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FLASHLIGHTS
Other

Concealed SARS-CoV-2 interstitial pneumonia unmasked by infarct-like acute myocarditis

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A 38-year-old otherwise healthy man presented to the emergency department for sudden-onset oppressive chest pain. On admission, vital parameters were within normal limits and physical examination was unremarkable. Since the ECG showed mild ST-segment elevation in the inferior leads (*Panel A*), he underwent urgent coronary angiography which ruled out obstructive coronary artery disease (*Panel B*). Transthoracic echocardiogram showed preserved left ventricular (LV) ejection fraction with inferolateral wall hypokinesis. The peak of high-sensitive troponin I was 4038 ng/L (normal value <20). Acute myocarditis was suspected, and a cardiac magnetic resonance (CMR) was performed. High signal intensity (SI) of the mid-basal LV lateral wall on T2 short tau inversion recovery (STIR) sequences consistent with myocardial oedema (*Panel C*) and subepicardial late gadolinium enhancement in the same location (*Panel D*) were detected. Unexpectedly, areas of high SI on T2-STIR images were also noted on both lungs (*Panel C*), suggesting a pulmonary inflammatory process. Despite an initially negative chest X-ray, computed tomography revealed bilateral ground-glass opacity with multifocal consolidation and thickening of interlobular septa consistent with interstitial pneumonia (*Panel E*). Considering the ongoing coronavirus outbreak, a nasopharyngeal swab was obtained resulting positive for severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) infection. The patient remained free from either cardiovascular or respiratory symptoms and presented only mild fever (37.5°C). Laboratory tests detected an increase of transaminases and C-reactive protein (6.73 mg/dL; normal value <0.5) with stable lymphocytopenia. After 20 days of hospitalization, he was discharged with the diagnosis of infarct-like myocarditis associated with subclinical SARS-CoV-2 respiratory infection.

Acute myocarditis in the setting of SARS-CoV-2 infection has been anecdotally reported and its mechanism remains to be elucidated. So far, the SARS-CoV-2 genome has never been detected within the myocardium, suggesting an immune-mediated inflammatory myocardial injury. For the first time we reported a case of subclinical SARS-CoV-2 interstitial pneumonia occasionally unmasked by CMR performed for acute myocarditis.

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