

Pneumoscotum associated with nontherapeutic lower gastrointestinal endoscopy

A 66-year-old man underwent flexible rectosigmoidoscopy due to anemia and rectal bleeding. The rectosigmoidoscopy showed blood oozing from third-degree hemorrhoids (● Fig. 1 a). During the procedure the patient noticed swelling of his scrotum (● Fig. 1 b); he then developed abdominal pain. A computed axial tomography scan confirmed subcutaneous emphysema and the presence of pneumoperitoneum, with air in the scrotum (● Fig. 2 a), around the rectum (● Fig. 2 b), in the retroperitoneum, and the perinephric (● Fig. 2 c) as well as the parasophageal (● Fig. 2 d) spaces. Physical examination under general anesthesia revealed perforation of the rectum into the subcutaneous tissue adjacent to the hemorrhoids. After consultation with the surgeons, the patient was kept nil per os overnight. Antibiotics were administered (ciprofloxacin 200 mg i.v. bid, metronidazole 500 mg i.v. tid), and the pneumoscotum resolved within 3 days. The patient's white blood cell count remained stable. After 3 days, the patient was started on a full liquid diet and then advanced to a regular diet. He was discharged uneventfully after 4 days in hospital.

Subcutaneous or retroperitoneal air that dissects into the dartos lining of the scrotal wall or movement of air from the intraperitoneal space into the scrotum may result in pneumoscotum. Local gas production is another mechanism that suggests anaerobic infection, requiring urgent surgical interventions [1]. In the literature there are only seven cases of pneumoscotum following lower gastrointestinal endoscopy [2–8]. Four of these patients had undergone polypectomy [2–5], one had undergone endoscopic mucosal resection for a tumor [6], and one with ulcerative colitis had undergone biopsy [7]. To the best of our knowledge, our case is only the second one reported in the literature involv-



Fig. 1 Physical examination following rectosigmoidoscopy.
a External hemorrhoids were visible on perianal inspection in the knee-elbow position.
b Edematous scrotum.

ing the development of pneumoscotum following a pure diagnostic lower gastrointestinal endoscopy [8]. None of the patients with this complication required a surgical repair procedure, and complete resolution was observed after close clinical observation, with judicious use of antibiotics and serial monitoring of the patients. Our case serves as an important reminder to gastroenterologists that pneumoscotum could present as a sign of colonic perforation even in patients with diagnostic lower gastrointestinal endoscopy.

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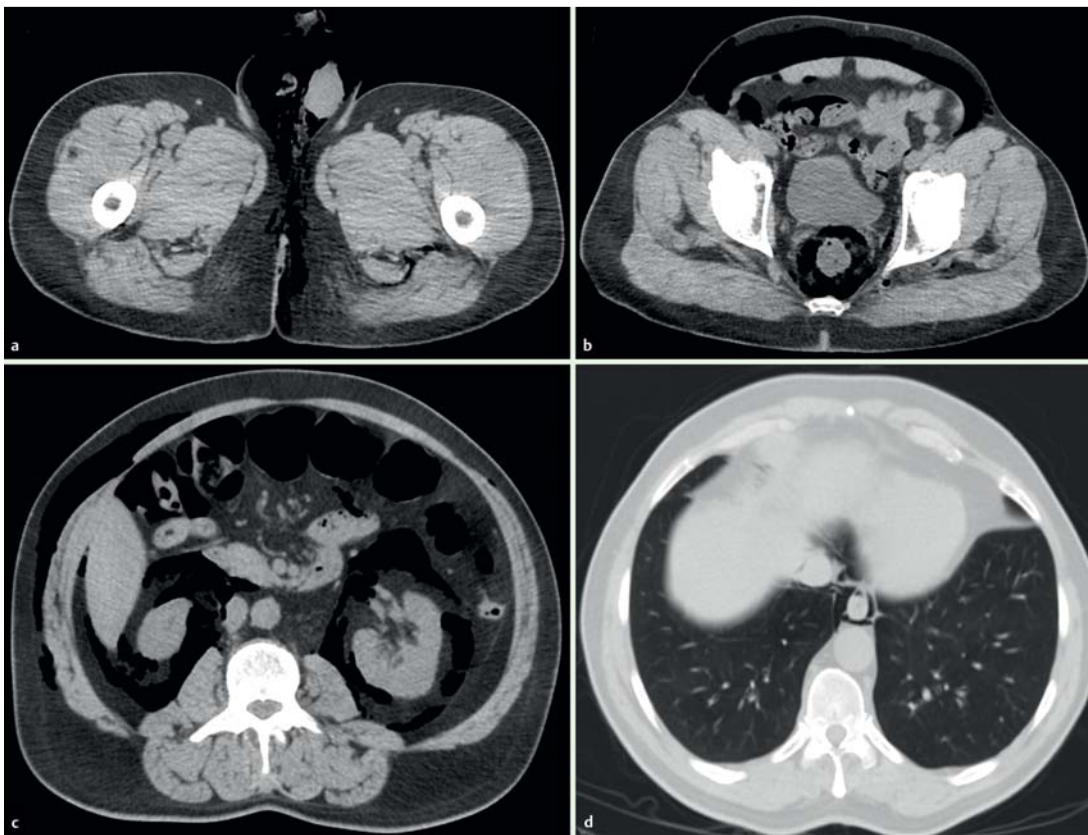


Fig. 2 Computed tomography scans of the thorax and abdomen demonstrated: **a** pneumoscotum; **b** free air surrounding the rectal wall, **c** in the perinephric area on both sides, **d** and in the paraesophageal space.

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