Sclerosing Peritonitis in a Patient with Systemic Lupus Erythematosus on Peritoneal Dialysis

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Introduction

Encapsulating peritoneal sclerosis (EPS) is a rare condition seen in patients on chronic peritoneal dialysis (PD) where inflammatory fibro-collagenous layers form around the small intestine and intra-abdominal organs leading to entrapment and obstruction. Interestingly, patients with systemic lupus erythematosus (SLE) on PD for end-stage renal disease (ESRD) also show a predilection for developing EPS.

Case Presentation

A young female with a history of SLE and comorbid ESRD on PD presented with nausea, vomiting, and severe abdominal pain. She was recently discharged from an outside facility on empiric antibiotics for culture-negative peritonitis.

On admission, the patient was afebrile and vitally stable. Her abdominal pain was suspected to be a sequela of the peritonitis, likely exacerbated by constipation that was self-reported. PD was resumed and she was restarted on her previously prescribed antibiotic regimen of fluconazole, vancomycin, and ceftazidime.

There was no improvement of her nausea or abdominal pain despite an aggressive bowel regimen. Computed tomography (CT) imaging of the abdomen was also unremarkable.

The patient later developed new-onset fever, tachycardia, and rebound leukocytosis. Peritoneal fluid cultures grew *E. faecalis*. The PD catheter was subsequently removed, and dialysis was performed through an existing arteriovenous fistula. Repeat CT revealed pneumoperitoneum and profound gastroduodenal, jejunal, and cecal mucosal edema secondary to peritonitis and perforation.

The patient underwent an emergent exploratory laparotomy, during which a 4-cm hole in the transverse colon and a 'thickened peritoneum, with encapsulation of the liver, transverse colon, and stomach' were identified. A diagnosis of EPS was designated based on the surgical findings.

Conclusion

Although the relationship between SLE and EPS is poorly understood, retrospective analysis of EPS cases suggests that an existing history of SLE may predispose patients to developing EPS. EPS is associated with significant morbidity and mortality. Therefore, a high index of suspicion is warranted in patients with SLE on PD who present with abdominal pain, nausea, and vomiting associated with weight loss and ascites.

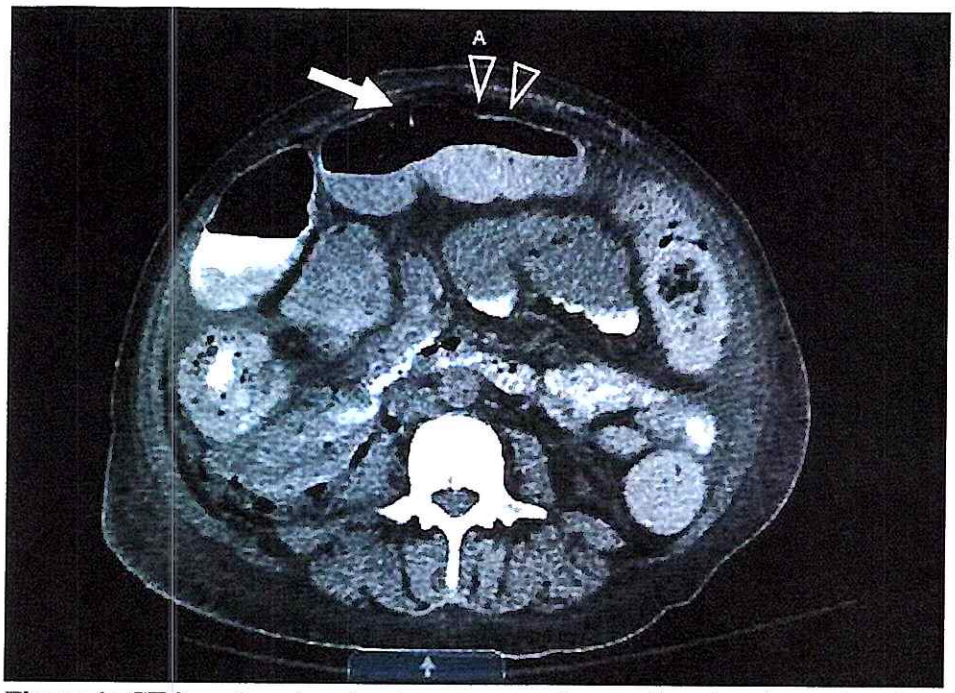

Figure 1: CT imaging showing transverse colon perforation (arrow) and pneumoperitoneum (arrowheads)

References

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