



Lung abscess diagnosed by ultrasound

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An 86-year-old male patient with a history of chronic obstructive pulmonary disease and chronic dysphagia presented to the emergency department with shortness of breath. He had recently been diagnosed with aspiration pneumonia and completed a 7-day course of levofloxacin. At follow-up with his primary care physician, he reported ongoing symptoms and had a chest X-ray which showed a persistent left lower lobe consolidation (Fig. 1). On presentation to the emergency department, he was afebrile and pulse oximetry was 99% on room air. Examination revealed decreased breath sounds at the left base. Laboratory evaluation was unremarkable. Point-of-care lung ultrasonography was performed (Fig. 2), and based on ultrasound findings, computed tomography of the chest was obtained (Fig. 3).

Ultrasound showed a hypoechoic, complex fluid collection within a left lung base consolidation, suggestive of a lung abscess (Fig. 2). Computed tomography of the chest confirmed a large parenchymal abscess, measuring 5 × 7 mm, with additional multifocal abscesses (Fig. 3). The patient was started on intravenous piperacillin and tazobactam and admitted to the hospital. This patient's abscess was presumed to be a polymicrobial infection due to aspiration, which is the most common cause of lung abscesses.¹ He was ultimately discharged on 6 weeks of oral amoxicillin-clavulanate.

Lung ultrasound is an important diagnostic tool in patients with respiratory complaints. It can provide more detail than chest X-ray in evaluating peripheral lung pathology. Lung ultrasound is more accurate than chest X-ray at differentiating consolidation and pleural effusion, and in diagnosing simple or complex effusions.²

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Capsule Summary

What is already known

Pneumonia and lung abscesses present similarly but are managed very differently. Respiratory complaints are commonly investigated with X-ray, but this may not give providers the most accurate information on the diagnosis or how to effectively treat their patients.

What is new in the current study

Lung ultrasound is more accurate than chest X-ray at differentiating consolidation and pleural effusion and in diagnosing simple or complex effusions. Ultrasound can help with the correct management of patients presenting with respiratory complaints.



Fig. 1. Posteroanterior chest X-ray with an opacification within the left lung base.

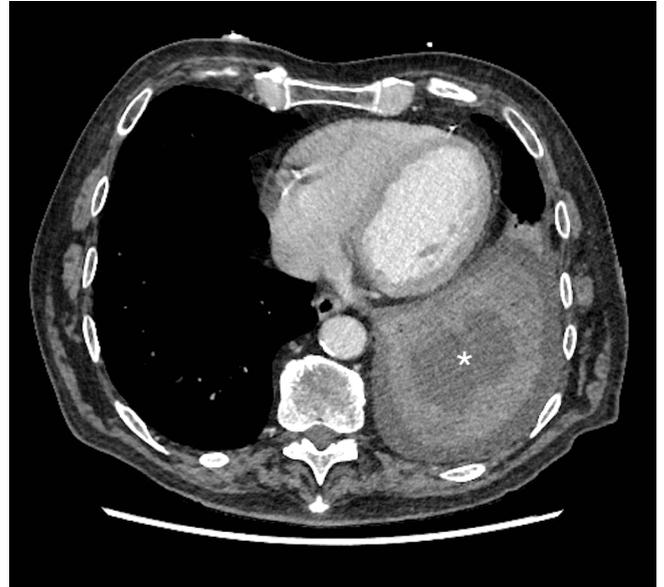


Fig. 3. Axial view of computed tomography of the lung demonstrating the lung abscess (asterisk) within consolidated lung.



Fig. 2. Lung ultrasound of the left lung base showing a well-circumscribed, hypoechoic lung abscess (asterisk) within consolidated lung with a surrounding pleural effusion (arrow).

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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