

COVID-19 social isolation-induced takotsubo cardiomyopathy

TO THE EDITOR: Takotsubo syndrome, also known as stress cardiomyopathy, apical ballooning syndrome, or broken heart syndrome, is a reversible cardiomyopathy frequently precipitated by a stressful event. Its clinical presentation is indistinguishable from a myocardial infarction,¹ with electrocardiogram (ECG) changes and elevation in cardiac enzymes. The syndrome was first described in 1991 in Japan and named in reference to the left ventricle morphological features that resemble a pot used for trapping octopuses. Takotsubo syndrome has recently been reported in association with coronavirus disease 2019 (COVID-19),² but we report a case of takotsubo cardiomyopathy brought on by the stress of isolation as a result of social distancing.

A 71-year-old woman presented to the emergency department complaining of chest pain. On arrival, an ECG demonstrated diffuse ST elevation (Box, A) and troponin was elevated (7800 ng/L). Coronary angiography was performed immediately which did not demonstrate any obstructive lesion and she was admitted to the intensive care unit (ICU) for ongoing haemodynamic support. Echocardiography performed in the ICU showed a dilated left ventricle with an akinetic apex and preserved contraction of the basal segments (Box, B) suggestive of takotsubo cardiomyopathy. On questioning regarding recent stressors, our patient, who lived alone, reported significant anxiety about not being able to visit family due to social distancing, and was particularly saddened by being unable to see her grandchildren.

Public health interventions undertaken by governments around the world in an

attempt to reduce the rate of transmission of COVID-19, or to “flatten the curve”, have included measures such as social distancing.³ While being effective in the aim of lowering infections, these measures may have many unintended consequences. Social isolation is detrimental to mental health, associated with increased stress levels and anxiety, especially in older people, who may be less able to use technology to stay in contact with friends and family.⁴ In our patient, this stress was enough to trigger takotsubo cardiomyopathy.

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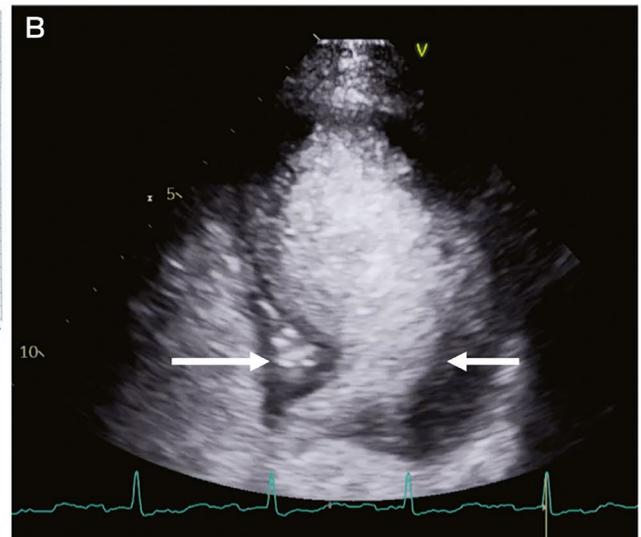
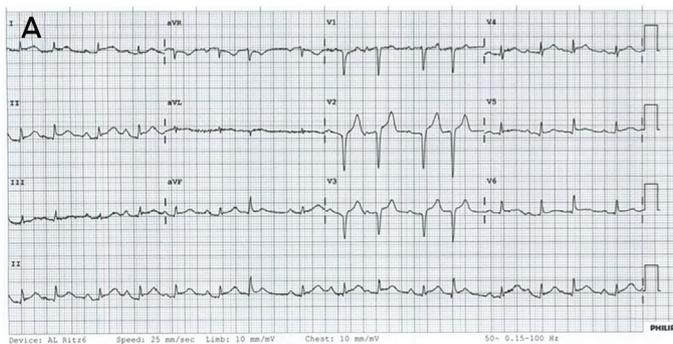
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References are available online.

Electrocardiogram (A) showing diffuse ST elevation. Echocardiogram (B) showing a dilated left ventricle with an akinetic apex and preserved contraction of the basal segments (arrows)



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