Case 790

Eurorad

Sigmoid volvulus in a young adult

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Section: Abdominal imaging
Imaging Technique: MR
Case Type: Clinical Cases
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Patient: 29 years, male

Clinical History:

Acute abdominal pain in a 29 year-old man
Imaging Findings:

A 29 year-old man otherwise healthy came to our hospital for acute abdominal pain, distension, and emesis. There was no fever. Clinical examination showed diffuse tenderness of the abdomen, but there was no sign of peritonitis. Plain films of the abdomen (upright and supine)were first taken. Lower obstruction was suspected. 6 hours later, a water soluble enema was performed. Then on the basis of the age and clinical/radiographic findings, surgery was performed. Sigmoid volvulus was found. There was no ischemia. After manual reduction, left lower abdominal fossa colostomy was performed.
Discussion:

This presentation reports a case of sigmoid volvulus. It is the most common cause of volvulus because of the anatomy of the sigmoid colon which is a long and mobile segment of the large bowel. Clinical findings associate pain, progressive or acute distension, constipation and vomiting. In up to 80% cases, diagnosis is based on the findings of an AP plain film of the abdomen taken in supine position. The "coffee bean" sign (1)is explained by close apposition of dilated loops (a sign of closed loop obstruction). The "Northern exposure" sign (2) was recently described : Dilated sigmoid colon appears as an inverted U-shaped loop which migrates cephalad (North) to the transverse colon. Emptiness of the left iliac fossa (3) was also described. This disease usually occurs in older patients. Predisposing factors include debilitating disease such as Parkinson, Alzheimer, multiple sclerosis, pseudobulbar palsy or Chagas disease. Constipated patients who abuse laxatives are also known to have an increased risk. Sigmoid volvulus can be observed in young adults and even in children (4)in case of congenital anomalies or a defective fixation of the large bowel. Other conditions can mimic sigmoid volvulus on radiographs. In cecal volvulus, there is only one air-fluid level (two are present in sigmoid volvulus). Transverse colon volvulus does not originate in the pelvis. In pseudo-obstruction, air is present in the rectum. In mechanical obstruction, distension and superior displacement of the sigmoid colon are usually less prominent. Such a closed loop obstruction can result in ischemia, infarction and perforation. A combination of an urgent endoscopic decompression followed by elective resection is the basis of initial treatment. In patients with megacolon, a secondary subtotal colectomy can be done to reduce the risk of recurrence. In this case, the delay between the first radiograph and surgery could be criticized. Endoscopy was not performed. Diagnosis was probably delayed because of the age of the patient.
Differential Diagnosis List: sigmoid volvulus

Final Diagnosis: sigmoid volvulus

References:

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Figure 1

a

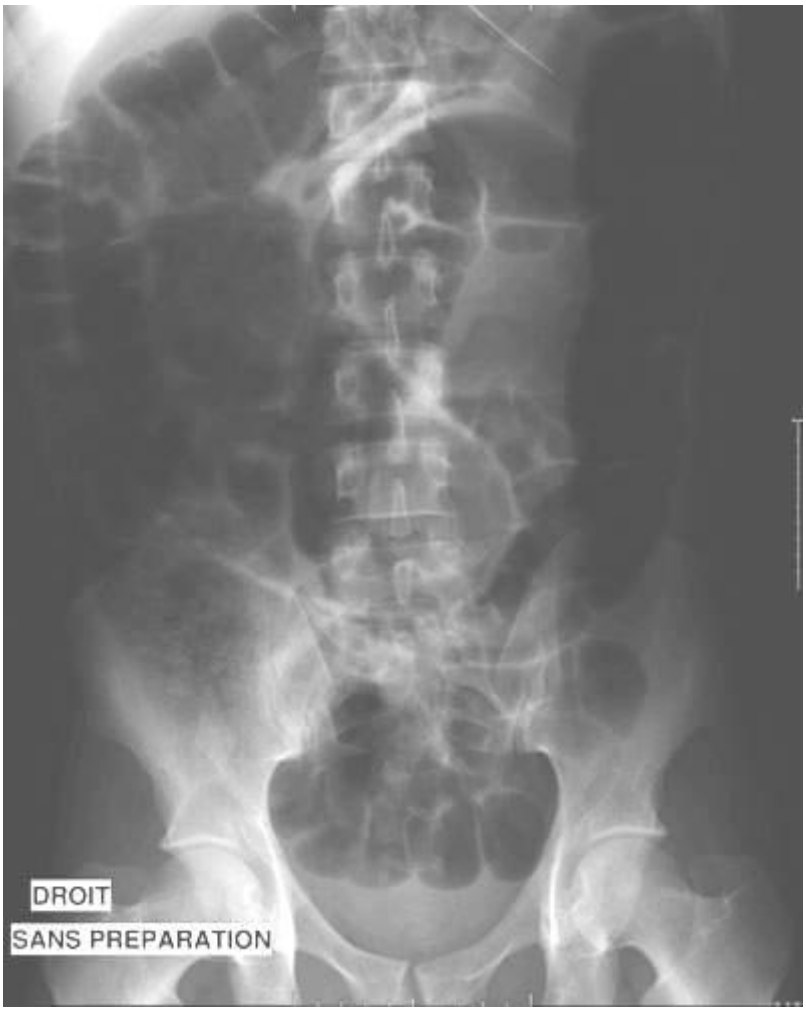
Description: Upright. Multiple air-fluid levels in the left lower quadrant and pelvis. Presence of abundant stool in the caecum. Empty rectum. Empty left lower fossa. **Origin:**

b

Description: Supine. The "coffee bean" sign is visible (close apposition of the sigmoid loops) **Origin:**

Figure 2

a



Description: The Northern exposure sign is visible because distension of the transverse colon had increased. **Origin:**

Figure 3

a

Description: AP view. Typical bird's beak image at the obstruction site **Origin:**

b

Description: Oblique view. Contrast medium visible through and above the obstruction **Origin:**