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Images of Interest / Imagens de Interesse

Stercoral Colonic Perforation: Do Not Underestimate the Fecaloma

Perfuração Estercoral do Cólon: Não Subestimar o Fecaloma

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Abstract

Stercoral colonic perforation is a rare but life-threatening complication of chronic constipation resulting from pressure necrosis caused by an impacted fecaloma. Because its clinical presentation is often nonspecific, computed tomography (CT) plays a pivotal role in diagnosis. The combination of a fecaloma, focal colonic wall discontinuity, pneumoperitoneum, and free intraperitoneal fluid should strongly suggest stercoral perforation, particularly in elderly patients with chronic constipation. Careful evaluation of the entire colon is also essential to exclude an underlying obstructing lesion or additional sites of perforation. Prompt recognition of these characteristic CT findings facilitates timely surgical intervention and may improve clinical outcomes. We present the case of a 74-year-old man with stercoral perforation of the sigmoid colon diagnosed preoperatively on CT.

Keywords

Colon; Constipation; Computed tomography; Fecaloma; Intestinal perforation.

Resumo

A perfuração estercoral do cólon é uma complicação rara, mas potencialmente fatal, da obstipação crónica, resultante de necrose por pressão causada por um fecaloma impactado. Dado que a sua apresentação clínica é frequentemente inespecífica, a tomografia computorizada (TC) desempenha um papel fundamental no diagnóstico. A combinação de um fecaloma, descontinuidade focal da parede cólica, pneumoperitoneu e líquido livre intra-peritoneal, sugere fortemente perfuração estercoral, particularmente em doentes idosos com história de obstipação crónica. A avaliação cautelosa de todo o cólon é igualmente essencial para excluir uma lesão obstrutiva subjacente ou locais adicionais de perfuração. O reconhecimento precoce destes achados característicos na TC permite uma intervenção cirúrgica atempada e pode melhorar o prognóstico. Apresentamos o caso de um homem de 74 anos com perfuração estercoral do cólon sigmoide, diagnosticada no estudo pré-operatório por TC.

Palavras-chave

Cólon; Obstipação; Tomografia computorizada; Fecaloma; Perfuração intestinal.

Case Presentation

A 74-year-old man presented to the emergency department with acute abdominal pain, nausea, and vomiting. His medical history was notable for chronic constipation.

On physical examination, he exhibited diffuse abdominal tenderness with guarding, raising suspicion for acute peritonitis. Laboratory tests showed elevated inflammatory markers.

Contrast-enhanced computed tomography (CT) of the abdomen and pelvis demonstrated marked fecal impaction within the sigmoid colon. A focal discontinuity of the colonic wall with adjacent extraluminal free air confirmed bowel perforation (Fig. 1). Circumferential mural thickening and hyperenhancement of the affected segment were also present (Fig. 1). Free pelvic fluid suggested associated peritonitis (Figs. 1 and 2). In addition, free retroperitoneal air extended cranially in the upper abdomen (Figs 2 and 3). No distal obstructing lesion or diverticular disease was identified. Overall, the imaging findings indicated stercoral perforation of the sigmoid colon.

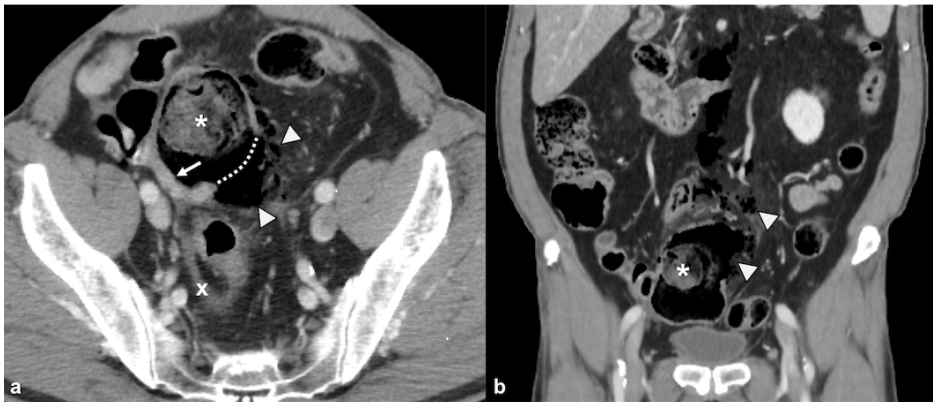


Figure 1 – Contrast-enhanced CT images of the pelvis (a - axial plane; b - coronal plane) demonstrate a moderate-sized fecaloma within the sigmoid colon (asterisk, *), associated with a large focal colonic wall defect (dotted line) and adjacent extraluminal free gas (arrowheads), consistent with bowel perforation. Circumferential mural thickening and hyperenhancement of the affected colonic segment are also present (arrow). Free pelvic fluid (X) suggests associated peritonitis.

