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ACUTE MYOCARDITIS ASSOCIATED WITH COVID19 VACCINATION

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✓ ***Resume***

When it comes to myocarditis, the term encompasses a wide range of immunological processes that can have an impact on the function and/or structure of the heart. Infections with viruses are responsible for the majority of myocarditis cases. The presence of non-infectious causes of myocarditis is rare, however it has been associated to systemic inflammatory illnesses, medicines, and vaccines in some cases. Minor side effects are typical following the illness (COVID-19) vaccine, and they may become more severe with the second dosage. However, more substantial adverse properties have been documented following the disease (COVID-19) vaccine. Troponin levels were found to be high in the lab, while viral serologists found no evidence of infection. Although our findings are contradictory, it appears that COVID-19 infection is associated with a much higher risk of cardiac involvement than COVID-19 immunization in this study.

Keywords: Myocarditis, Acute myocarditis, Cardiac magnetic resonance COVID-19 vaccinationmRNA-COVID-19 vaccine

COVID-19 GA QARSHI EMLASH BILAN BOG'LIQ BO'LGAN O'TKIR MIOKARDIT

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Miyokardit haqida gap ketganda, bu atama yurakning funktsiyasi yoki tuzilishiga ta'sir qilishi mumkin bo'lgan immunologik jarayonlarning keng doirasini qamrab olishini ko'rishimiz mumkin. Aksariyat hollarda virusli infektsiyalar miyokarditning sababchisiidir. Miyokarditning yuqumli bo'lmagan sabablari kamdan-kam uchraydi, ammo ba'zi hollarda tizimli yallig'lanish kasalliklari, dori vositalari va vaktsinalar bilan bog'liq holatlarda miyokardit rivojlanadi. Ssezilarsiz nojo'ya ta'sirlar kasallik (COVID-19) vaktsinasiga xos bo'lib, ular ikkinchi dozadan keyin kuchayishi mumkin. Biroq, kasallikka (COVID-19) qarshi vaktsinadan keyin boshqa jiddiy nojo'ya ta'sirlar haqida xabar berilgan. Kuzatuvlar natijasida laboratoriyada troponin darajasi yuqori ekanligi aniqlandi, virusli seroloqlar esa infektsiya belgilarini topmadilar. Natijalarimiz bir-biriga zid bo'lsa-da, ushbu tadqiqotda COVID-19 infektsiyasi yurak shikastlanishi xavfi COVID-19 immunizatsiyasiga qaraganda ancha yuqori ekanligini ko'rishimiz mumkin.

Kalit so'zlar: miokardit, o'tkir miokardit, yurakning magnit rezonansi, COVID-19 vaktsinasi COVID-19 mRNK vaktsinasi

ОСТРЫЙ МИОКАРДИТ, СВЯЗАННЫЙ С ВАКЦИНАЦИЕЙ ПРОТИВ COVID-19

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✓ ***Резюме***

Когда речь идет о миокардите, этот термин охватывает широкий спектр иммунологических процессов, которые могут влиять на функцию и/или структуру сердца. Вирусные инфекции являются причиной большинства случаев миокардита. Наличие неинфекционных причин миокардита встречается редко, однако в некоторых случаях он

был связан с системными воспалительными заболеваниями, лекарствами и вакцинами. Незначительные побочные эффекты типичны для вакцины против болезни (COVID-19), и они могут стать более серьезными при второй дозе. Однако после вакцины против болезни (COVID-19) были зарегистрированы более существенные побочные эффекты. В лаборатории было обнаружено, что уровень тропонина высок, в то время как вирусные серологи не обнаружили признаков инфекции. Хотя наши результаты противоречивы, похоже, что инфекция COVID-19 связана с гораздо более высоким риском поражения сердца, чем иммунизация против COVID-19 в этом исследовании.

Ключевые слова: миокардит, острый миокардит, магнитный резонанс сердца, вакцинация против COVID-19, мРНК-вакцина против COVID-19

Relevance

With the exception of a small number of cases, there has been no evidence of immunization-related cardiomyopathy in the general population, with the exception of a brief period following COVID-19 vaccination, which has been reported [5]. With the exception of a small number of cases, there has been no evidence of immunization-related cardiomyopathy in the general population, with the exception of a brief period following COVID-19 vaccination, which has been reported [15, 16]. It had previously been identified as a potential cause of heart failure in the general public that vaccinations against smallpox, influenza, and lockjaw were associated with heart failure in this study [12]. However, vaccines against smallpox, influenza, and lockjaw were not found to be associated with heart failure in this study, despite the fact that they had previously been identified as a potential cause of heart failure in the general public. Despite the fact that vaccines for smallpox, influenza, and lockjaw were previously identified as possible causes of heart failure in the general public, this has not yet been proven. A significant discovery made while administering mRNA COVID-19 injections for clinical investigation was the absence of myocarditis, which demonstrated that the immunization was effective in preventing the disease. This was one of the most significant discoveries made while administering mRNA COVID-19 injections for clinical investigation. This was one of the most notable results that came out of the clinical research inquiry as a result of the findings of the clinical research examination. This investigation's finding, however, is likely to have been influenced by the fact that only a limited number of people participated in the clinical trial, as well as the seeming rarity of the illness under consideration [6, 14].

