

Acute Myocarditis Complicating Covid-19 mRNA Vaccination

Ahmed Abdelsalam

Consultant, Department of Cardiology, Helios Hospitals, Germany

*Corresponding author

Ahmed Abdelsalam, Consultant, Department of Cardiology, Helios Hospitals, Germany. Tel: +493068323885. E-mail: abdelahmed25@gmail.com

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Vaccination against covid-19 is effective element to combat the Pandemic worldwide. Acute Myocarditis is one of the side effects of Covid mRNA especially after second vaccine in young adults and adolescent males. The incidence is estimated 2 cases pro 100,000 mRNA vaccines.

43 years old presented in outpatient with Chest discomfort and Dyspnoea 5 days after second mRNA(Pfizer): No History of Diarrhoea or common cold in previous 2 Months .EKG narrow complex QRS, T wave Inversion V1 to V6.

Echo: apical Hypokinesie, without Impairment of Ejection fraction. After admission In hospital, elevated inflammation parameter (Leucocytosis 12, CRP 34)

Coronarangiography: Normal Coronaries

The patient was released but after 2 weeks presented again with progressive Dyspnoea (NYHA II), EKG typical left bundle branch block with QRS duration of 158 ms

Echo: global Hypokinesia, severely impaired ejection fraction; LV-EF 25% cardiac MRI: Myocardial Edema, Hyperemia early after contact injection. with severely impaired ejection fraction.

Optimal medical therapy for heart failure is administered for 3 Months and then echocardiography repeated which showed a little bit improvement in Ejection fraction (LV-EF 35%) CRTD implanted with good clinical and echocardiographic Outcome.

Although the mechanisms for development of myocarditis are not clear, molecular mimicry between the spike protein of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and self-antigens, trigger of preexisting dysregulated immune pathways in certain individuals, immune response to mRNA, and activation of immunologic pathways, and dysregulated cytokine expression have been proposed. The reasons for male predominance in myocarditis cases are unknown, but possible explanations relate to sex hormone differences in immune response and myocarditis, and also underdiagnosis of cardiac disease in women. Almost all patients had resolution of symptoms and signs and improvement in diagnostic markers and imaging with or without treatment. Despite rare cases of myocarditis, the benefit-risk assessment for COVID-19 vaccination shows a favorable balance for all age and sex groups.

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