

14 JUNE 2021

JOINT STATEMENT

POSSIBLE ASSOCIATION
BETWEEN
COVID-19
VACCINATION
AND MYOCARDITIS/PERICARDITIS

CHAPTER OF CARDIOLOGISTS,
COLLEGE OF PHYSICIANS, SINGAPORE &
SINGAPORE CARDIAC SOCIETY



ACADEMY OF MEDICINE
SINGAPORE



CHAPTER OF CARDIOLOGISTS
COLLEGE OF PHYSICIANS, SINGAPORE



WHY MYOCARDITIS/PERICARDITIS?

Myocarditis refers to inflammation of heart muscle, while pericarditis refers to inflammation of the pericardium, the lining covering the heart. The inflammation may be due to various causes including infection, the body's response to infection, autoimmune disease, cancer, medications, toxins and as part of the body's healing process after any injury (e.g., heart attack). Sometimes, no cause can be determined. This is known as 'idiopathic' myocarditis.

In most cases, the heart recovers from myocarditis after the underlying cause is treated or resolved.. More common symptoms of myocarditis include chest pain, breathlessness and palpitations. Symptoms are usually mild and some people do not even know they have myocarditis. Often, symptomatic myocarditis will require hospitalisation, and rarely, this may result in heart failure requiring intensive care unit treatment. Pericarditis is less dangerous and usually present with chest pain.

In Singapore, myocarditis and pericarditis do occur. The rates are low and are estimated at 2-11 per 100,000 persons per year, depending on the age group and gender.

COVID-19 INFECTION IS ASSOCIATED WITH MYOCARDITIS AND PERICARDITIS

Various reports suggest that COVID19 infection is associated with both myocarditis and pericarditis. Published rates vary widely. In the largest and most complete of these studies, all patients (all young competitive athletes) who had prior COVID19 infection underwent cardiac MRI scans. The study showed that the incidence of myocarditis was 2.3% (ranging from 0 to 7.6% at different institutions)¹ i.e. the equivalent of 2,300 per 100,000 patients infected with COVID19.

COVID-19 VACCINATION AND POSSIBLE ASSOCIATION WITH MYOCARDITIS AND PERICARDITIS

The data so far is only available for the mRNA vaccines produced by Pfizer-BioNTech and Moderna. Initial reports from Israel and the USA suggest a small risk of myocarditis and pericarditis associated with the second dose of the mRNA COVID19 vaccines. Our own local Singapore data are too small to be definitive. Nonetheless, preliminary estimates from the USA suggest that the overall risk from the second dose of the mRNA vaccines is about 1.6 cases per 100,000 doses, with risk primarily in males under the age of 30.

COVID19 vaccination greatly reduces the risk of COVID19 infection and its serious complications in the majority of individuals, and helps the population achieve herd immunity. The risk of complications from COVID19 infection continues to far outweigh the risk from COVID19 vaccines.

People who develop chest discomfort, breathlessness or palpitations after COVID19 vaccination should seek urgent medical attention. After vaccination, and especially after the second dose, strenuous activity should be avoided for one week.

The Chapter of Cardiologists, Academy of Medicine Singapore and the Singapore Cardiac Society continues to recommend COVID19 vaccination for eligible patients. We will continue to monitor the situation closely and provide professional guidance accordingly.

REFERENCES

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