While conducting this analysis, our team uncovered an abundance of interesting data points that can aid us in the future in our efforts to better understand the myocarditis produced by the COVID-19 vaccination [7, 9, 11]. The following pieces of information may be important to your situation, but they were not included in this group: An investigation resulted in a conclusion that included one or more of the following items, all of which were taken into consideration:

Myocarditis produced by mRNA vaccines has been discovered in certain investigations to be associated with normal left ventricular function; nonetheless, the illness is characterized by rapid myocardial deterioration in addition to myocardial edema in the affected heart. When the underlying clinical history and transitory findings are considered together, they appear to have been favorable in this particular case, based on the data. Apart from the fact that it shares some clinical characteristics and findings with something like to something somewhat analogous in individuals aged twelve to fifteen years, the clinical presentation differs from that seen in MIS-C and appears to be less detrimental overall. This is true, with the exception of clinical characteristics and findings that are compatible with something somewhat equivalent in those aged twelve to fifteen years. (Clemow, 2021).

There are a variety of potential hazards linked with vaccines, contrary to common perception, and these have been found [1, 3, 4]. Despite the fact that vaccines are a critical component of preventative and public health care programmes, as has been established, vaccines continue to be underappreciated. Minor adverse effects such as swelling, discomfort, and redness at the injection site are possible after receiving the COVID-19 immunization shot [2]. Once the dose has been delivered to the patient, these adverse effects are perfectly normal and expected, and they should be addressed as such throughout the treatment process. As a result of the disease, it is likely that additional systemic symptoms, such as nausea and vomiting, can manifest themselves as well. An additional prevalent side effect, in addition

to headaches and muscle soreness (including fatigue), is elevated body temperature (including chills), which is followed by exhaustion, to mention a few examples. The manufacturer anticipates that the second dose of COVID-19 vaccine will be less harmful than the first dose of this vaccination regimen if it is administered in the same manner as the first dose of this vaccination regimen. This is based on the manufacturer's experience with the first dose of this vaccination regimen. As predicted, the first dose of the vaccine schedule will be the most deadly of the entire series, according to predictions. According to the business reports, a number of companies, including Pfizer-BioNTech and Moderna, have already linked the mRNA antibodies to more serious side effects, which have included myocarditis and other problems. If myocarditis is not treated promptly and efficiently, it can proceed from asymptomatic heart pain to substantial circulatory failure and death, among other consequences. Understanding the significance of the problem is critical in determining how serious it is [8, 13].

Infections with viruses can lead to heart disease in a variety of ways, with viral infections being one of the most prevalent and dangerous types of infection to occur in humans. That is not to mention the fact that it is one of the most dangerous types of employment available anyplace on the planet at the moment. The influenza virus and the parvovirus B19 infection have both been associated to the development of this condition in recent years, but more research is needed. Additionally, it can be caused by a variety of different reasons, including the common cold, among others, in addition to being more prevalent during the winter months. Many vaccines have now been discovered to be associated with idiopathic myocarditis; antibodies against smallpox antibodies have been discovered to be the ones that are most consistently associated with this condition [10]. There may have been another element that influenced this decision, and it is possible that it was the fact that the administration of the COVID-19 antibody has been associated with a relatively modest number of cases of myocarditis that have been described in the literature. A multitude of factors, including the fact that myocarditis is a relatively uncommon infection, have contributed to a general lack of public awareness about the dangers associated with this deadly cycle (Emery, 2021).

