Incidence of myocardial pericarditis and myocardial injury in subjects vaccinated with 2019 coronavirus disease.

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Several recent publications describe cases of myocardial pericarditis after vaccination against coronavirus disease 2019 (COVID19). However, it is unclear whether these cases are post-vaccination or a more common cause of myocardial pericarditis. To determine if there is a correlation between COVID19 vaccination and myocarditis, we study gender-specific myocarditis in a cohort of patients who received COVID19 vaccination at a tertiary care centre in 2021. And the cumulative incidence of myocardial injury was compared to the cumulative incidence of these diseases. The age-adjusted incidence of pericarditis in men was found to be higher in the vaccinated population than in the control population, with a rate ratio of 9.7 (p = 0.04). However, the incidence of age-adjusted myocardial pericarditis in females did not differ between the vaccinated and control populations, with a rate ratio of 1.28 (p = 0.71). In 2021, we also found that the rate of myocardial injury in both men and women was higher than in 2019, both before and after vaccination. It has nothing to do with COVID19 vaccination. In conclusion, our study confirms a clear increase in the diagnosis of myocardial pericarditis after COVID19 vaccination, but not in women, but this finding is due to an increase in myocardial injury rate in 2021. It can be confusing [1].

The individual and public health benefits of COVID19 vaccination clearly outweigh the slight increase in risk of myocardial pericarditis after vaccination. With global promotion to develop severe acute respiratory syndrome coronavirus 2 (SARSCoV2) vaccines, finally in December 2020, emergency use authorization for messenger RNA (mRNA) vaccines Pfizer Biotech and Modern Coronavirus Disease 2019 (COVID19) was granted in the United States. 2021. As of July 2021, with a similar release of the Janssen / Johnson & Johnson single-dose vaccine in February 1, 187 million, more than 187 million people received at least one COVID 19 vaccine, 162 million was fully vaccinated in the United States Potential side effects associated with the States. 3 vaccines were closely monitored by the Vaccine Adverse Event Reporting System. As of June 11, 2021, more than 1,226 cases of myocarditis have been reported after mRNA-COVID19 vaccination. Recently, numerous case reports and series have been published explaining patients who developed myocarditis after COVID19 vaccination [2]. However, these cases are secondary to other myocarditis etiology such as viral, drug-induced, and autoimmune diseases and are contingent only after COVID 19 vaccination. It is unknown whether it was the target. Subsequently, this consider compared the sex particular aggregate frequency of myopericarditis and of myocardial harm at a tertiary care centre in a cohort of COVID19 immunized patients from 2020 to 2021 versus the aggregate rate of these conditions within the same subjects exactly 2 years earlier.

Information System as having received at least 1 dose of a COVID19 vaccine at a site within Massachusetts from August 3, 2020, to May 21, 2021. The control cohort consisted of the same subjects who were registered in the BIDMC electronic health records systems >2 years before their first COVID19 vaccination date and were 18 years or older in 2019. The cohorts are listed in Table 1. Vaccinated patients were followed from the date of the first COVID19 vaccination to May 22, 2021. Control patients were followed from their anniversary (just two years before their first vaccination date) to May 22, 2019. Patients were evaluated in an inpatient or outpatient setting during the follow-up period and assigned a diagnostic code of the International Classification of Diseases 10th Revised (ICD10) consistent with myocarditis have been identified. Your medical record has been reviewed. Cases that meet the European Cardiology Society's diagnostic criteria for clinically suspected myocarditis or possible etiology of pericarditis were classified as cases of myocarditis. 11, 12 Patients with a history of active COVID19 infection and myocarditis or pericarditis were excluded. Patients who meet the criteria for myocardial pericarditis are listed in Supplementary Appendix 1.

A similar ICD10 search algorithm was used to identify patients diagnosed with myocardial infarction (MI) [3]. Cases of acute appendicitis and acute pancreatitis were also identified using the ICD10 search algorithm to determine if there was a change in medical use after the spike after COVID-19. The cardiac troponin T assay at BIDMC is performed using the Roche ElectroChemiLuminescence Immunoassay. The 99th percentile of the healthy population of this assay is 0.10 ng / mL. Continuous variables are summarized as mean ± standard deviation or median interquartile range. Statistical analysis was performed using SAS Studio 3.8 (SAS Institute Inc., Cary, NC). Gender and age adjustments were performed using the July 2019 annual estimates of the US resident population, using direct standardization using the SAS STDRATE procedure. 13 Age-adjusted incidence and risk were compared using Mantel Haenszel statistics. Cumulative incidence was calculated using the Kaplan-Meier estimation and compared using the Logrank test. This study was approved by the BIDMC Clinical Research Committee.

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There were 12 cases of myocarditis in the vaccinated group (6 males and 6 females, 2 pericarditis and 10 myocarditis / myocarditis). A total of 3 cases occurred after the first administration of the mRNA vaccine (median 6 days after vaccination), 7 cases after the second administration of the mRNA vaccine (median 4 days after vaccination), and 2 cases after the single administration. Janssen / Johnson & Johnson vaccine (median 10 days after vaccination). There were 5 myocardial pericarditis.

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