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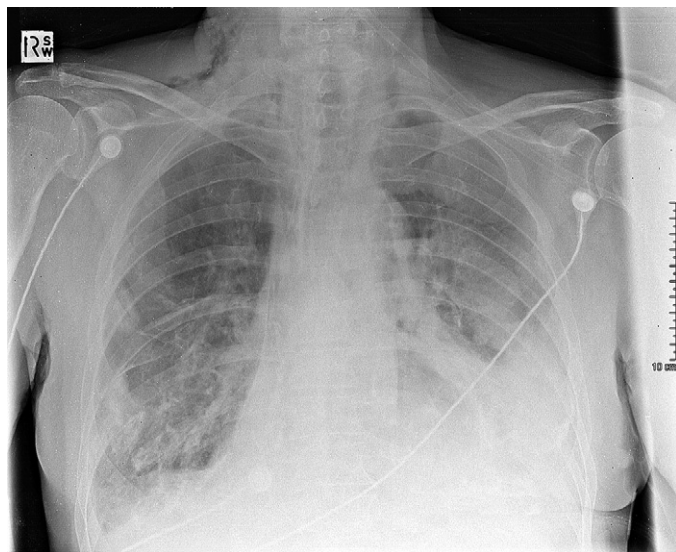


Figure 1. Anteroposterior chest radiograph showing pleural effusion, pneumomediastinum, and subcutaneous emphysema.

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A previously well 74-year-old man presented to the emergency department with a 12-hour history of central chest pain after a bout of vomiting. Physical examination revealed signs of septic shock and subcutaneous emphysema. Chest radiograph was performed (Figure 1), and after confirmation of the diagnosis on computed tomography (Figure 2), the patient underwent urgent surgery.



Figure 2. Computed tomography of the chest with oral contrast, demonstrating a lower left esophageal tear with mediastinal leakage of oral contrast medium (arrow). Used with permission of Martin Rochford, MSc, MFAEM, the Department of Emergency Medicine, St. Vincent's Hospital, Darlinghurst, Sydney, Australia.

For the diagnosis and teaching points, see page 777.

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(continued from p. 746)

DIAGNOSIS:

Boerhaave's syndrome (spontaneous esophageal rupture). The majority of transmural esophageal tears are iatrogenic, with Boerhaave's syndrome accounting for only 15% of all cases. It is commonly seen in middle-aged men with excessive dietary or alcoholic intake and typically occurs after forceful emesis. The Mackler triad defines the classic presentation of vomiting, lower thoracic pain, and subcutaneous emphysema. Chest auscultation may reveal signs of pleural effusion or the Hamon's crunch (a crackling sound caused by pneumomediastinum).¹ Erect chest radiograph may show a unilateral effusion, pneumothorax, hydropneumothorax, pneumomediastinum, subcutaneous emphysema, or mediastinal widening. The V-sign of Naclerio is caused by air dissecting the fascial planes behind the heart to form the shape of the letter V. Treatment is with broad-spectrum antibiotics, intravenous fluid resuscitation, and urgent primary surgical repair. Overall mortality is 35%, making it the most lethal gastrointestinal perforation. Diagnosis and surgery within 24 hours carry a 75% survival rate, decreasing to 50% after 24 hours and 10% after 48 hours. A high index of suspicion and familiarity with the clinical and radiologic features are vital if this relatively rare cause of chest pain is to be diagnosed correctly.

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