

<sup>b</sup> Consorcio de Investigación Biomédica de Epidemiología y Salud Pública (CIBERESP), Spain

<sup>c</sup> Laboratorio de Referencia e Investigación en Enfermedades Viricas Inmunoprevenibles, Centro Nacional de Microbiología, Instituto de Salud Carlos III, Madrid, Spain

\* Corresponding author.

E-mail address: [juan.sanz@salud.madrid.org](mailto:juan.sanz@salud.madrid.org) (J.C. Sanz).

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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.

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Sora Yasri<sup>a,\*</sup>, Viroj Wiwanitkit<sup>b</sup>

<sup>a</sup> KM Center, Bangkok, Thailand

<sup>b</sup> Dr DY Patil University, Pune, India

\* Corresponding author.

E-mail address: [sorayasri@outlook.co.th](mailto:sorayasri@outlook.co.th) (S. Yasri).

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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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## Ethics

All the procedures performed in the course of this retrospective study were carried out in accordance with institutional and national research committee ethical standards, and the study was conducted in accordance with World Health Organization (WHO) standards for biomedical and scientific research in humans. Case reports do not require independent ethics committee approval. Informed consent was obtained from and signed by the study participant.

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## Conflicts of interest

The author has no conflicts of interest to declare.

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Armando Flores-Rebollar

*Departamento de Medicina Interna, Instituto Nacional de Ciencias Médicas y Nutrición «Salvador Zubirán», Mexico City, Mexico*  
E-mail address: [afcalatrava@yahoo.com](mailto:afcalatrava@yahoo.com)

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