According to data from the Israeli Ministry of Health, it is expected that approximately 5 million people in Israel have received the COVID-19 vaccination (Israeli Ministry of Public Health). In a population of 5 million people, the Ministry of Health has reported a total of 62 instances of myocarditis, which is a significant number for such a small area. In the end, only six cases had been identified following the administration of mRNA vaccinations, with the vast majority of cases discovered only after the administration of the second dose of vaccine. An in-depth investigation revealed that only six cases had been identified following the administration of mRNA vaccinations. As a direct result of the first dose of the mRNA vaccine, the investigation discovered that just six cases had been detected as a result of the immunization as a whole. Following these discoveries, there has been a long-standing association between these two characteristics in the general population, particularly among men under the age of thirty. However, this link has also been detected in men older than 30 years of age, and it has been documented for a significant amount of time. This study's findings led to a significant increase in the prevalence of the disease among the 16–30-year-old cohort, which went from one in every 100 000 in the overall population to one out of every 20 000 in the 16–30-year-old cohort, compared to a prevalence of one in every 100 000 in the entire population before the data were released. There were a total of sixty-two persons injured in the incident who were sent to the hospital for treatment over the next few days, according to the most recent sources. Two people died as a result of their injuries, according to the newest reports. Several service members were diagnosed with myocarditis in 2011 after receiving the COVID vaccine in the United States, according to Department of Defense documents. The vaccine was given to them in the United States of America, where they lived. When they landed in the United States of America, they were given the COVID vaccine to protect them from the disease. Thirty of these soldiers were already on their second dose of COVID-19 mRNA vaccine when they were diagnosed with the virus; they had only received their first dose of COVID-19 mRNA vaccination a few days before they were diagnosed with the virus. Thirty of these soldiers were diagnosed with the virus while they were on their second dose of COVID-19 mRNA vaccine. The soldiers became infected with the virus while serving in Afghanistan on a combat mission.

Myocarditis and pericarditis are contagious heart conditions that can cause a variety of adverse symptoms, including chest discomfort, fatigue, windedness, and shudders that can be unpredictable

and are caused by irregular heartbeats or other cardiovascular problems. Myocarditis and pericarditis are contagious heart conditions that are caused by irregular heartbeats or other cardiovascular problems. Irregular heartbeats or other cardiovascular issues can result in myocarditis and pericarditis, which are contagious heart illnesses. Myocarditis and pericarditis are contagious heart infections that can be caused by irregular heartbeats or other cardiovascular disorders. Irregular heartbeats or other cardiovascular diseases can result in myocarditis and pericarditis, which are contagious heart infections that can spread quickly. Cardiovascular disorders such as irregular heartbeats or pericarditis, which are contagious heart infections that spread quickly, can occur as a result of irregular heartbeats or other cardiovascular ailments. When irregular heartbeats or other cardiovascular problems arise, it can result in cardiovascular disorders such as pericarditis, which is a contagious heart infection that spreads swiftly. It is possible to develop cardiovascular issues such as pericarditis, which is a contagious heart infection that spreads quickly, when irregular heartbeats or other cardiovascular problems occur. As a result of irregular heartbeats or other cardiovascular disorders, it is possible to develop cardiovascular concerns such as pericarditis, which is a contagious heart infection that spreads swiftly. The development of cardiovascular issues such as pericarditis, a contagious heart infection that spreads quickly as a result of irregular heartbeats or other cardiovascular diseases, is conceivable as a result of irregular heartbeats or other cardiovascular disorders. It is possible that irregular heartbeats or other cardiovascular disorders will lead to the development of cardiovascular concerns such as pericarditis, a contagious heart infection that spreads swiftly as a result of irregular heartbeats or other cardiovascular diseases. As a result, additional research is needed to determine if the occurrence of myocarditis in patients who have been infected with SARS-CoV-2 and are showing fundamental deterioration is a contributing factor to the heart damage that has been observed in these patients. Several researchers have looked at this possibility, and some feel that myocarditis is one of the causes contributing to and/or causing the increased death rates observed in COVID-19 patients compared to the general public. Previously, it was hypothesized that myocarditis was one of the causes contributing to and/or causing the higher death rates found in COVID-19 patients, and now this hypothesis has been verified (Emery, 2021). As a result of immunization with live virus COVID-19 vaccines, the risk of infection increases throughout the period following immunization. This is especially true in some cases after multiple extended periods of immunization with live virus COVID-19 vaccinations. According to the most recent findings, patients who have been exposed to the live virus COVID-19 on several occasions over an extended period of time have experienced myocarditis and pericarditis. Many of these infections have been reported in persons who have been exposed to the virus more than once, according to the CDC. In recent findings, both the European Medicines Agency (EMA) and the Food and Drug Administration (FDA) concluded that the benefits of widely recommended COVID-19 vaccinations outweighed the risks, particularly when considering the possibility of severe COVID-19 disease and the ramifications that could result as a result of this disease. Those who are currently suffering from myocarditis will benefit from an overview of the most recent discoveries and treatment recommendations, while those who are not currently suffering from myocarditis will benefit from treatment recommendations for those who are not currently suffering from myocarditis. Symptoms of myocarditis can range from mild and non-threatening to severe and even life-threatening in nature, depending on the severity of the infection. Later on in this page, you will learn more about how it manifests itself in a variety of ways, which will be discussed in further depth later in this page. Take, for example, the situation of a patient who suffered myocarditis as a result of receiving the COVID-19 shot. According to previous research findings, a case scenario describing how it is projected to develop in the future is described in the following section: (Palmer, 2021). In order to avoid potentially life-threatening consequences, an alternate strategy to the conventional approach should be used for diagnosing myocarditis in individuals who have a positive COVID-19 vaccination status but who also exhibit signs and symptoms of acute cardiac decompensation, in addition to the conventional approach. It is crucial that individuals who are suspected of having myocarditis be identified as soon as feasible after being diagnosed as a first step in reducing the number of COVID-19 vaccine-related side effects and improving medical care for those who have been exposed to this vaccination.

