


Case report of acute myocarditis after administration of coronavirus disease 2019 vaccine in Japan

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Background

The worldwide spread of coronavirus disease 2019 (COVID-19) is still not under control in February 2021, albeit later than in Europe and the USA. The COVID-19 vaccination reactions, which may be more intense after the second dose. The number of COVID-19 vaccination have been recently increased.

Case summary

We report a case of a 26-year-old healthy man who presented to our hospital after his second COVID-19 vaccination. The electrocardiogram showed ST elevation in aVF, V4 to V6, and small Q wave in II, III, aVF. Laboratory studies revealed elevated troponin T, creatine phosphokinase-MB, and negative viral serologies. Acute aortic dissection and pulmonary embolism were excluded by contrast-enhanced thoracoabdominal computed tomography. An urgent coronary angiogram showed no significant stenosis. Cardiac magnetic resonance imaging demonstrated oedema and late gadolinium enhancement of the left ventricle in a mid-wall pattern.

Discussion

Although the temporal association does not prove causation, the very short period from the onset of myocarditis suggests that this acute myocarditis seemed to be an adverse reaction to the COVID-19 vaccine. To the best of our knowledge, this is the first published case of acute myocarditis following COVID-19 vaccination.

Keywords

Myocarditis • COVID-19 • Vaccination

