

Tozinameran

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Graves' disease : case report

A 40-year-old woman developed Graves' disease following vaccination with tozinameran for COVID-19.

The woman had a 8-year history of hypothyroidism, which required treatment with levothyroxine sodium. Her anti-thyroid peroxidase and anti-thyroglobulin antibodies were negative. In view of the COVID-19 pandemic, on 6 April 2021, she received the first dose and on 1 May 2021, received the second dose of tozinameran [BNT162b2 mRNA vaccine; Comirnaty; *route and dosage not stated*] vaccine. However, 5 weeks after the second dose of vaccine i.e. 8 June 2021, she developed palpitation and was noted to have sinus tachycardia. Blood tests revealed thyrotoxicosis. Physical examination showed a moderate diffuse goiter with thyroid bruit. The thyroid stimulating immunoglobulin (TSI) level was 420%. Thyroid ultrasonography demonstrated a heterogeneous background thyroid echogenicity with increase in vascularity, indicative of diffuse thyroid disease. The technetium thyroid scan showed diffuse markedly increased uptake over both lobes of thyroid, with increased blood flow and increased blood pool on dynamic images. Based on the aforementioned findings, she was diagnosed to have Graves' disease secondary to vaccination with tozinameran.

Subsequently, the woman's therapy with levothyroxine sodium was discontinued, and she was treated with carbimazole and propranolol. This led to a significant improvement in the thyroid function.

Lui DTW, et al. Development of Graves' Disease After SARS-CoV-2 mRNA Vaccination: A Case Report and Literature Review. [Review]. *Frontiers in Public Health* 9: 23 Nov 2021. Available from: URL: <http://doi.org/10.3389/fpubh.2021.778964>

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