Pediatricians should report cases of heart inflammation after COVID-19 vaccination

by Melissa Jenco, News Content Editor

A small number of adolescents and young adults have experienced mild heart inflammation after receiving an mRNA COVID-19 vaccine, according to federal health officials. It is unclear whether the two are linked.

"We look forward to seeing more data about these cases so we can better understand if they are related to the vaccine or if they are coincidental," said Yvonne A. Maldonado, M.D., FAAP, chair of the AAP Committee on Infectious Diseases. "Meanwhile, it's important for pediatricians and other clinicians to report any health concerns that arise after vaccination to VAERS (the Vaccine Adverse Event Reporting System) so we can systematically track and analyze them, and determine if they signal a real concern."

The AAP continues to recommend that adolescents get vaccinated while health officials investigate cases of myocarditis, inflammation of the heart muscle.

More than 163 million people in the U.S. have received at least one dose of COVID-19 vaccine, including just over 4.5 million adolescents ages 12-17, CDC data show. There were "relatively few" cases of myocarditis after vaccination, according to a May 17 report from the Centers for Disease Control and Prevention's (CDC’s) Advisory Committee on Immunization Practices COVID-19 Vaccine Safety Technical Work Group (VaST).

The report did not give a number but said the cases have been seen predominantly in adolescents and young adults and in more males than females. Cases are more common after the second dose of vaccine and typically occur within four days after vaccination. Most cases have been mild.

"Within CDC safety monitoring systems, rates of myocarditis reports in the window following COVID-19 vaccination have not differed from expected baseline rates," the report said. "However, VaST members felt that information about reports of myocarditis should be communicated to providers."

The European Medicines Agency is looking into similar cases and said in a report earlier this month, “There is no indication at the moment that these cases are due to the vaccine.”

Stuart Berger, M.D., FAAP, chair of the AAP Section on Cardiology and Cardiac Surgery Executive Committee, said in general, myocarditis is rare. Patients can be asymptomatic and often recover quickly. Most commonly, mild inflammation is related to a viral infection. This includes SARS-CoV-2 and the related multisystem inflammatory syndrome in children.

Symptoms that may prompt concern include chest pain, arrhythmias/palpitations and shortness of breath. Depending on severity, clinicians who believe a patient has myocarditis may order an EKG, echocardiogram, and testing for troponin levels, according to Dr. Berger. Treatment is supportive care for the symptoms.

"If you ever have a question, you ought to feel comfortable contacting your local pediatric cardiologist," said Dr. Berger, medical director of Lurie Children's Hospital Heart Center. "We certainly see it (myocarditis) more often than pediatricians. ... In the context of anything else, viral infections like COVID or the vaccine, we can be helpful in giving you advice also."

Children and adolescents experiencing myocarditis from any cause should talk to a pediatric cardiologist before returning to full participation in athletic activities. For cases occurring after vaccination, VaST also recommends clinicians consult with an infectious disease specialist and rheumatologist.

Health officials are closely monitoring safety systems as they investigate myocarditis cases after vaccination. Clinicians should report these cases to VAERS at http://vaers.hhs.gov.

Resources

- CDC guidance on administering the Pfizer-BioNTech COVID-19 vaccine
- CDC COVID vaccination toolkit for pediatricians
- AAP guidance on providing COVID-19 vaccines to adolescents
- Information for parents from HealthyChildren.org on COVID-19 vaccines and myocarditis
- Information for parents from HealthyChildren.org on preparing children and adolescents for COVID-19 vaccination
- Video instructions on reporting to VAERS