

COVID-19 pneumonia misdiagnosed as pulmonary contusion in a child

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A 7-year-old boy was admitted to the emergency department after a fall from 2 m. Physical examination revealed upper back pain. Laboratory tests revealed elevated levels of C-reactive protein (39.88 mg/litre). Chest computed tomography demonstrated peripheral, multilobar areas of ground-glass opacities. Physicians in the emergency department interpreted the computed tomography findings as showing pulmonary contusion because of the history of trauma. However, because of the discordant computed tomography features and elevated C-reactive protein levels the emergency department physicians consulted with the radiology department. The chest radiologist reported the computed tomography features as those of novel coronavirus (COVID-19) pneumonia (Figure 1a–d). A nasopharyngeal swab, obtained 6 hours after the computed tomography was performed, was positive for COVID-19.

Pulmonary contusion and COVID-19 pneumonia can present with similar features on computed tomography (Duan et al, 2020; Ye et al, 2020). Radiologists and emergency department physicians should be familiar with the computed tomography and clinical features of these two challenging conditions and should consider COVID-19 pneumonia as a differential diagnosis of patients presenting with chest trauma.

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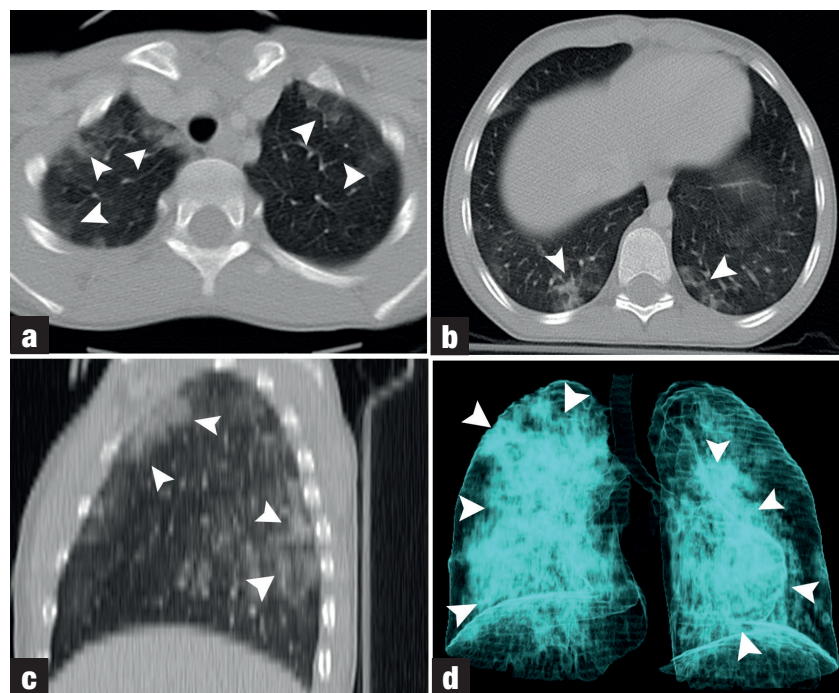


Figure 1. a, b, Axial, (c) sagittal and (d) volume-rendered three-dimensional reconstruction chest computed tomography images (RadiAnt DICOM Viewer 5.5.1, Medixant, Poznan, Poland) demonstrating multiple, multilobar peripherally located lesions (arrowheads).

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