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CONTINUING MEDICAL EDUCATION
ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Surgery Quiz – Case 58

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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2025, 42(4):575–576

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A 48-year-old patient presented at the emergency room with acute pain of the abdomen. A full blood test, an abdominal and chest x-ray and an electrocardiogram (ECG) were performed. In the history taking the patient, mentioned eating two cans of tuna five hours ago and the sudden onset of pain was four hours ago. Physical examination revealed abdominal distension, general tenderness, and hypoactive bowel sounds. The laboratory results revealed high white blood cells (WBC); the only other finding was from the abdominal x-ray (fig. 1).

Comment

Coffee beans are essentially the seeds of the coffee cherry. Arabica and Robusta are the two main types. Unfortunately, we are not describing this. We are referring to the radiological sign of this finding on the abdominal x-ray (fig. 1). Some authors describe the dilated twisted sigmoid loop as an "inverted U" or "Omega sign." It is used to describe the twisting of the sigmoid colon about its mesenteric axis, mimicking the picture of a coffee bean (fig. 2). The two side parts of the bean represent the gas-filled segments of the dilated bowel creating an inverted U-shape, whereas the central cleft of the bean represents the double thickness of opposed bowel walls. The presence of air within the bowel wall is a sign known as parietal pneumatosis and it is suggestive of bowel ischemia, whereas the presence of extraluminal air in the peritoneal cavity suggests bowel perforation.

Sigmoid volvulus is the third most common cause of bowel obstruction and a common and potentially life-threatening condition occurring in older, frail adults. A volvulus of the colon occurs in the sigmoid region about 40% of the time. Risk factors include chronic constipation, diabetes mellitus, neurologic disorders, and previous abdominal surgery. The classic clinical presentation is a

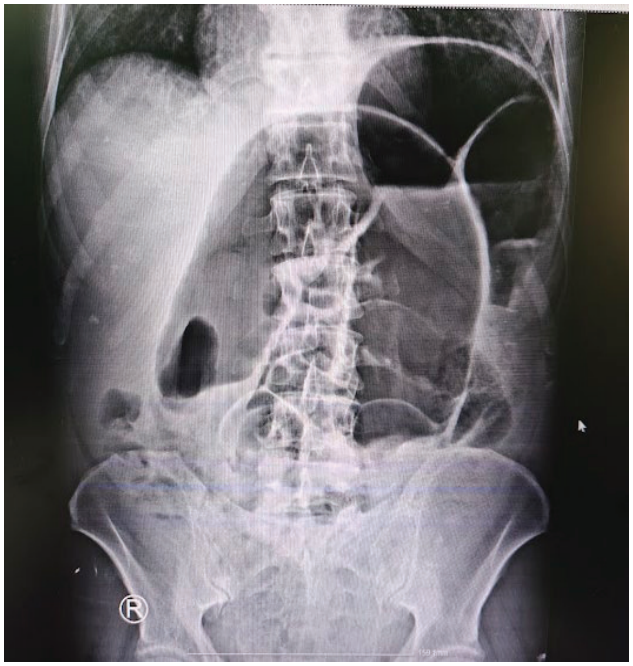

Figure 1.

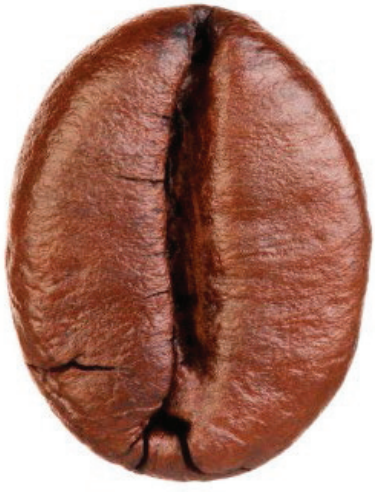

Figure 2.

triad of abdominal pain, distention, and constipation. In sigmoid volvulus, the blood supply to the involved gut is compromised. The bowel may become gangrenous, leading to perforation, peritonitis, and potentially fatal sepsis. Immediate detorsion is required with volvulus to restore the compromised blood perfusion. Conservative management with rehydration and bowel rest will not release the volvulus and restore blood flow to the sigmoid and is therefore inappropriate. Surgical resection of sigmoid colon does not meet initial treatment goals of relieving the volvulus and restoring blood perfusion. For patients who have developed irreversible ischemic bowel injury, resection of the affected colon may become a life-saving procedure. Endoscopic reduction of the volvulus relieves the obstruction and restores the blood supply to the affected sigmoid. Once sigmoid volvulus is suspected, endoscopic reduction should be performed immediately, before the volvulus bowel sustains irreversible ischemic injury. During endoscopy, the clinician can also visualize the colon and determine if the patient has developed bowel ischemia. Endoscopic reduction of the sigmoid volvulus was the most appropriate next step in the management of our patient. Intravenous antibiotics are an important adjunctive treatment in patients with peritonitis.

The appropriate management should relieve the volvulus, reestablish the blood perfusion to the affected colon, and prevent possible future recurrence. The presence of gangrenous bowel is a major predictor of mortality. Endoscopic reduction of sigmoid volvulus alone is associated with a significant risk of recurrence; hence, sigmoid resection with coloproctostomy or end colostomy should follow endoscopic decompression. Laparoscopic sigmoidectomy minimizes surgical complications and shortens recovery time. It provides a promising alternative for elderly patients with chronic illness.

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Diagnosis: *Coffee bean sign*