



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



DIAGNOSING PERICARDITIS DUE TO COVID-19 VACCINATION

Poster Contributions

For exact presentation time, refer to the online ACC.22 Program Planner at <https://www.abstractsonline.com/pp8/#!/10461>

Session Title: Complex Clinical Cases: FIT Flatboard Poster Selections -- Covid

Abstract Category: FIT: Coronavirus Disease (COVID-19)

Authors: *Yuliya Zektser, Omid Amidi, Ali Nsair, Ronald Reagan UCLA Medical Center, Los Angeles, CA, USA*

Background: There have been increasing reports of myocarditis and pericarditis after COVID-19 vaccination and this is an active area of investigation. A study in the western U.S. found that the number of monthly cases of pericarditis rose significantly after vaccination began.

Case: A 32-year-old male with no past medical history presented for one day of pressure-like chest pain with a pleuritic component that improved when sitting up. He also experienced neck and back pain as well as chills and diaphoresis. He received his first dose of the Moderna COVID-19 vaccine two days prior. His admission EKG revealed ST elevations and concavity and PR depressions in limb and precordial leads with reciprocal ST depression and PR elevation, leading to an initial concern for STEMI. Troponin was trended every 3 hours and remained negative, as well as a negative creatine kinase-MB. C-reactive protein was elevated and erythrocyte sedimentation rate was normal. Rapid influenza and COVID-19 nasal PCR testing were negative. Transthoracic echocardiogram showed normal left ventricular systolic and diastolic function, an elevated assumed right atrial pressure, mild tricuspid regurgitation and small posterior and lateral pericardial effusion.

Decision-making: Our patient's clinical presentation was most consistent with pericarditis, and he was discharged with colchicine and ibuprofen. While vaccination cannot be proven to be the precipitant of his pericarditis, the temporal association in a healthy male with no viral or infectious symptoms is very suspicious. Most cases occur in otherwise healthy young men often after their second vaccination. Interestingly, our patient believes he may have previously had COVID-19 infection earlier in the pandemic.

Conclusion: There is still debate on the causal relationship between mRNA vaccines and myocarditis and pericarditis. Hypotheses of mechanisms center on molecular mimicry between the spike protein and self-antigens. To identify cases of vaccine-related myopericarditis, we must have a high index of suspicion in patients who present with acute symptoms after a COVID-19 mRNA vaccine without other potential causes.