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## Subacute thyroiditis after COVID-19 vaccination



### Tiroiditis subaguda tras la vacunación con COVID-19

Dear Editor:

We would like to share ideas on the publication “Subacute thyroiditis after anti-SARS-CoV-2 (Ad5-nCoV) vaccine.<sup>1</sup>” Rebollar reported a case and mentioned for possible clinical association between thyroid problem and COVID-19 vaccination.<sup>1</sup> Thyroid problem might be followed vaccination and the pathogenesis is still inconclusive. Regarding subacute thyroiditis, there are sporadic case reports in COVID-19 vaccine recipients.<sup>2,3</sup> The observed thyroid abnormality might or might not be associated with vaccination. After vaccination, the abnormal thyroid function might occur and it is not related to any immunological abnormality.<sup>4</sup> Hyperviscosity might occur after vaccination<sup>4</sup> and it can result in an aberrantly thyroid function.<sup>5</sup>

#### Authors contribution

SY (50%): (1a) Substantial contributions to study conception and design. (1b) Substantial contributions to acquisition of data. (1c) Substantial contributions to analysis and interpretation of data. (2) Drafting the article or revising it critically for important intellectual content. (3) Final approval of the version of the article to be published.

VW (50%): (1a) Substantial contributions to study conception and design. (1b) Substantial contributions to acquisition of data. (1c) Substantial contributions to analysis and interpretation of data. (2) Drafting the article or revising it critically for important intellectual content. (3) Final approval of the version of the article to be published.

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#### Conflict of interest

The authors ask for waiving for any charge relating to this correspondence.

#### References

1. Rebollar AF. Subacute thyroiditis after anti-SARS-CoV-2 (Ad5-nCoV) vaccine. *Enferm Infecc Microbiol Clin.* 2021;(November); <http://dx.doi.org/10.1016/j.eimc.2021.10.015> [online ahead of print].
2. Sözen M, Topaloğlu Ö, Çetinarslan B, Selek A, Cantürk Z, Gezer E, et al. COVID-19 mRNA vaccine may trigger subacute thyroiditis. *Hum Vaccin Immunother.* 2021;10(December):1–6.
3. Jeeyavudeen MS, Patrick AW, Gibb FW, Dover AR. COVID-19 vaccine-associated subacute thyroiditis: an unusual suspect for de Quervain's thyroiditis. *BMJ Case Rep.* 2021;14, e246425.
4. Mungmunpuntipantip R, Viroj Wiwanitkit V. Abnormal thyroid function following COVID-19 vaccination. *Indian J Endocrinol Metab.* 2021;25:169.
5. Joob B, Wiwanitkit V. Expected viscosity after COVID-19 vaccination, hyperviscosity and previous COVID-19. *Clin Appl Thromb Hemost.* 2021;27; <http://dx.doi.org/10.1177/10760296211020833>.

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## Reply: Subacute thyroiditis after anti-SARS-CoV-2 (Ad5-nCoV) vaccine<sup>☆</sup>



### Respuesta: Tiroiditis subaguda después de la vacuna anti SARS-CoV-2 (Ad5-nCoV)

Dear Editor,

Yasri and Wiwanitki's<sup>1</sup> letter on my case report<sup>2</sup> speculates as to the association between the COVID-19 vaccination, blood hyperviscosity and thyroid dysfunction. No pathophysiological relationship

between hyperviscosity and aberrant thyroid function has been reported. False thyroid hormone test results due to blood hyperviscosity should not be confounded with thyroid dysfunction.

Hyperviscosity caused by acellular components (proteins), which may be monoclonal or polyclonal, are a known cause of potential interference in thyroid immunoassays.<sup>3</sup> These correspond to uncommon entities including: Waldenström's macroglobulinaemia, cryoglobulinaemia and multiple myeloma,<sup>4</sup> as well as rheumatic diseases associated with high rheumatoid factor levels. Paraprotein interference in immunoassays used to measure thyroid hormone and thyroid-stimulating hormone (TSH) levels<sup>5</sup> has been extensively and specifically studied; although false results are mostly reported in total thyroid hormone levels,<sup>3–6</sup> any immunoassay used may be prone to interference. However, such interference is recognisable and does not indicate any thyroid function abnormality.

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