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Medical Imagery

Acute pulmonary embolism mimicking COVID – 19 pneumonia



An 81-year-old woman was admitted to the emergency department with reduced general condition and diarrhea for 2 weeks. Physical examination, sonography of the abdomen and ECG showed no pathologies. Fever was not present. Peripheral O₂-saturation was 86%. Laboratory test showed an infection constellation.

A non-enhanced (NE) chest CT revealed peripheral ground-glass opacity (GGO) with visible intralobular lines (“crazy-paving”) of the left upper lobe (Figure 1A/B).

Although this is a typical infiltrate pattern of COVID-19 pneumonia, the unilateral changes were consistent with an intermediate appearance of COVID-19 pneumonia according to the recently published RSNA COVID-19 reporting consensus statement, where the intermediate appearance is defined as presence of multifocal, diffuse, perihilar, or unilateral GGO (. . .)

and absence of typical features, in our case the missing bilaterality (Simpson et al., 2020).

As further testing revealed elevated D-Dimer as well as a negative RT-PCR regarding Covid-19, a contrast-enhanced (CE) chest CT was indicated 2 days after initial NE-chest CT. In this CE-chest CT the aforementioned ground-glass opacity can be depicted as dome-shaped, pleural-based opacification, consistent with a post-infarction pneumonia (Figure 1 C) due to pulmonary embolism (PE) (Figure 1 D).

The patient was admitted to ICU because of progressive right heart compromise. The PE was treated with low-molecular-weight heparin.

This image shows that structured reporting of possible COVID-19 CT findings can lead the clinician to e.g. further testing and has potential to accelerate managing of patients through the workup

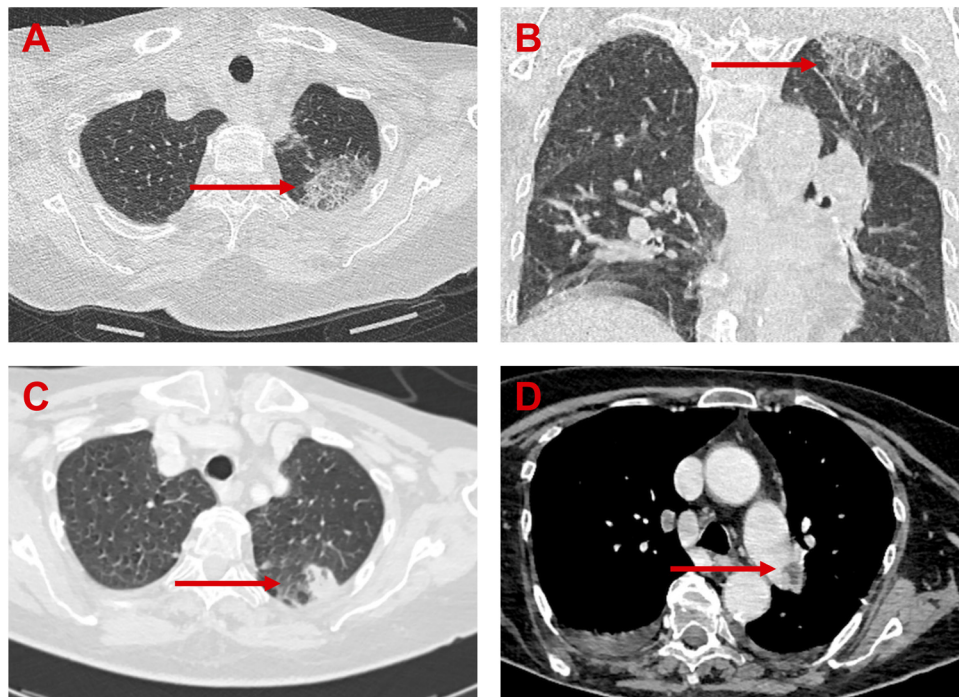


Figure 1. (A) Initial CT-Scan; axial lung window: red arrow indicates peripheral ground-glass opacity/ visible intralobular lines (“crazy-paving”) (B) Initial CT- Scan; coronal lung window: red arrow indicates peripheral ground-glass opacity/ visible intralobular lines (“crazy-paving”). (C) Follow up CT-Scan; axial lung window: red arrow indicates pleural-based opacification- consistent with a post-infarction pneumonia (D) Follow up CT-Scan; axial mediastinal window: red arrow indicates pulmonary embolism (PE).

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during these difficult times, especially under the ongoing discussion of the value of D-dimer in COVID-19 patients (Grillet et al., 2020).

Conflict of interest

The authors declare that they have no conflict of interest.

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Ethical approval

Informed patient's consent has been conducted.

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