

Psoas sign of pneumoperitoneum

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A 51-year-old woman presented to the emergency department with a 1-day history of lower abdominal pain and nausea. A physical examination revealed lower abdominal tenderness without guarding. Abdominal radiography of the patient in the supine position revealed the psoas sign (Figure 1, arrow), which is a radiographic indication of pneumoperitoneum in the retroperitoneal space outlining the psoas muscle.

Computed tomography (CT) of the abdomen showed that the sigmoid colon wall had collapsed and feces had accumulated in the

surrounding area (Figure 2, arrow). Sigmoid colon perforation with peritonitis was diagnosed via an emergency laparotomy. The sigmoid colon was resected, the inside of the pelvis was washed, and an ostomy was added. The patient was discharged from the hospital 17 days later and recovered uneventfully.

Computed tomography is the most useful imaging modality for detecting gastrointestinal tract perforation.¹ Compared with plain films, CT is highly sensitive and specific for extraluminal air.



FIGURE 1 Abdominal radiography of the patient in the supine position revealed the psoas sign (arrow)

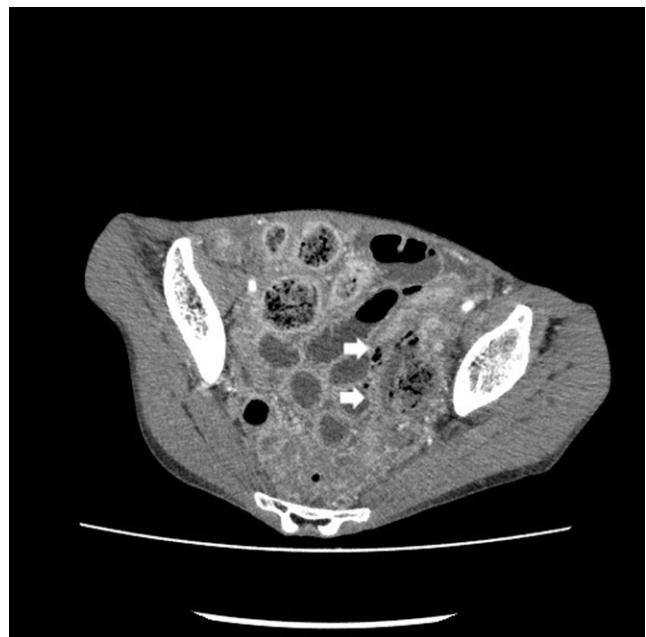


FIGURE 2 Computed tomography of the abdomen showed that the sigmoid colon wall had collapsed and feces had accumulated in the surrounding area (arrow)

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However, physicians working in clinics without CT scans should diagnose gastrointestinal perforation by abdominal radiography. It is important to know the point of abdominal radiography.

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CONFLICT OF INTEREST

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

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1. Singh JP, Steward MJ, Booth TC, et al. Evolution of imaging for abdominal perforation. *Ann R Coll Surg Engl.* 2010;92:182–8.

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