

Ultrasound Diagnosis of Pneumonia: A Case Report

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Background: A 54-year-old man presented himself in the emergency room with worsening dyspnea for a few hours and persistent fever for approximately three days. He appeared tachypnoeic, with a respiratory rate of 28 breaths/minute, pyretic (TC 38.5°C), with normal vital signs. It was performed an arterial blood gas analysis which showed pO₂ equal to 64 and subsequent placement of oxygen therapy. Blood tests revealed leukocytosis with predominance of neutrophils, PCR 18 mg/dl, negative troponin.

Case History: In view of the clinical picture, a bedside thoracic ultrasound (TUS) was performed. The ultrasound examination highlighted a consolidated hypoechoic area with a dynamic air bronchogram in the right upper lobe, compatible with a focus of pneumonia.

For diagnostic confirmation and better characterization of the extension of the pathology, a chest CT was performed which confirmed the presence of a large consolidative area with air bronchogram in the upper lobe of the right lung, without significant pleural effusion.

Discussion: Although CT is the gold standard in the diagnosis of pneumonia, TUS offers a good radiation-free alternative, is portable and can be used at the bedside, but is operator-dependent and less detailed than CT [1].



Figure: 1 Chest US with Presence of air Bronchograms and area of Consolidation.

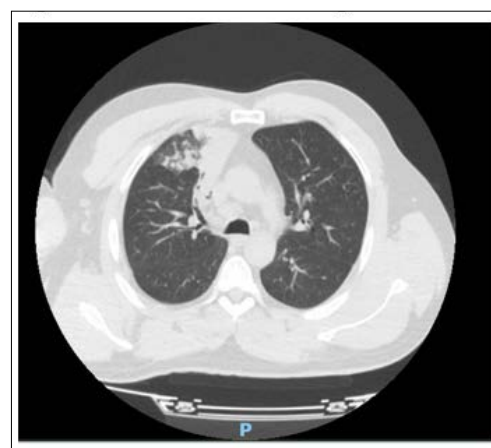


Figure:2 Chest CT with Effective Diagnosis of area of Consolidation Like Pneumonia.

References

1. Lichtenstein D, Goldstein I, Mourgeon E, Cluzel P, Grenier P, et al. (2004) Comparative diagnostic performances of auscultation, chest radiography, and lung ultrasonography in acute respiratory distress syndrome. *Anesthesiology* 100: 9-15.