

COVID-19 vaccine Pfizer BioNTech**S****Recurrence of acute myocarditis: case report**

A 17-year-old boy developed recurrent acute myocarditis following vaccination with the second dose of COVID-19 vaccine Pfizer BioNTech.

The boy required medical attention in January 2021 because of chest pain consistent with myocarditis and elevated serum troponin levels. Cardiac MRI showed two small areas of delayed gadolinium enhancement of the left ventricular myocardium along with an EKG indicating diffuse ST-segment changes. He was provided with supportive care and discharged 6 days later with normal laboratory findings. On 15 April 2021, he received his first dose of COVID-19 vaccine Pfizer BioNTech [Pfizer-BioNTech COVID-19 mRNA vaccine; *route and dosage not stated*]. On 07 May 2021, he received his second dose of COVID-19 vaccine Pfizer BioNTech and subsequently developed fever and body aches a day later, which responded well to paracetamol [acetaminophen]. The next day, he developed a sudden onset of severe, burning left-sided chest pain that extended up to his upper left arm and left shoulder. His chest pain deteriorated with movement and exertion, and was similar to his previously experienced episode of myocarditis. He then presented to the emergency department with an EKG indicating diffuse ST-segment elevations. Laboratory investigations revealed elevated levels of serum troponin and CRP along with a low level of erythrocyte sedimentation rate. The SARS-CoV-2 IgM antibody for the spike protein tested positive in context with the recent immunisation. Subsequently, recurrent acute myocarditis secondary to COVID-19 vaccine Pfizer BioNTech was confirmed [*duration of treatment to reaction onset not stated*].

The boy was admitted to the paediatric ICU for observation and telemetry, which revealed occasional isolated premature ventricular contractions. His troponin levels further elevated at 51.37 ng/mL. Additionally, a cardiac MRI revealed trivial pericardial effusion, sub-epicardial late gadolinium in same distribution as earlier acute myocarditis episode but along with interval increased enhancement and low normal left ventricular ejection fraction. His chest pain improved significantly with supportive care and an unspecified non-steroidal anti-inflammatory drug treatment. He was discharged after 6 days of admission. At the time of discharge, his troponin level had significantly reduced and EKG was normal. Three days after discharge, an outpatient cardiac evaluation indicated a normal EKG and ECG.

Minocha PK, et al. Recurrence of Acute Myocarditis Temporally Associated with Receipt of the mRNA Coronavirus Disease 2019 (COVID-19) Vaccine in a Male Adolescent. *Journal of Pediatrics* 238: 321-323, Nov 2021. Available from: URL: <http://www.elsevier.com/inca/publications/store/6/2/3/3/1/1/index.htm>

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