

## Acute Myocarditis after mRNA COVID-19 Vaccine: A Correspondence

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### Dear Editor,

We would like to share ideas on the publication “Acute Myocarditis Following mRNA COVID-19 Vaccine.”<sup>1</sup> Gomes et al. examine the potential side effects of COVID-19 vaccination and the current state of acute myocarditis. COVID-19 immunization will probably cause heart abnormalities. We agree that this is a possibility. However, it should be noted

that there is frequently inadequate information on the health/cardiac status of the troublesome cases before immunization. Although a post-vaccination analysis, which includes an EKG, can confirm the presence of myocarditis, it is impossible to establish a link between heart disease and the COVID-19 vaccine. There is still a potential that you will have medical issues simultaneously. Dengue fever, for example, can induce cardiac problems if it co-occurs.<sup>2</sup>

### Keywords

Myocarditis; mRNA; COVID-19; Vaccine.

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### References

1. Gomes DA, Santos RR, Freitas P, Paiva MS, Ferreira J, Trabulo M. Acute Myocarditis Following mRNA COVID-19 Vaccine. *Arq Bras Cardiol.* 2022;118(4):783-6. doi: 10.36660/abc.20210469.
2. Kebayoon A, Wiwanitkit V. Dengue after COVID-19 Vaccination: Possible and Might be Missed. *Clin Appl Thromb Hemost.* 2021;27:10760296211047229. doi: 10.1177/10760296211047229.

### Reply

#### Dear Editor,

We thank Mungmunpantipantip and Wiwanitkit for their letter regarding our paper entitled “Acute Myocarditis Following mRNA COVID-19 Vaccine”.<sup>1</sup>

We agree that although there is a temporal relationship between vaccination and the development of myocarditis, it is not possible to establish causality. However, after we reported this clinical case, case series were published regarding myocarditis following the BNT162b2b mRNA vaccine (Pfizer-BioNTech).<sup>2,3</sup>

In the report by Mevorach et al.,<sup>2</sup> with 136 cases of post-vaccination myocarditis, the observed risk was 2.35 times higher compared to unvaccinated persons, and one fatal case occurred. In another report with 54 cases by Witberg et al.,<sup>3</sup> the incidence

of myocarditis up to 42 days following vaccination was 2.13 per 100.000 persons, all experiencing spontaneous recovery. In both series, the highest incidence was amongst young males.

It should be outlined that the occurrence of myocarditis following COVID-19 vaccination is rare and self-limited in the vast majority of cases.<sup>4</sup> Therefore, this presumed complication must not alter the vaccine's superior benefit/ risk relationship.

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## References

1. Gomes DA, Santos RR, Freitas P, Paiva MS, Ferreira J, Trabulo M. Acute Myocarditis Following mRNA COVID-19 Vaccine. *Arq Bras Cardiol.* 2022;118(4):783-6. doi: 10.36660/abc.20210469.
2. Mevorach D, Anis E, Cedar N, Bromberg M, Haas EJ, Nadir E, et al. Myocarditis after BNT162b2 mRNA Vaccine Against Covid-19 in Israel. *N Engl J Med.* 2021;385(23):2140-9. doi: 10.1056/NEJMoa2109730.
3. Witberg G, Barda N, Hoss S, Richter I, Wiessman M, Aviv Y, et al. Myocarditis after Covid-19 Vaccination in a Large Health Care Organization. *N Engl J Med.* 2021;385(23):2132-9. doi: 10.1056/NEJMoa2110737.
4. Caforio ALP. Receipt of mRNA Vaccine against Covid-19 and Myocarditis. *N Engl J Med.* 2021;385(23):2189-90. doi: 10.1056/NEJMe2116493.



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