

## Tachycardia, adverse effect, COVID-19 vaccine: Correspondence



### Taquicardia, efecto adverso, vacuna COVID-19

Dear Editor,

We would like to share ideas on the publication “Tachycardia as an undescribed adverse effect to the Comirnaty® vaccine (BNT162b2 Pfizer-BioNTech Covid-19 vaccine): Description of 3 cases with a history of SARS-CoV-2 disease.<sup>1</sup>” We feel it vital to confirm the development of this adverse event following vaccination administration in subjects with a history of prior SARS-CoV-2 infection and, if it is verified, take the necessary steps in subjects with prior cardiac disease,<sup>1</sup> according to Marco Garca et al. We agree that the COVID-19 vaccine can have certain side effects, and that tachycardia may be a clinical issue after vaccination. As Marco Garca et al. pointed out, the problem could be caused by a personal ailment in the background. Before concluding that the clinical condition is caused by the vaccine, a thorough assessment is required.<sup>1</sup> Furthermore, we must consider the possibility that the problem is caused by a coexisting medical condition. A COVID-19 vaccine recipient, for example, can contract dengue fever and develop tachycardia.<sup>2</sup> Before disclosing any new suspected side effect of the COVID-19 vaccination, it is customarily necessary to conduct a thorough examination for confirmation.

## Funding

None.

## Conflict of interest

None.

## References

1. Marco García MT, Torres Lana Á, Anta Agudo MB, Rufino Delgado MT. Tachycardia as an undescribed adverse effect to the Comirnaty® vaccine (BNT162b2 Pfizer-BioNTech Covid-19 vaccine): description of 3 cases with a history of SARS-CoV-2 disease. *Enferm Infecc Microbiol Clin (Engl Ed)*. 2022, <http://dx.doi.org/10.1016/j.eimce.2022.03.002>. S2529-993X(22)00041-7. Online ahead of print.
2. Kebayoon A, Wiwanitkit V. Dengue after COVID-19 vaccination: possible and might be missed. *Clin Appl Thromb Hemost*. 2021;27, 10760296211047229.

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## Reply to “Tachycardia, adverse effect, COVID-19 vaccine”



### Respuesta a “Taquicardia, efecto adverso, vacuna COVID-19”

Dear Editor:

We have read with interest the letter from Pathum Sookaromdee et al., in reference to our manuscript “Tachycardia as an adverse effect not described in the Comirnaty® vaccine (COVID-19 mRNA BNT162b2 vaccine from Pfizer-BioNTech): description of 3 cases with a history of SARS-CoV-2”, and we would like to make the following clarifications:

Regarding their comment that in order to conclude that an adverse effect is due to the vaccine, a medical condition must be ruled out, our manuscript reports 3 cases of patients who presented tachycardia after the Pfizer-BioNTech COVID-19 vaccine. In none of the 3 cases was there a personal history of previous heart disease and the tachycardia appeared between 10 and 15 h after the administration of the vaccine, resolving spontaneously in less than 36 h, therefore, there is a temporal association between the administration of the vaccine and the onset of the symptom. Only in case 3 was a study carried out by the Cardiology department because the patient also presented symptomatic extrasystoles maintained over time. The cardiology study consisted of an electrocardiogram and an echocardiogram with normal results, thus ruling out structural heart disease. The patient remained asymptomatic from the extrasystoles one month after the start of treatment with bisoprolol.

Since the publication of our manuscript, there have been numerous articles that describe this adverse effect after the administration of the Comirnaty vaccine. Tate et al. describe the case of a 29-year-old woman who suffered sinus tachycardia of up to 135 bpm as the only adverse event that appeared 6–8 h after the administration of the second dose of the vaccine and resolved in 24 h.<sup>1</sup> The onset of tachycardia has also been described in the context of postural orthostatic tachycardia syndrome.<sup>2</sup>

Recently (04/21/2022), Pfizer-BioNTech published the report of cases of analysis of adverse effects secondary to its COVID-19 vaccine, which describes all the cases reported in the United Kingdom during the period from 12/09/2020 to 04/20/2022.<sup>3</sup> In said report, tachycardia was described in 2,449 cases, in no case fatal.

In our case, and as in the Pfizer-BioNTech report, it is a suspected post-vaccination adverse reaction.

## References

1. Tate C, Demashkieh L, Hakmeh W. Isolated tachycardia presenting after Pfizer-BioNTech COVID-19 vaccination. *Cureus*. 2021;13:e16706, <http://dx.doi.org/10.7759/cureus.16706>.
2. Reddy S, Reddy S, Arora M. A case of postural orthostatic tachycardia syndrome secondary to the messenger RNA COVID-19 vaccine. *Cureus*. 2021;13:e14837, <http://dx.doi.org/10.7759/cureus.14837>.
3. Publishing Service. Government of UK. COVID-19 mRNA Pfizer-BioNTech Vaccine Analysis Print. Updated Apr 20, 2022. Disponible en: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/989996/COVID-19\\_mRNA\\_PfizerBioNTech\\_Vaccine\\_Analysis\\_Print.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/989996/COVID-19_mRNA_PfizerBioNTech_Vaccine_Analysis_Print.pdf). Accessed May 13, 2022.

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