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Reply to Letter to the Editor: "Cardiovascular Events After Coronavirus Disease 2019 Vaccinations: A Letter to the Editor''

LETTER TO THE EDITOR
REPLY

To the Editor,

Daungsupawong and Wiwanitkit,[1] in their comment, bring up significant questions regarding a deeper comprehension of the prevalence, contributing factors, and effects of cardiovascular events following coronavirus disease 2019 (COVID-19) vaccinations. They suggest that conducting meticulously designed, prospective studies should be the main focus of future research in this area.

Actually, there are several challenging obstacles facing the medical and public health systems as a result of the global COVID-19 pandemic. Governments and public health organizations began to focus their attention on the widespread transmission of COVID-19 from China to other nations. The WHO stated in October 2022 that the COVID-19 virus had killed about 6.5 million people globally. Death rates are still high, particularly in high-risk groups such as cancer patients with immunosuppressed states, individuals with diabetes, and patients with heart disease.

Vaccinations can result in hypersensitivity reactions, just like other medications. Hypersensitivity reactions linked to vaccinations are not common. Anaphylactic reactions, on the other hand, can happen instantly, usually within minutes, following vaccination exposure and pose a serious risk to life. Although they are uncommon, these reactions can have major consequences. It can be challenging to identify the cause of hypersensitivity reactions that occur after vaccination and determine if the reactions were brought on by the vaccine or something else. Since the use of vaccines has increased due to the increased frequency of viral epidemics, mild hypersensitivity reactions are a common occurrence in routine clinical practice. Nevertheless, prompt attention, prevention, and treatment are necessary because even relatively mild hypersensitivity reactions can result in serious complications.

To protect children against diseases before the age of 2 years, the Advisory Committee on Immunization Practices in the United States recommends immunizing children with a schedule that includes 10 vaccines in total. It has been estimated that the risk of a hypersensitivity reaction after vaccination is 1.31 (95% CI, 0.90-1.84) per million doses of the vaccine.

The authors of this comment note that the lack of specific guidelines for healthcare providers regarding the diagnosis and treatment of hypersensitivity myocarditis following COVID-19 vaccination suggests that the study may not have much practical value. A recent report based on passive surveillance[2] found that after receiving the second dose of the messenger RNA COVID-19 vaccine, adolescents and young male individuals had a higher risk of myocarditis. This risk was observed across a range of age and sex groups. These authors recommended weighing the risks associated with COVID-19 vaccination against its benefits. It is important to remember that myocarditis can cause dilated cardiomyopathy, which can lead to

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end-stage heart failure and necessitate cutting-edge treatments like orthotopic heart transplantation.[3]

Further clinical research is therefore required to demonstrate the outcomes and long-term consequences of COVID-19-associated myocarditis for particular diagnostic and treatment purposes. We anticipate that these discussions will assist clinicians in being aware of potential cardiovascular risks, which may inspire further research, given that the quantity and quality of the current data are limited.

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