2017;23(4):282-285.
4. Burkart JM and Bansal Shweta. Encapsulating peritoneal sclerosis in patients on peritoneal dialysis. In: *UpToDate*, Connor RF (Ed), Wolters Kluwer. (Accessed on May 15th. 2024)