

Widespread Emphysema After Elective Colonoscopy

Ana Marta Pinto, MD¹, Ana Fonte, MD¹, Rute Cerqueira, MD², and Paula Sarmento, MD¹

¹Department of Anesthesiology, Centro Hospitalar Entre Douro e Vouga, EPE, Portugal

²Department of Gastroenterology, Centro Hospitalar Entre Douro e Vouga, EPE, Portugal

CASE REPORT

Perforation in colonoscopy occurs in 5.8 procedures per 10,000,¹ and 52% are detected within 1 hour.² Common signs include subcutaneous emphysema of the face, neck, or upper chest,³ but the growing complexity and demand for colonoscopy increase the incidence and severity of complications.

A 72-year-old man with a medical history of pneumoconiosis and colorectal cancer status post right hemicolectomy complicated by anastomotic leakage resulting in temporary diverting ileostomy presented for colon cancer surveillance and precolonic reconstruction evaluation. One year before, the patient was submitted to right hemicolectomy for colon cancer therapy. As early surgical anastomosis leakage occurred, a temporary diverting ileostomy was performed.

Ten minutes after colon inflation with room air, the patient became hemodynamically unstable which precluded the polypectomy.

Computed tomography showed subcutaneous emphysema (Figure 1), pneumoretroperitoneum (Figure 2), pneumothorax, pneumopericardium (Figure 3), and extra peritoneum fistula (Figure 4).



Figure 1. (A) Facial subcutaneous emphysema after intubation and (B) normal face at discharge.

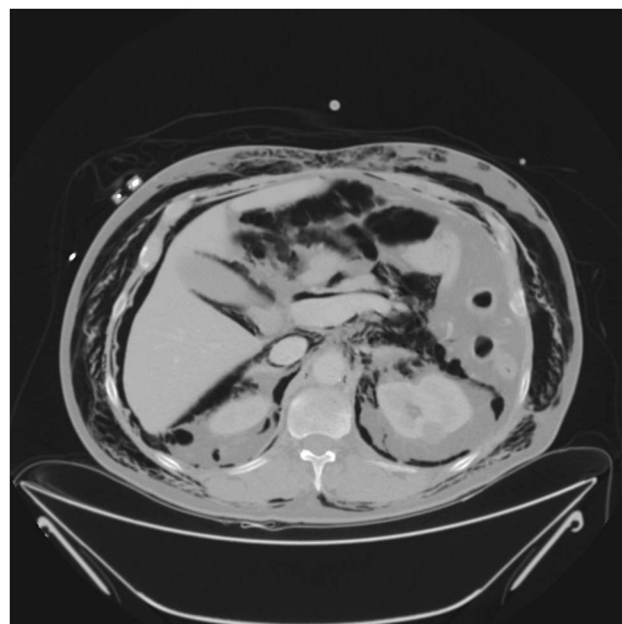


Figure 2. Computed tomography abdomen: pneumoperitoneum and pneumoretroperitoneum.

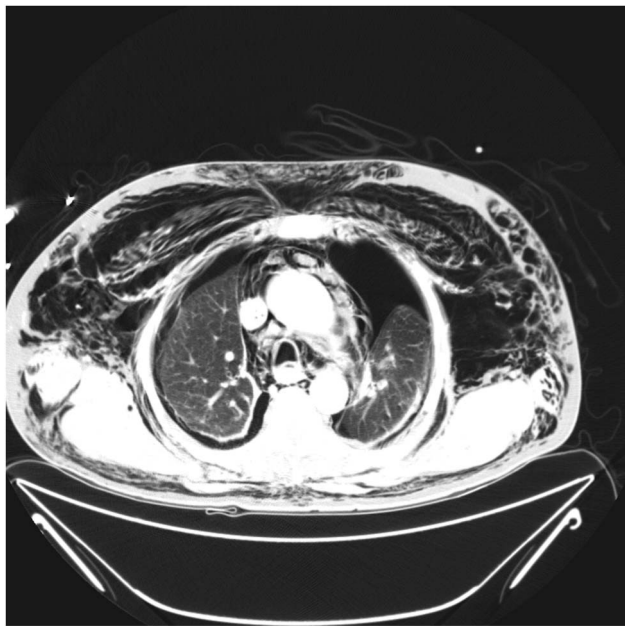


Figure 3. Computed tomography chest: bilateral pneumothorax and pneumopericardium.

Anatomical alterations resulting from past abdominal surgeries favored gas spreading through the fistula. Positive pressure ventilation and lung disease led to hypertensive pneumothorax generating hemodynamic instability. The use of low solubility room air and the ileostomy bag acted as emphysema catalyzers.

To prevent life-threatening complications, it is important to know the underlying pathophysiological framework, the patient's risk factors, and adapt to each individual patient.

DISCLOSURES

Author contributions: AM Pinto: writing of the manuscript and literature review, and is the article guarantor. P. Sarrmento, A. Fonte, and R. Cerqueira: literature review, review of intellectual content, and manuscript final approval.

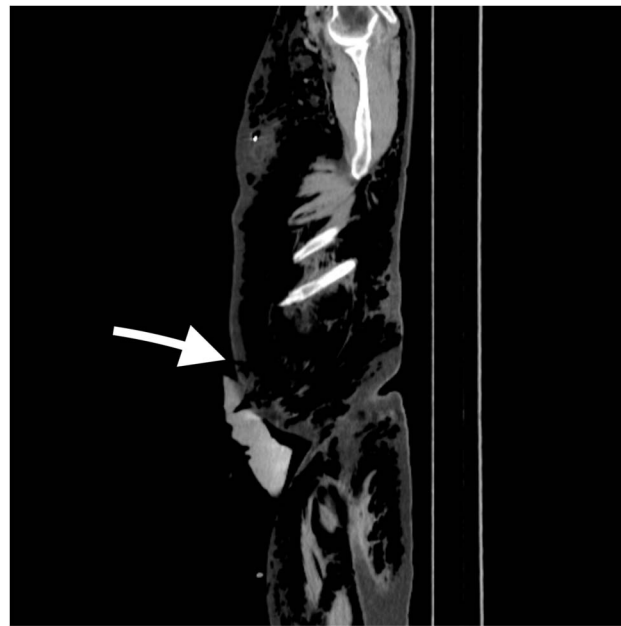


Figure 4. Abdominal wall with ileostomy bag in place. White arrow: extra peritoneum fistula.

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Informed consent was obtained for this case report.

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