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Hampton's hump: An unusual radiological sign of pulmonary embolism

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Abstract

Hampton's hump is a peripheral dome-shaped, opacification abutting the pleura, signifying pulmonary infarction distal to a pulmonary embolism. We report a case of pulmonary embolism that presented with the Hampton's hump sign on a chest X-ray, which is an unusual yet moderately specific indicator for diagnosing pulmonary embolism.

Keywords: Hampton's hump; Pulmonary embolism.

Description

A 70-year-old male patient presented to the emergency department, complaining of right-sided chest pain persisting for the past two days. Notably, there were no significant underlying health conditions identified during the assessment. The physical examination did not reveal any remarkable findings. A chest radiograph showed dome-shaped, pleural based opacity in right middle lung field, consistent with Hampton's hump (a white arrow in Figure 1), a finding that aroused concern about pulmonary embolism. The Electrocardiogram (ECG) did not show any abnormalities. The only abnormal blood test reported was a slightly elevated D-dimer of 4 mg/l (<0.5 mg/l). Subsequent evaluation with a Computed Tomography (CT) pulmonary angiogram exhibited a filling defect within the segmental branch of the right middle lobe pulmonary artery (a white arrow in Figure 2). Additionally, a wedge-shaped ground glass change was observed in the lateral segment of the right middle lobe (an asterisk in Figure 2). These findings conclusively confirmed a diagnosis of pulmonary embolism with distal pulmonary infarction. It is noteworthy that Hampton's hump, a seldom-seen radiographic indicator, is associated with pulmonary embolism. While the presence of a Hampton's hump demonstrates a high degree of specificity (82%) for diagnosing pulmonary embolism, its sensitivity is relatively low (22%) [1-3]. Following treatment with heparin, the patient was discharged with a six-month anticoagulation regimen.

Declarations

Conflict of interests: No conflicts of interest.

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Figure 1: Chest radiograph revealed dome-shaped opacity in right middle lung field, consistent with Humptom's hump (a white arrow).

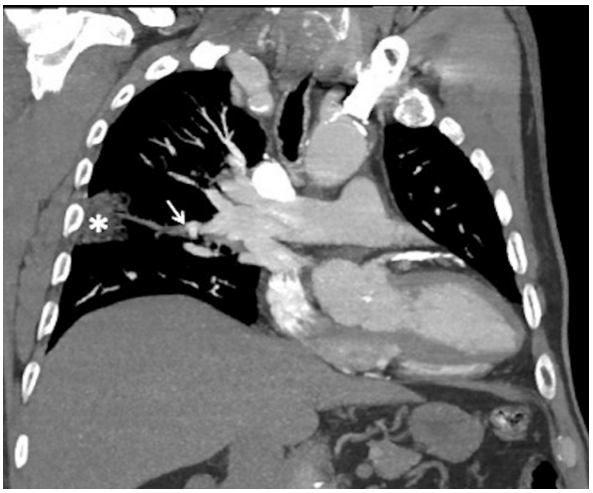

Figure 2: CT pulmonary angiogram (or CTPA) exhibited a filling defect within the segmental branch of the right middle lobe pulmonary artery (a white arrow in Figure B) and, a wedge-shaped ground glass opacity in the lateral segment of the right middle lobe (an asterisk).