

Background: Myocarditis has been a rare, but well-documented side effect of the mRNA-based vaccines against SARS-CoV-2 as well as a complication of viral infections including SARS-CoV-2. However, myopericarditis as a complication of monoclonal antibody infusion or as complication of allergic reaction to antibody infusions might be and underreported.

Case presentation: In this case, we report a 30-year-old man with a previous diagnosis of COVID infection 1 week prior to presentation, unvaccinated for SARS-CoV-2 who was referred from a monoclonal infusion center where he received casirivimab and imdevimab and 15 minutes after infusion began to complain of chills, chest pain, shortness of breath and was hypotensive. While in the infusion center he received epinephrine, Benadryl and was directed to the emergency room. While in the ER, patient was febrile, tachycardic, and hypotensive. Initial troponin was 1.91 which peaked at 11.73 with the CK-MB that peaked at 21.2. EKG had no ischemic changes. First two-dimensional echocardiogram showed an ejection fraction of about 45%, with a left ventricular dysfunction and trivial posterior pericardial effusion. Diagnosed as myopericarditis. On admission he was started on full dose lovenox, aspirin, fluid resuscitation, steroids, remdesevir and bipap due to his respiratory compromise. 3 Days later with clinical improvement, repeat 2-d echocardiogram with EF of 65%, with normal ventricular contractility and no pericardial effusion. Patient was discharged home with close cardiology follow up.

Conclusions: Though this could be simple case of viral myopericarditis with troponinemia secondary to demand-ischemia, the differential should be broadened to complication of monoclonal antibody, given the sudden symptom onset after infusion completion and/or a possible Kounis syndrome. Though there have not been any reported cases of casirivimab and imdevimab causing myopericarditis, adverse cardiac events after monoclonal therapy have been reported mainly in cancer patients receiving monoclonal infusions.