

## Sigmoid volvulus: An image telling the story

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### Case presentation

A 77-year-old gentleman, with past medical history of dementia and psychosis, presented to the emergency department with a chief complaint of abdominal distention. X-ray imaging of the abdomen revealed air filled distended loops of large bowel (**Figures 1A and 1B**). Computerized tomography (CT) revealed marked dilatation of the large intestine, from the cecum to the sigmoid colon where there is a beak-shaped transition as well as multiple air fluid levels without free air (**Figures 2a and 2b**). A bedside colonoscopic decompression was performed with resolution of the volvulus.

### Discussion

Sigmoid volvulus occurs when the sigmoid colon twists on the sigmoid mesocolon, resulting in acute, subacute or chronic intestinal obstruction. Colorectal cancer is, by far, the most common

cause of large bowel obstruction (LBO) in the United States. In contrast, volvulus causes only 4% of LBO. (1) Because of its anatomic characteristics, the sigmoid colon is the most frequent segment of the gastrointestinal tract to develop volvulus, as it is represented in 2/3 of the cases. (2) Risk factors are chronic constipation, advanced age, neuropsychiatric disorders, and medications affecting intestinal motility.

A CT scan of the abdomen and pelvis with contrast is the recommended imaging study in the work-up of suspected sigmoid volvulus. (3) If contrast allergy is present, plain radiography can reveal a bent inner tube (double wall thickness of the inner colon and single wall thickness of the outer colon) or “coffee bean” sign. (4) A magnetic resonance imaging of the abdomen and pelvis is recommended for pregnant patients, children, and young adults who have high levels of radiation exposure. (5-7)

**Key words:** Acute abdomen, imaging, sigmoid volvulus.

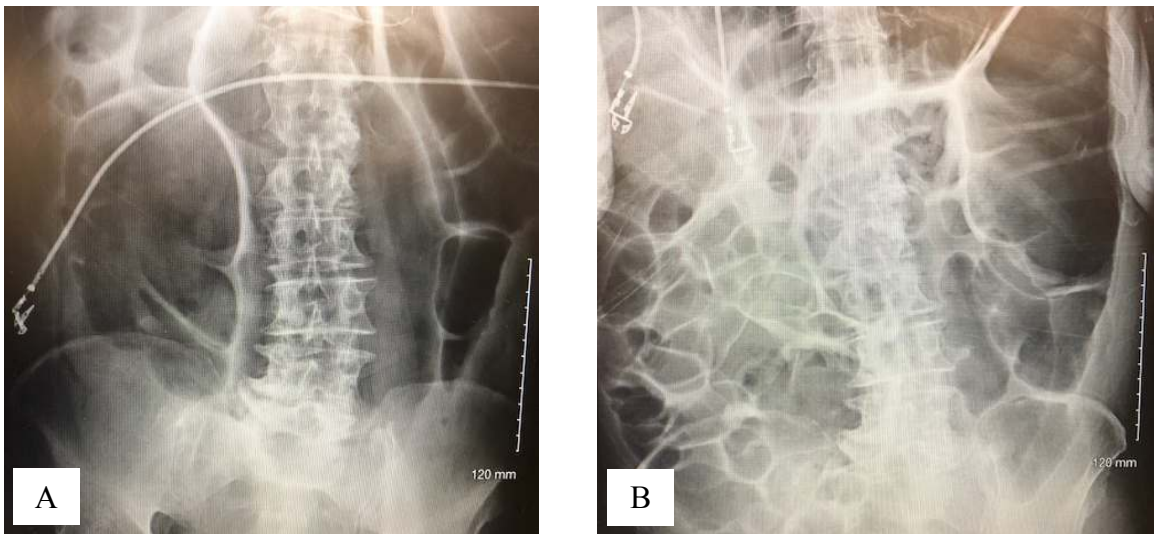
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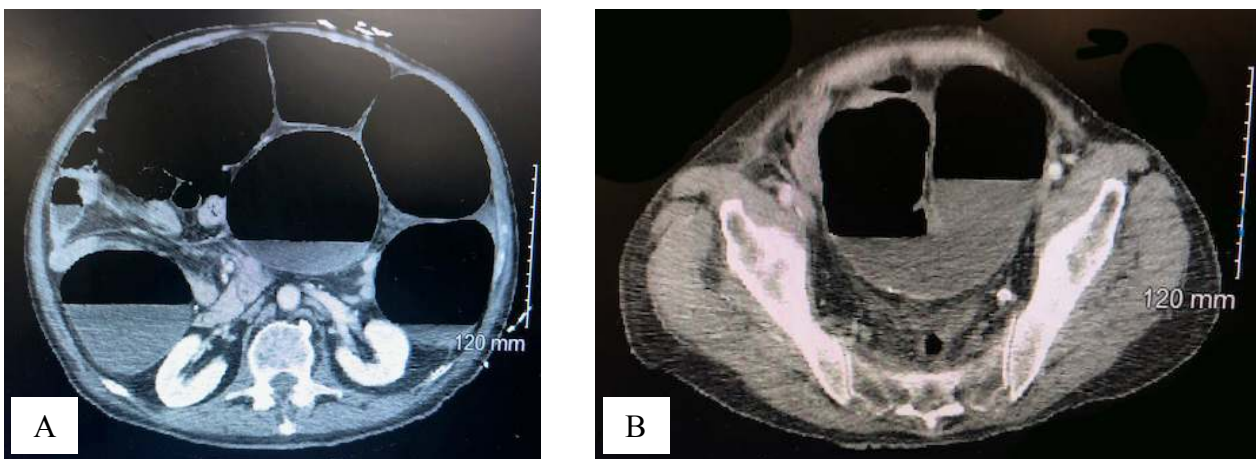
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**Figure 1 (A and B).** Abdominal X-ray depicts air-filled, dilated loops of large bowel (A) with tip of nasogastric tube in stomach (B) and no free air



**Figure 2 (A and B).** Computed tomography of abdomen reveals marked dilatation of the large intestine (A), from the cecum to the sigmoid colon with a beak shaped transition. A distal loop of large intestine rotates towards the left upper quadrant (B)



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