

Peripheral neuropathy following COVID-19 mRNA vaccination - 2 Case Reports

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Introduction

We describe two recent cases of peripheral neuropathy reported after vaccination with mRNA SARS-CoV2 vaccine (Moderna®).

Patient 1

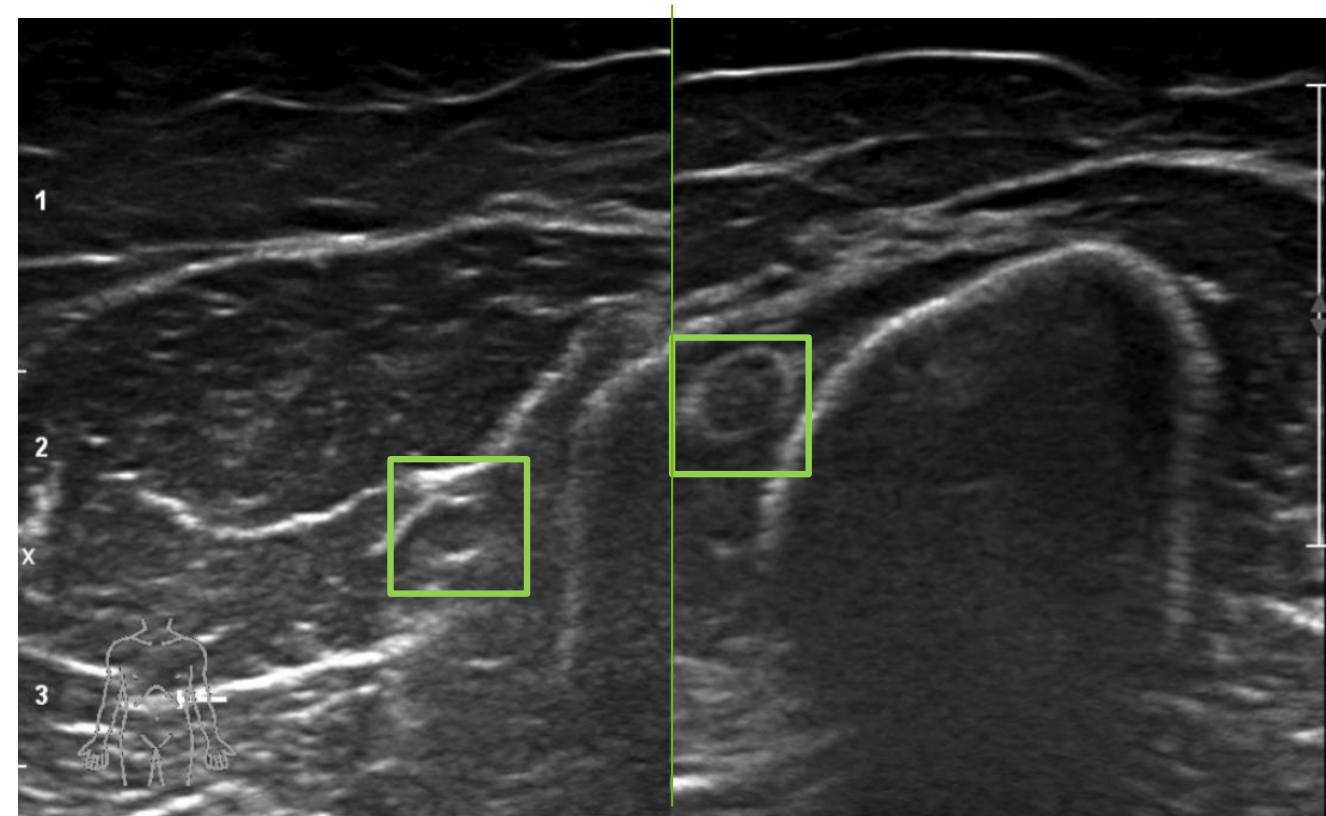
A 67-year-old man with hypertension and hyperlipidemia developed acute and severe neuropathic shoulder pain 8 days after the second vaccination dose of COVID-19 vaccine in the ipsilateral deltoid muscle. A causative trauma and other differential diagnoses were denied. NSAIDs showed no effect, but corticosteroids improved the pain. Subsequently paresis of the left proximal shoulder muscles occurred, and EMG showed axonal damage.

Patient 2

A 60-year-old female with no medical history developed weakness of left hand extension 4 days after the first vaccination dose of COVID-19 vaccine in the ipsilateral deltoid muscle. Neurological examination showed a mild paresis of the radial innervated muscles in the forearm and reduced sensitivity of the dorso-radial area of her hand. Nerve-conduction-studies demonstrated a conduction block of the radial nerve proximal to the elbow, concomitant with focal swelling detected by high-resolution nerve ultrasound.

Conclusion

The two cases show a temporal and local association (ipsilateral injection) of peripheral neuropathies after vaccination with mRNA COVID-19 vaccine (Moderna®). Similar case reports are published. However, temporal association is not equal to causal association and can ideally be investigated by prospective randomized trials, which is unethical in the pandemic situation. Therefore, prospective register studies, case series and case reports must act as a substitute. However, due to underreporting or insufficient timely data processing a large body of information is missing.



High-resolution nerve ultrasound of Patient 2

On the right side the focal swelling of the left N. radialis on the upper arm (5.7 mm²). On the left side the right N. radialis on the upper arm.