Purpose of the research: This study sought to determine the clinical manifestations, short-term prognosis, and myocardial tissue abnormalities in children who had coronavirus infection 2019

vaccination-associated myocarditis as demonstrated on cardiac magnetic resonance imaging (CMR) or cardiac magnetic resonance imaging (CMR) and magnetic resonance imaging (MRI) in children who had coronavirus infection 2019 vaccination-associated myocarditis (C-VAM).

Material of methods

In a multicenter investigation involving 16 US institutions, patients under the age of 21 who had an examination of C-VAM were compared to a group of youngsters who had a multisystem incendiary illness, the researchers discovered. In the journal Pediatrics, the findings of the researchers on this topic were published, and may be found by clicking here. In order to identify which was higher in the study, the levels of C-VAM in younger children and adolescents were compared to the levels of C-VAM in older adolescents. In response to early reports that suggested a possible link between COVID-19 myocarditis and vaccines, cardiologists from all around the country were contacted and asked to submit any COVID-19 myocarditis cases from their practices to this review study, which is currently underway. Cardiologists from throughout the country who were asked to take part in the study expressed great interest in taking part and were anxious to get started. The occurrences were reported to the Vaccine Adverse Event Reporting System (VAERS), which is handled by the Centers for Disease Control and Prevention at many locations around the United States (CDC). As a result, numerous neighboring examination morals sheets from the working together medical clinics were rejected by the institution's survey board, while others received written informed consent from patients and their guardians, which was accepted by the survey board (McCaffery, 2021).

Result and discussion

Overall, there were 63 patients, with an average age of 15.6 years and a male preponderance (92 percent) of the population. Everyone, with the exception of one, had acknowledged the presence of a messenger RNA vaccination and had presented after the second dose. Four of the patients exhibited severe dysrhythmia; 14 percent had moderate left ventricular brokenness on echocardiogram that vanished after release; and 88 percent met the criteria for myocarditis as defined by the symptomatic CMR Lake Louise standards. Myocardial injury was shown to be more prevalent in youngsters than the multisystem inflammatory syndrome (MSIS). None of the patients required inotropic, mechanical, or circulatory support. There were no fatalities as a result of this occurrence. After a median of 35 days of follow-up, 86 percent of patients reported that their symptoms, arrhythmias, and ventricular dysfunction had disappeared completely (Palmer, 2021).

Conclusion

The goal of this study, which is the largest of its kind ever done in the United States, is to gain a better understanding of acute myocarditis in children under the age of five. The properties of cardiovascular magnetic resonance imaging (CMR), as well as clinical aspects and primary implications in pediatric patients with acute myocarditis, are being investigated by the researchers in this study. To the best of our knowledge, this is the largest research project of its kind that has ever been carried out anywhere in the world, and we believe it to be the most ambitious. As a result of our submission to the MIS-C for assessment and review, we now have a more comprehensive understanding of both disease processes than we had previously. According to the findings of an extensive study conducted on a large number of patients suffering from C-VAM, it was discovered that the vast majority of patients had myocardial enlargement and damage, despite the fact that the vast majority of patients presented with a mild clinical presentation and that the vast majority of patients had regular or rapidly recovered left ventricular function in the vast majority of cases. According to preliminary findings, this particular group has experienced positive treatment outcomes, which represents a significant step forward in the fight against cancer. Consequently, considering that immunization programmes are mostly targeted at children under the age of five in the first place, it is even more critical to investigate the prognostic implications of this cardiac injury, in addition to the long-term effects and pathophysiology of this cardiac injury.

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information, supervise, coordinate and conduct data collection as well as publish a preliminary version of the study, which was then evaluated and revised.

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