

Young Male With Myocarditis Following mRNA-1273 Vaccination Against Coronavirus Disease-2019 (COVID-19)

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In Japan, the introduction of the coronavirus disease-2019 (COVID-19) vaccine has been gradually expanded to younger people, but concerns about myocarditis associated with the vaccine among young people have been reported. We report a typical case of a young man with myocarditis following administration of an mRNA-1273 COVID-19 vaccine (Moderna).

A 25-year-old man with no past medical or allergic history, developed a fever after receiving the second vaccination. On the 3rd day, he was admitted to hospital with chest pain. The ECG on admission showed ST elevation in the inferior and lateral leads (**Figure A**), and blood tests showed elevation of myocardial enzymes, which peaked 12 h after the onset of symptoms (creatinine kinase (CK) 604 U/I, CK-MB 47 ng/mL and troponin T 0.725 ng/mL). Transthoracic echocardiography showed inferolateral hypokinesia (**Figure B**), coronary angiography showed no significant stenosis, and left ventriculography showed posterolateral hypokinesia (**Figure C**, **Supplementary Movie**). Cardiac magnetic resonance (CMR) showed regional increase of T2 signal intensity and late gadolinium enhancement (LGE) of the posterolateral wall (**Figure D**), findings that met the updated Lake Louise criteria.¹ His ECG and echocardiographic findings normalized over several days, and

the chest pain spontaneously improved without treatment during hospitalization. The patient was discharged on the 9th day after admission. The stable clinical course and CMR findings were consistent with previous reports in other countries.²

Disclosures

K.N. is a member of *Circulation Journal's* Editorial Team. The authors declare no conflicts of interest.

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Supplementary Files

Supplementary Movie. Left ventriculography showing posterolateral hypokinesia.

Please find supplementary file(s):
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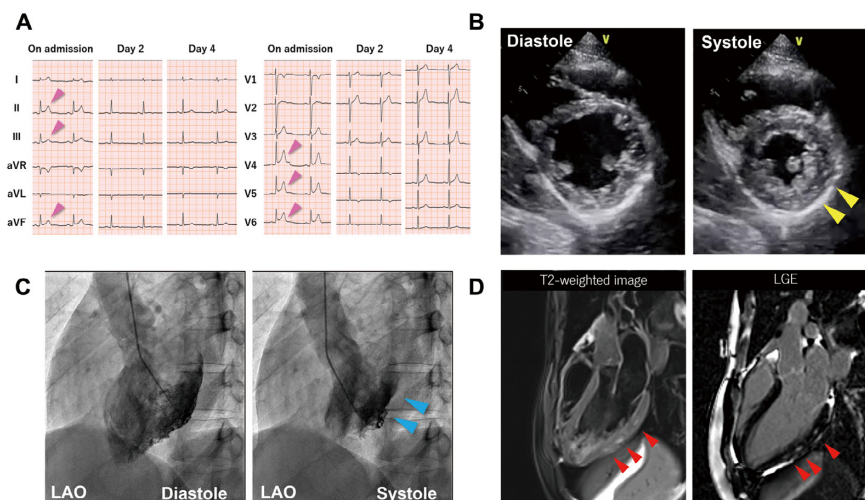


Figure. (A) ECG on admission and serial changes until normalization. ST elevation can be seen in several leads (pink arrowheads). (B) Transthoracic echocardiography showing posterolateral hypokinesia (yellow arrowheads). (C) Left ventriculography showing posterolateral hypokinesia (blue arrowheads). (D) CMR showing regional increase of T2 signal intensity and LGE of the posterolateral segment (red arrowheads).