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Spontaneous Esophageal Rupture Initially Presenting as Shoulder Pain

Mao-Chang Chang 1 , Wei-His Chang 2
1 Department of Medical Education, National Taiwan University Hospital, Taiwan
2 Department of Emergency Medicine, Kaohsiung Armed Forces General Hospital

INTRODUCTION

Esophageal rupture is a rare condition that typically occurs in individuals without a history of trauma. Although infrequently reported in the literature, spontaneous rupture of esophageal diverticula represents a severe clinical entity that is often challenging to diagnose and manage effectively.

CASE DESCRIPTION

A 92-year-old male with a history of hypertension was brought to the emergency department due to sudden onset of soreness in the left shoulder radiating to the chest, occurring after pulling on a bedside rail. He also reported a mild cough. On physical examination, breath sounds were normal, but Hamman‘s sign was noted on cardiac auscultation. Chest X-ray (Figure 1) revealed the presence of air within the soft tissues of the neck. Laboratory studies showed a WBC count of 11.16 K/μL with a differential of 91.3% neutrophils (segmented 75.0%, band 16.3%), 2.6% lymphocytes, and 6.0% monocytes. CRP was elevated at 28.04 mg/dL. Liver and renal function tests were within normal limits. Cardiac enzymes were within normal range, except for an elevated NT-proBNP of 4734 pg/mL. CT scan (Figure 2) revealed a rupture within the esophagus surrounded by formation of an abscess. Subsequent endoscopy (Figure 3) confirmed a perforation located 30 cm from the incisors in the mid-esophagus. The final diagnoses were mid-esophageal rupture, mediastinitis, and left-sided empyema. Surgical intervention was considered; however, the patient declined all treatments. A DNR order was signed, and the patient ultimately died of respiratory failure 21 days after admission.

DISCUSSION

Spontaneous esophageal rupture presents with nonspecific symptoms like dysphagia and chest discomfort. In this case, pain from pulling a bedrail mimicked muscle strain. Hamman’s sign raised suspicion, prompting CT, which showed perforation. Chest X-ray may show air in neck tissues; CT often detects extraluminal air (92% of cases).[1] Endoscopy confirms rupture but may worsen tears. Mortality can reach 50%, and management depends on rupture site, cause, and patient condition. Most spontaneous ruptures involve the thoracic esophagus.[2]

CONCLUSION

This case is notable for atypical presentation, initially misdiagnosed as musculoskeletal, reflecting the challenge of identifying spontaneous esophageal rupture.

Keywords

Esophageal Rupture, Spontaneous Rupture

References

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Figure 1

Figure 2

Figure 3