

An old woman with diffuse abdominal pain and abnormal imaging findings

Uma mulher idosa com dor abdominal difusa e achados anormais de imagem

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A 71-year-old Brazilian female came to hospital claiming fever, intense abdominal pain and constipation intercalated with diarrhea during five days. Her medical antecedents were four deliveries, a caesarean with salpingo-oophorectomy, and chronic obstructive pulmonary disease (COPD) due to smoking more than 40 pack-years. She denied use of alcohol or of illicit drugs. On physical examination she was febrile and eutrophic (49 kg, 152 cm, and BMI: 21.2 kg/m²), with dyspnea (30 rpm), tachycardia (100

bpm) and arterial hypotension (90/55 mmHg). Her abdomen was flaccid and plane with normal peristalsis, but diffusely painful on superficial palpation and positive sudden decompression on the right, with positive Murphy's sign, and no organomegaly. Laboratory determinations showed anemia, leukocytosis, and mild elevation of liver enzymes. Worth of note, were the findings of the imaging studies, and of colonoscopy evaluation (Figure 1).

What is your diagnosis?

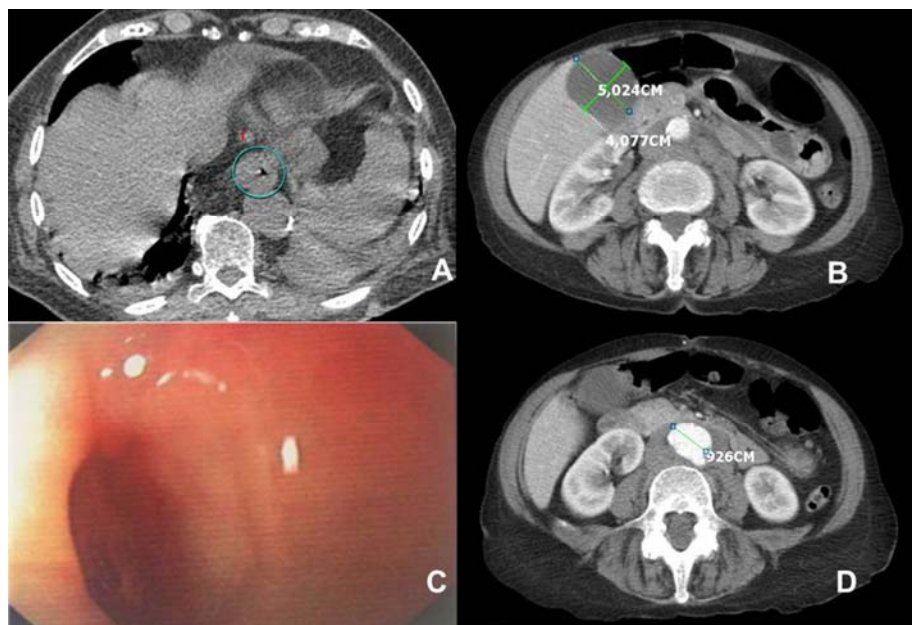


Figure 1. A and B: Computed tomography (CT) revealed the presence of a small hiatus hernia (encircled), and a large gallbladder without evidence of cholelithiasis; C: colonoscopy evaluation showed colonic diverticulum; D: CT with contrast disclosed an abdominal aortic aneurysm.

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Saint's triad and abdominal aortic aneurysm

Saint's triad (ST) was first described in three patients with hiatus hernia, colon diverticulosis and gallbladder disease, and has been considered either as an uncommon or underreported entity.¹⁻⁵ Etiopathogenetic mechanisms of ST are not entirely clear, but recent case studies have suggested some relationship with systemic disorders of connective tissue that can be called "herniosis".²⁻⁵ The reported factors of "herniosis" involve aging, COPD, hypertension, and diabetes mellitus.²⁻⁵ Conditions more often described in cases of ST include: 1) cholelithiasis, cholecystitis anomalies and hydropic gallbladder; 2) hiatus hernia, inguinal and other intestinal hernias; and 3) diverticulosis of small intestine and of colon or sigmoid.¹⁻⁵ Although aortic aneurysm and dilated cardiomyopathy have been reported in patients with ST,^{3,4} the hypothesis of casual coexistence of these conditions cannot be ruled out. Some authors consider the possible pathophysiologic role of mutations in cytoskeletal proteins and proteins associated to contraction, as dystrophin, desmin, lamin, and sarcoglycan to explain the occurrence of associated cardiovascular disorders.³ Accordingly to this theory, bile stasis and stones are due to gallbladder dysmotility and dilation; and similar phenomenon would explain the development of diverse hernias and diverticulosis.³⁻⁵ As clinical manifestations of ST are nonspecific, this diagnosis is often incidentally performed.

The elderly woman herein reported had COPD, which is a risk factor of ST, and presented acute abdominal symptoms associated with a probable episode of acalculous gallbladder disease. Abdominal computed tomography confirmed the presences of hiatus hernia and of acalculous cholecystitis, and colonoscopy showed the large bowel diverticulum (Figure 1 A to C). Moreover, tomography findings were consistent with abdominal aortic aneurysm (Figure 1 D). The present data cannot reinforce causal relationship between the changes of ST and aneurysms. Notwithstanding, further researches would yield better knowledge about these phenomena.²⁻⁴

References

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