Image in cardiology

Tako-tsubo syndrome associated with COVID-19

Síndrome de *tako-tsubo* asociado con COVID-19

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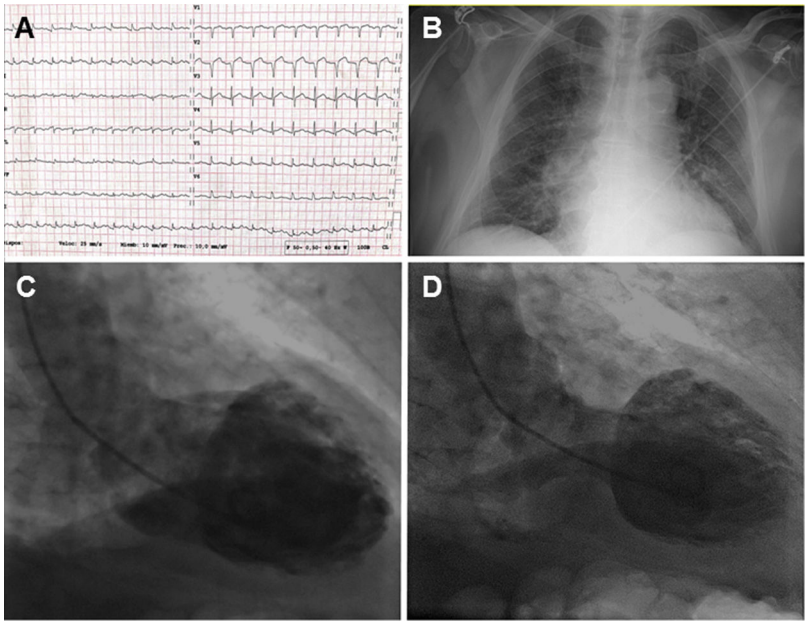

Figure 1.

An 82-year-old man, with a history of hypertension, diabetes mellitus, dyslipidemia, peripheral artery disease, and chronic renal failure but no prior history of heart disease attended the emergency room of a regional hospital with anginal chest pain consistent with heart failure. The electrocardiogram showed a 1 mm ST segment elevation in leads V_2-V_3 and DI-AVL (figure 1A), and so the infarction protocol was activated. The patient reached the electrophysiology laboratory in Killip class II and a rapid polymerase chain reaction (PCR) test for acute respiratory severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was performed as part of the protocol. Coronary angiography showed coronary arteries free of lesions and cardiac ventriculography was performed. This showed a very reduced left ventricular ejection fraction with extensive apical akinesia (figure 1C,D). The PCR result was positive, indicating tako-tsubo syndrome related to viral infection.

The findings of ventriculography were confirmed by echocardiography, and chest x-ray showed signs of mild heart failure, with no evidence of pneumonia (figure 1B). The patient's progression was favorable; heart failure improved and he did not develop lung involvement secondary to the COVID-19 disease. Ten days after admission, he was discharged with only ongoing neurohormonal treatment.

The mechanism by which SARS-Cov-2 infection may cause tako-tsubo syndrome is not clear. However, viral infection has been associated with a state of systemic inflammation and this may be the trigger for the syndrome.

CONFLICTS OF INTEREST

J.A. Gómez-Hospital declares a consultant role for Abbott, Medtronic, Boston, Terumo, IHT. The remaining authors do not declare any conflicts of interest.

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