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IMAGES IN EMERGENCY MEDICINE

Imaging

Male with abdominal distention and abnormal chest x-ray

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This case has not been previously presented.

1 | PATIENT PRESENTATION

A 48-year-old man receiving chemotherapy for glioblastoma multiforme presented for generalized weakness and fecal incontinence, which he described as "dribbling drops" of liquid stool. Physical examination showed dry mucous membranes, bowel sounds in the right upper quadrant, diffuse abdominal tenderness without peritoneal signs, suprapubic fullness, and a large amount of clay-like stool in the rectal vault. Dehydration was suggested by sodium of 148 mmol/L and osmolarity of 313 mOsm/kg on serum chemistries. Chest radiograph (Figures 1 and 2) was obtained, followed by computed tomography (Figure 3).

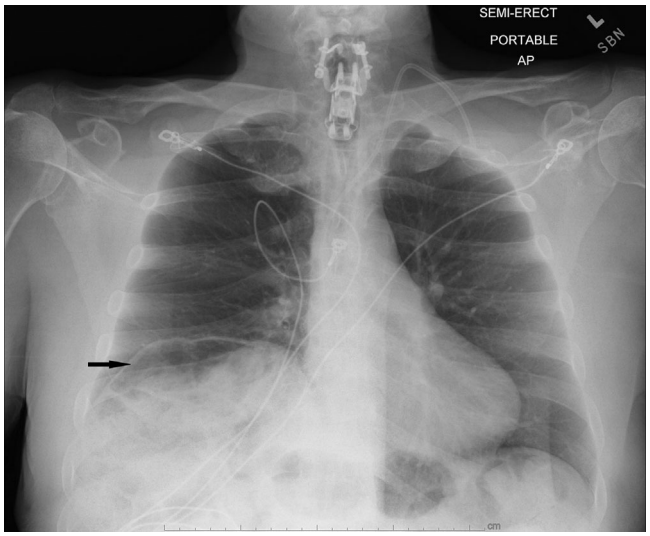

FIGURE 1 Plain film of the chest with possible pneumoperitoneum (wide black arrow).

2 | DIAGNOSIS

2.1 | Chilaiditi's sign complicating urinary retention and fecal impaction

Chilaiditi's sign occurs when the bowel is interposed between the right hemidiaphragm and the liver. It occurs in less than 1% of the population and is more common in elderly males and those with chronic constipation, cirrhosis, obesity, or chronic lung disease.[1] When symptoms of abdominal pain, nausea, vomiting, or respiratory distress occur, it is known as Chilaiditi's syndrome. Our patient was admitted for serial abdominal examinations, and he responded to conservative management with bladder decompression with Foley catheter and enemas. Surgery may be required if obstruction, volvulus, or bowel ischemia is suspected.

Chilaiditi's sign is an important mimic of pneumoperitoneum. Haustral markings may be seen on plain films. Inverting the image or

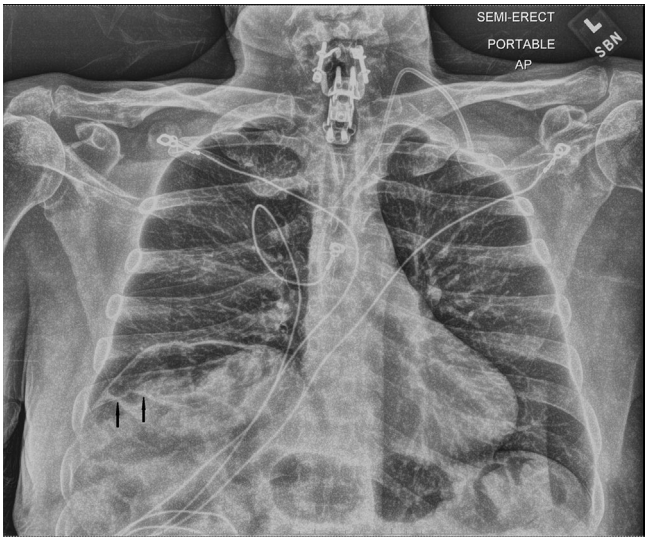

FIGURE 2 Colonic haustra are more apparent with over penetrated technique on chest x-ray (narrow black arrow).

changing the penetration may assist in visualizing haustra. Air will not move if the patient is repositioned for additional images. Computed tomography is diagnostic. Distinguishing factors on ultrasound have also been described.[2]

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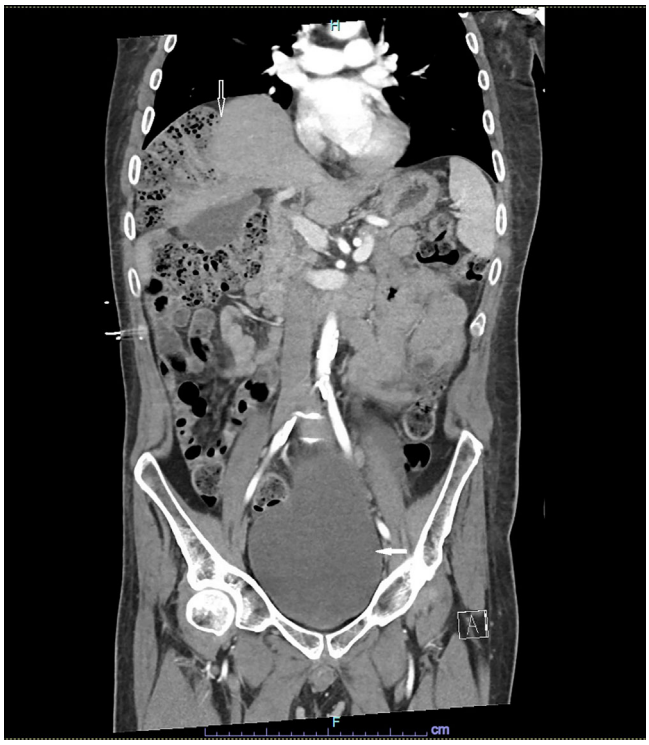

FIGURE 3 CT done with IV contrast only and intravenous contrast showing large bowel distended with stool and gas displacing liver (open arrow) and distended bladder (solid arrow).

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