CLINICAL IMAGES

Perforation of the colon by high-pressure water inserted via the anal canal

Ibrahim Turkcuer, Mustafa Serinken, Ozgur Karcioglu, Cagatay Aydin, Yilmaz Kiroglu

Bowel perforation is a life-threatening condition associated with high morbidity and mortality rates. There are few data on colonic perforations (CP) due to barotrauma with air or fluid inserted into the anus via various devices.[1,2]

A 72-year-old man was referred to an emergency department (ED) because of CP due to high-pressure water self-applied anally. On presentation he complained of rectal bleeding and abdominal pain. His general condition and vital signs were normal except for a raised heart rate of 115 bpm. He had been constipated for a long time, and 8 hours before the ED visit had attempted to flush out his colon using a high-pressure garden hose. The hose had been inserted approximately 30 - 40 cm into the anal canal.

There was extensive guarding on palpation of the abdomen. An ultrasound scan showed free fluid in the perihepatic and perisplenic recesses, but no free air or air-fluid levels were seen on conventional radiographs. Findings on digital rectal examination were normal. He underwent surgery because oral and intravenous contrast-enhanced abdominal tomographs revealed perforation proximal to the rectosigmoid junction, associated with extensive intra-abdominal free fluid and free air (Fig. 1). Ragged colonic tissue around a perforation of nearly 2 cm in length, 20 cm proximal to the rectosigmoid junction, was excised and repaired. He was discharged after an uneventful recovery.

Conclusion

Emergency physicians should have a high index of suspicion for catastrophic intra-abdominal injuries, including colonic perforation, in patients with rectal bleeding and severe abdominal pain. Peritoneal signs due to faecal contamination can be a late finding after colonic perforation. Factors such as psychiatric conditions should be kept in mind when such injuries are encountered in the ED. These patients require a detailed examination and investigations to reveal colorectal injuries, and it must be kept in mind that peritoneal signs can be delayed.

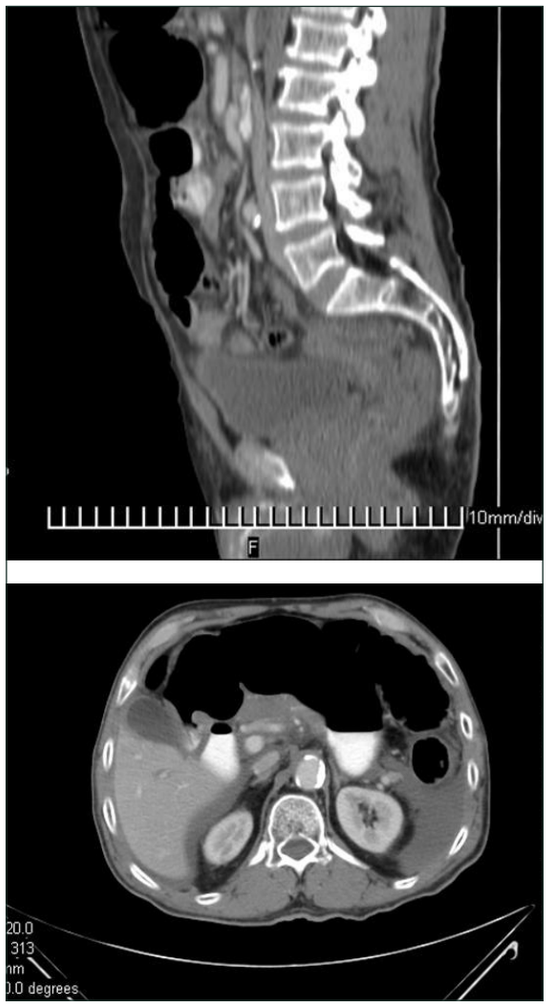

Fig. 1. Extensive intraperitoneal free fluid coupled with free air.

Ibrahim Turkcuer and Mustafa Serinken are Assistant Professors of Emergency Medicine in the Department of Emergency Medicine, Pamukkale University School of Medicine, Denizli, Turkey; Ozgur Karcioglu is Associate Professor of Emergency Medicine in the Department of Emergency Medicine, Acibadem University School of Medicine, Istanbul, Turkey; Cagatay Aydin is Associate Professor of General Surgery in the Department of General Surgery, Pamukkale University School of Medicine; and Yilmaz Kiroglu is Assistant Professor of Radiology in the Department of Radiology, Pamukkale University School of Medicine.

Corresponding author: *I Turkcuer (iturkcuer@yahoo.com).*

1. Farbin S, Davidson P, Shockley L. Perforation of the sigmoid colon by hydrostatic pressure of a public water fountain. *J Emerg Med* 1996; 14: 703-706.
2. Coffey JC, Winter DC, Sookhai S, Cusack SPA, Kirwan WO. Non-iatrogenic perforation of the colon due to acute barotrauma. *Int J Colorectal Dis* 2007; 22: 561-562.