Spontaneous Colonic Perforation in a Patient on Peritoneal Dialysis

Dear Editor,

Colonic perforation in the absence of tumors, diverticulosis, or external injury is rare.[1] Its diagnosis is delayed in patients on peritoneal dialysis (PD) because the dialysate often masks the signs and symptoms of PD-related peritonitis.[2]

A 53-year-old woman on continuous ambulatory PD (CAPD) for 10 months presented with fever, non-bilious vomiting, diffuse pain in the abdomen, and cloudy PD fluid. PD effluent had a 1200/µL white blood cell count with 81% neutrophils. She was started on intraperitoneal vancomycin and gentamycin. PD fluid culture grew *Escherichia coli* sensitive to gentamycin.

Dialysate total cell count showed no improvement after 3 days, and she developed abdominal distension and obstipation. Contrast-enhanced computed tomography (CECT) abdomen revealed colon perforation [Figure 1]. Laparotomy revealed perforation near the proximal two-third and distal one-third junctions of the transverse colon. Feculent peritoneal fluid was drained and end transverse colostomy was done. Despite intensive care, including mechanical ventilation, inotropic support, and continuous renal replacement therapy, she developed multiorgan failure and died on the tenth day.

Perforation peritonitis is a severe complication with a high mortality rate;[3] however, diagnosis is often delayed due to confusion with PD-related peritonitis in CAPD patients. CECT should be considered early if peritonitis symptoms don't improve after appropriate antibiotic initiation.[2]

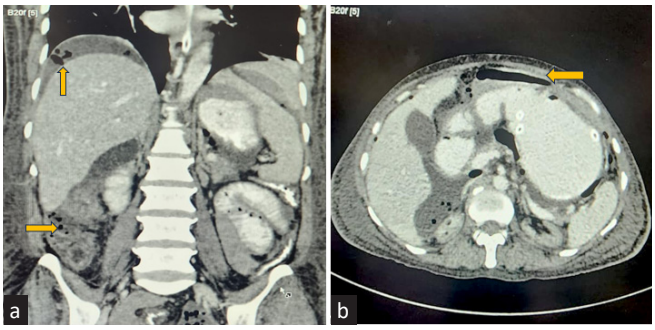

Figure 1: Contrast-enhanced computed tomography images (a) coronal view and (b) axial view showing multiple extra-luminal air attenuating foci in the non-dependant portion of the intra-peritoneal compartment of the abdomen (yellow arrows).

Causes of perforation are ischemic colitis, tuberculosis, malignancy, perforated diverticulitis, inflammatory bowel disease, sclerosing peritonitis with mural bowel fibrosis, cholecystitis, and rarely chronic constipation.[4] In the index case, the colonic perforation was spontaneous and could have resulted from constipation. Solid feculent mass compresses the colonic wall, diminishes the blood supply, leads to ischemia in the anti-mesenteric border, and necrosis of colonic mucosa, forming feculent ulcerative changes[1] as were observed in the histopathological examination of our case.

Conflicts of interest: There are no conflicts of interest.

Jyoti Aggarwal[1], Yeshwanth Mohan Yelavarthy[1], Vinay Rathore[1], Narendra Kuber Bodhey[2], Radhakrishna Ramchandani[3]

Departments of [1]Nephrology, [2]Radiodiagnosis, [3]General Surgery, All India Institute of Medical Sciences, Raipur, Chhattisgarh, India

***Corresponding author:** Vinay Rathore, Department of Nephrology, All India Institute of Medical Sciences, Raipur, Chhattisgarh, India. E-mail: vinayrathoremd@gmail.com*

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