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Images in Infectious Diseases

Septic embolism of the lung due to spondylodiscitis

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A 57-year-old male with respiratory distress and back and chest pain was admitted to the respiratory disease clinic in September 2021. He was referred from another hospital for rightsided spontaneous pneumothorax on radiographic examination. On arrival, he was tachypneic, and laboratory studies showed leukocytosis (32 \times 10³ μ L) and an elevated level of C-reactive protein (214 mg/L). Computed tomography (CT) of the thorax revealed right-sided pneumothorax and bilateral peripherally distributed multiple nodules with cavitation (Figures 1-2). Antibiotics were started and a chest tube was inserted. Blood cultures were negative, but the bronchial lavage culture revealed Staphylococcus aureus. The biopsy of the lung nodules showed lymphoplasmacytic infiltration and inflammation. A week after admission, the patient complained of leg numbness. Lumbar magnetic resonance imaging revealed spondylodiscitis of L3-4 and S1 (Figure 3). After 6 weeks of treatment with levofloxacin, the pulmonary lesions regressed. The patient refused surgery for spondylodiscitis.



FIGURE 1: Coronal reformatted chest CT shows peripherally distributed nodules with or without cavitation (open yellow arrows).



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FIGURE 3: Contrast-enhanced T1-weighted fat saturated magnetic resonance imaging shows L3-4 and S1 spondylodiscitis with epidural enhancement.

Septic pulmonary embolization is a rare condition that is difficult to diagnose due to nonspecific clinical and radiological findings. Indwelling catheters, drug abuse, and infective endocarditis are risk factors for this condition¹. The CT appearance of septic emboli includes well-defined peripherally located nodules with or without cavitation or wedge-shaped peripheral lesions². Feeding vessel signs were also observed.

Patients rarely present with spontaneous pneumothorax³. In patients with spondylodiscitis and peripherally distributed cavitary nodules on CT scan, septic lung emboli should be suspected.

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