

Characteristic features of pneumothorax on lung perfusion scan

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CLINICAL CASE

A tall 32 y/o man was referred to our department following an episode of acute pleuritic chest pain located at upper left hemithorax without dyspnea. The patient's chest X ray (CXR) had been reported to be normal (unavailable at time of lung scanning).

Lung perfusion images (fig. 1) showed absent radiotracer activity in the upper part of the left lung in a field, slightly smaller than upper pulmonary lobe that could not be specifically assigned to a group of segments. The defect revealed a sharp, well-delineated border in semi-lunar pattern with downward convexity. The patient underwent high-resolution CT (fig. 2), which confirmed diagnosis of pneumothorax.

As to our knowledge, there is only one similar report, previously¹. Although it was emphasized that CXR plays a central role in the interpretation of lung perfusion scan², it is not infrequent and rare that these radiographies misinterpreted to be normal, falsely¹.

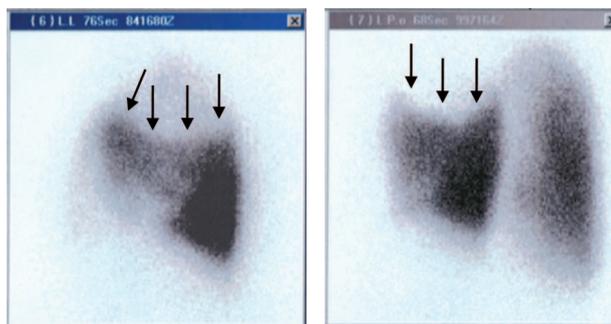


FIG. 1.—Lung perfusion scan demonstrating characteristic features of pneumothorax, excluding the possibility of other space-occupying lesions, the border of which are not usually delineated and sharp. The large sized well-delineated and sharp-border cold defect in the perfusion scan in the upper part of the lung with downward convex border in a zone that is not well compatible with a typical set of segments should raise the possibility of spontaneous pneumothorax in the list of differential diagnoses.



FIG. 2.—High resolution computed tomography of the chest, confirming the diagnosis of the pneumothorax.

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