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## A Case of Myocarditis Following Covid-19 Mrna Vaccination

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**Background:** Myocarditis can present with non-specific signs and symptoms of easy fatigability, arrhythmias, palpitations and chest pain. This can be from ischemic injury, trauma, genetics, and external antigens but recent studies showed myocarditis can be a rare complication of Covid-19 vaccination particularly with mRNA type vaccine.

**Objective:** To discuss the presentation, diagnosis and treatment of myocarditis after receiving a Covid-19 mRNA vaccine.

**Case:** A 31-year-old Filipino female, developed heart failure symptoms of easy fatigability and orthopnea, 2 days after receiving Covid-19 mRNA booster shot. Work up showed atrial fibrillation on ECG, positive troponin I, elevated NT-Pro BNP, 2d echocardiography showed global hypokinesia with reduced EF of 20%, MRI showed . dilated left ventricle with moderate to severe systolic dysfunction, ejection fraction 27.1%; moderate to severe global hypokinesia, diffuse myocardial edema, consistent with acute to subacute myocarditis. Heart failure medications were started patient was started on Methylprednisolone 40mg IV every 12 hours for 7 days then was eventually shifted to 60mg/tab 1 tab once a day, then tapered off by 10mg/week reduction. Follow up 2d echocardiography after 4 months of medical therapy showed increase in EF to 52% from 26% and the previously severely hypokinetic segments has improved in contractility to mild hypokinesia.

**Conclusion and Significance:** In this case, Covid-19 mRNA booster vaccine was the only significant event prior to having heart failure symptoms, coinciding with the recent data and US case reports with interval of 2-3 days, predominantly in younger adult populations vaccinated with mRNA Covid-19 vaccine. This case report aims to increase awareness that such side effects may also occur in young healthy Filipinos and to present the stepwise diagnostic procedures facilitated and the medications given which significantly improved the patient. Myocarditis is a rare adverse effect of covid-19 vaccine but the benefit still outweighs the risk compared to having covid-19 infection. Researchers still strongly recommend use of covid-19 vaccination.

### Biography

Aimee Grace J. Santiago is a distinguished cardiologist at Manila Doctors Hospital, Philippines.