



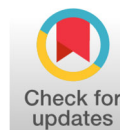
Journal of Advanced Biological Sciences

Received: October 29, 2024 | Accepted: December 15, 2024 | Published: December 30, 2024
Volume 01, Issue 02, Pages 28-29

DOI <https://doi.org/10.66590/jabs2024010205>

Letter to Editor

OPEN ACCESS



Anti-SRP Positive Myositis Following a SARS-CoV-2 Vaccination

Josef Finsterer^{1*}

¹Neurology and Neurophysiology Center, Vienna, Austria

Author Designation: ¹Researcher

*Corresponding author: Josef Finsterer (e-mail: fifigs1@yahoo.de).

How to Cite the Article:

Finsterer, Josef. "Anti-SRP Positive Myositis Following a SARS-CoV-2 Vaccination." *Journal of Advanced Biological Sciences*, vol. 01 no. 02, December 2024, pp. 28-29. <https://doi.org/10.66590/jabs2024010205>

Letter to the Editor | We read with interest the article by Tan et al. about a 54 years old male who developed calf muscle tightness two weeks after the first dose of the Sinovac vaccine [1]. Despite this adverse reaction, he received the second dose of the same brand one week later and developed muscle weakness in the proximal limbs one week after the second jab [1]. Creatine-kinase (CK) peaked at 27000 U/l, needle electromyography (EMG) was myopathic, and muscle biopsy showed necrotic and regenerating fibers without marked inflammation but with high anti-signal recognition particle (SRP) antibodies [1]. Necrotising myositis was diagnosed and the patient benefited significantly from intravenous immunoglobulins (IVIG) and steroids [1]. The study is appealing but raises concerns that need to be discussed.

The muscle biopsy showed no "marked inflammation" [1]. We should know why the patient was still diagnosed as myositis? Since necrotic fibers indicate rhabdomyolysis and serum CK exceeded the upper reference limit by >10-fold, it is conceivable that the patient experienced rhabdomyolysis with positive anti-SRP antibodies. Rhabdomyolysis has been repeatedly described as a complication of SARS-CoV-2 vaccinations [2]. One argument for rhabdomyolysis is the high CK value. We should know if the patient also complained of myalgia, if the urine was ever cola-coloured, and if myoglobinuria was ever present. Furthermore, the current medication that the patient has taken regularly is missing. Of particularly interest is if the patient was regularly taking statins, antibiotics, neuroleptics, tokolytics, isotretinoin, or propranolol.

There is evidence that rhabdomyolysis develops particularly in patients with subclinical myopathy [3]. Therefore, we should know if the individual history was positive for previous CK elevation, rhabdomyolysis, or previous malignant hyperthermia-like reactions during general anesthesia and if the family history was positive for hereditary myopathy.

There is also evidence that rhabdomyolysis occurs in the context of vasculitis [4]. We should know whether the patient was ANA or ANCA positive and whether muscle biopsy provided evidence for vasculitic changes.

Previous reports have shown that anti-SRP positive necrotising myopathy can be associated with hypothyroidism [5]. Therefore, we should know if the patient has ever been diagnosed with hypothyroidism, Hashimoto thyroiditis, or was on thyroid hormone replacement therapy.

We should know if the index patient had muscle magnetic resonance imaging (MRI) with contrast medium and if there were any signs of inflammation or necrosis.

Key Words COVID-19, SARS-CoV-2 vaccination, side effect, adverse reaction, myopathy

REFERENCES

- [1] Tan, C. Y., et al. "A Temporal Association Between COVID-19 Vaccination and Immune-Mediated Necrotizing Myopathy." *Muscle & Nerve*, 20 Mar. 2022, <https://doi.org/10.1002/mus.27531>.
- [2] Mack, M., L. Nichols, and D. M. Guerrero. "Rhabdomyolysis Secondary to COVID-19 Vaccination." *Cureus*, vol. 13, no. 5, 13 May 2021, article e15004. <https://doi.org/10.7759/cureus.15004>.

- [3] Knochel, J. P., et al. "Hypophosphatemia and Rhabdomyolysis." *Journal of Clinical Investigation*, vol. 62, no. 6, Dec. 1978, pp. 1240–1246. <https://doi.org/10.1172/JCI109244>.
- [4] Hakroush, S., and B. Tampe. "Case Report: ANCA-Associated Vasculitis Presenting With Rhabdomyolysis and Pauci-Immune Crescentic Glomerulonephritis After Pfizer-BioNTech COVID-19 mRNA Vaccination." *Frontiers in Immunology*, vol. 12, 30 Sept. 2021, article 762006. <https://doi.org/10.3389/fimmu.2021.762006>.
- [5] Shi, J., et al. "Hypothyroidism Combined With Anti-Signal Recognition Particle Immune-Mediated Necrotizing Myopathy: A Case Report and Review of the Literature." *Clinical Neuropathology*, 17 Jan. 2022. <https://doi.org/10.5414/NP301434>.