

Takotsubo Syndrome Associated with COVID-19: Clinical Case

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Clinical Case

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CLINICAL CASE

COVID-19 has been associated with various cardiovascular complications, including arrhythmias, myocarditis, myocardial infarction, and heart failure. Interestingly, it has been reported that COVID-19 may increase susceptibility to Takotsubo syndrome.

A 41-year-old woman presented to the emergency department with a fall, faintness, nausea, and general weakness. Her medical history included asthma, epilepsy, and dyslipidemia. The patient had received four doses of COVID-19 vaccine, the last one ten months before her presentation to the hospital. On admission, she had tachycardia at 126 bpm and left-branch block. The clinical examination was normal. The electrocardiogram showed sinus tachycardia with ST segment elevation in V3-V4 and diffuse negative T waves. Five days after admission, the electrocardiogram showed a combination of profoundly inverted T waves and a prolonged QT interval (QTc 560 msec). Laboratory tests performed upon admission showed elevated troponin levels of 5899 ng/L, which increased to 7599 ng/L one hour later. Furthermore, the SARS-CoV-2 PCR test was positive. A transthoracic echocardiogram performed upon admission revealed severe apical dyskinesia with typical left ventricular ballooning, consistent with Takotsubo syndrome. The left ventricular ejection fraction (LVEF) was reduced to 30%. A beta-blocker and an angiotensin-converting enzyme inhibitor were prescribed. A repeat echocardiogram performed 10 days after admission showed complete recovery with an LVEF of 60%. No major cardiac events were reported after 3 months of regular follow-up.

Takotsubo syndrome often triggered by intense emotional stress. However, our patient's case is unusual because she developed this syndrome in association with

mild COVID-19 infection and without any apparent emotional stress. It is a rare complication of COVID-19. Clinicians should be aware of this complication, which can lead to heart failure, ventricular arrhythmias, and cardiogenic shock. Our observation highlights the need for further research on the association between Takotsubo syndrome and COVID-19 and its potential implications for its management.

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