

mRNA-1273/tozinameran

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Myocarditis: 4 case reports

In a study of 7 patients participated in prospective outcomes registry to identify patients with acute myocarditis for the 3-month period between 1 February 2017 and 30 April 2017 through 2021, and with possible vaccine-associated myocarditis for the last 20 years, 4 patients including 3 men and 1 woman aged 23–70 years were described, who developed myocarditis following vaccination with mRNA-1273 or tozinameran for prophylaxis of COVID-19.

All 4 patients had received the second dose of mRNA-1273 (2 patients) and tozinameran [BNT162b2] between 1 and 5 days prior to admission. The 70-year-old woman had a history of hypertension, hypercholesterolaemia and Cigarette smoking. None had a viral prodrome or prior COVID-19 infection. COVID-19 and respiratory virus polymerase chain reaction test results were negative in 3 and 2 patients, respectively, who underwent testing. None had acute pulmonary disease on chest radiograph. All 4 patients had abnormal electrocardiogram results and elevated troponin levels. The woman underwent coronary angiography, which revealed no atherosclerosis. CMR imaging was performed between 3–5 days after vaccination. All had regional wall motion abnormalities on cine imaging, and ejection fraction ranged between 40% and 59%. Late gadolinium enhancement (LGE) was present in a nonischemic pattern consistent with myocarditis in all 4 patients. Both native T1 and T2 were elevated in the regions with LGE, consistent with acute injury, except in 1 patient who did not have a T2 map acquired at a slice location that included an area with LGE. Pericardial thickness was normal in all, and no patients had pericardial LGE. The hospital courses for all 4 patients were uneventful without evidence of arrhythmias or heart failure.

The patients were conservatively treated with unspecified nonsteroidal anti-inflammatory drug and colchicine, with one receiving corticosteroids. All were discharged within 2–4 days of admission.

Kim RJ, et al. Patients with acute myocarditis following mRNA covid-19 vaccination. *JAMA Cardiology* 6: 1196-1201, No. 10, Oct 2021. Available from: URL: <http://doi.org/10.1001/jamacardio.2021.2828>

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