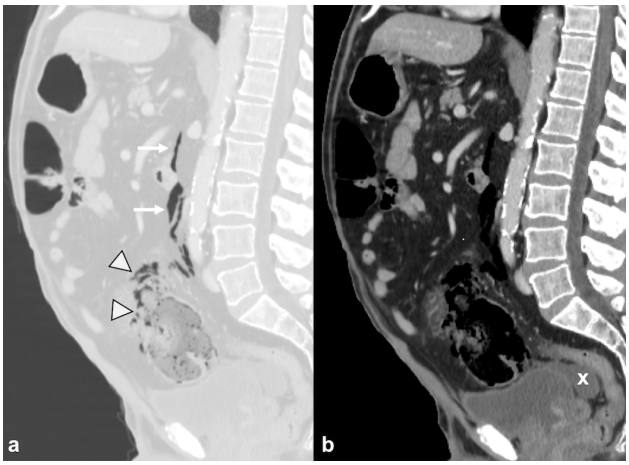


Figure 2 – Sagittal contrast-enhanced CT images (a - lung window; b - soft--tissue window). The lung window better demonstrates free extraluminal gas (arrowheads) extending cranially in the upper abdomen (arrows). Free fluid (X) is better seen in the rectovesical pouch.



Figure 3 – Axial contrast-enhanced CT image at the level of the renal hila demonstrates free retroperitoneal air in the upper abdomen (arrow).

Emergency laparotomy confirmed sigmoid perforation caused by an impacted fecaloma with diffuse fecal peritonitis. A Hartmann procedure was performed. The postoperative course was uneventful. Histopathological examination excluded malignancy and inflammatory bowel disease.

Discussion

Stercoral colonic perforation is a rare but life-threatening complication of chronic constipation that predominantly affects elderly individuals. Additional risk factors include neurological disorders and medications that impair colonic motility, such as opioids, antidepressants, antipsychotics, and antiepileptic drugs.[1] Progressive fecal impaction increases intraluminal pressure beyond capillary perfusion pressure, leading to pressure-induced ischemia, mural necrosis, stercoral ulceration, and ultimately perforation.[2] The antimesenteric border of the sigmoid and rectosigmoid colon is most frequently affected because of its relatively poor vascular supply and higher intraluminal pressure.[2,3]

Patients typically present with abdominal pain, nausea, vomiting, and signs of acute peritonitis, although symptoms may be attenuated in elderly or immunocompromised patients.[1,3] Because the clinical presentation is nonspecific, CT is the imaging modality of choice for early diagnosis.[1] Characteristic CT findings include a fecaloma (defined as a mass of dehydrated, inspissated feces with a diameter equal to or greater than that of the affected colonic segment), focal bowel wall discontinuity, extraluminal free air, and free intraperitoneal fluid. Perforations are often multiple and open directly into the peritoneal cavity. Mural thickening and hyperenhancement of the involved bowel may occur.[2,3] Importantly, fecal impaction may occur proximal to an obstructing colorectal carcinoma, with perforation resulting from pressure necrosis caused by the fecaloma rather than direct tumor invasion.[2] Careful assessment of the entire colon is therefore essential to exclude an underlying obstructing lesion, additional stercoral ulcers, or synchronous sites of perforation.

Prompt recognition of the characteristic CT findings is essential to expedite surgical management and improve patient outcomes, since stercoral perforation is a surgical emergency with reported mortality rates of 35–40%, largely related to delayed diagnosis.[1]

Conclusion

The combination of a fecaloma, focal colonic wall discontinuity, and pneumoperitoneum on CT should strongly suggest stercoral perforation, particularly in elderly patients with chronic constipation. Early recognition of these characteristic CT findings facilitates timely surgical intervention and may improve prognosis.

Ethical Disclosures / Divulgações Éticas

Conflicts of interest: The authors have no conflicts of interest to declare.

Conflitos de interesse: Os autores declaram não possuir conflitos de interesse.

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Confidentiality of data: The authors declare that they have followed the protocols of their work center on the publication of data from patients.

Confidencialidade dos dados: Os autores declaram ter seguido os protocolos do seu centro de trabalho acerca da publicação dos dados de doentes.

Protection of human and animal subjects: The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).

Protecção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial.

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