

Elasomeran/tozinameran

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Myocarditis: 2 case reports

A case series described, 2 men aged 21 years and 28 years old, who developed myocarditis following vaccination with elasomeran or tozinameran against COVID-19 [*routes, dosages and exact time to reactions onsets not stated*].

Patient 1: A 28-year-old man received his second dose of elasomeran [Moderna mRNA-1273] vaccine. However, 3 days after receiving vaccination, he presented to the hospital with chest pain, fever, headache, neck pain and myalgia. On admission, physical examination was unremarkable. Vitals signs on presentation were as follows body temperature 98.6F, heart rate 75 beats/min, blood pressure 118/60mm Hg and oxygen saturation was 98% on room air. Electrocardiogram revealed infero-lateral ST elevation with no reciprocal changes. Laboratory tests showed peak troponin-I at 7.75 ng/mL, ESR of 15 mm/hr and CRP at 6 mg/dL. Coronary angiogram was normal. Initial echocardiogram showed LVEF 55%, mid inferolateral wall hypokinesis, normal RV systolic function and no pericardial effusion while repeat echocardiogram showed LVEF 55–60%, normal wall motion, normal RV systolic function and no pericardial effusion. Cardiac MRI demonstrated delayed hyperenhancement in the lateral epicardium in the pericardium and epicardial surface of the anterior and lateral wall consistent with myocarditis. He was diagnosed with elasomeran-induced myocarditis. RT-PCR nasopharyngeal swab testing for COVID-19 during their hospital course was negative. Following conservative care, he completely recovered and was asymptomatic at the time of discharge.

Patient 2: A 21-year-old man received his second dose of tozinameran [Pfizer BNT162b2] vaccine. However, 2 days after receiving vaccination, he presented to the hospital with substernal chest pain, fever, chills and headache. On admission, physical examination was unremarkable. Vitals signs on presentation were as follows body temperature 98.9F, heart rate 83 beats/min, blood pressure 131/83mm Hg and oxygen saturation was 96% on room air. Electrocardiogram revealed diffuse ST elevation. Laboratory tests showed peak troponin-I at 17 ng/mL, ESR of 20 mm/hr, CRP at 3.8 mg/dL, D-dimer at 509 ng/mL, rheumatoid factor <10, anti-nuclear antibody 1:80. Initial echocardiogram showed LVEF 25%, mildly dilated RV and reduced systolic function, moderate mitral regurgitation with no pericardial effusion. Repeat echocardiogram showed LVEF 50–55%, normal wall motion, RV mildly dilated with mildly reduced function and mild mitral regurgitation. He developed brief episode of supraventricular tachycardia. Cardiac MRI demonstrated delayed hyperenhancement in the lateral epicardium in the pericardium and epicardial surface of the anterior and lateral wall consistent with myocarditis. He was diagnosed with tozinameran-induced myocarditis. RT-PCR nasopharyngeal swab testing for COVID-19 during their hospital course was negative. Following treatment with methylprednisolone [Solumedrol], colchicine, losartan and metoprolol-succinate, he completely recovered and was asymptomatic at the time of discharge.