



COVID-19 Vaccine Induced Neuropathy

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Case Presentation

A 52-year-old female presented to the physiatry clinic complaining of pain in bilateral upper extremities with numbness of bilateral hands, left foot and right calf leading to multiple recent falls. The patient’s symptoms began shortly after receiving a second dose of COVID-19 vaccination. Physical examination demonstrated globally diminished strength of bilateral upper extremities, reduced sensation across C6-8 dermatomes, atrophy of bilateral thenar and hypothenar eminences and gait instability. NCS of bilateral upper extremities revealed decreased conduction velocity across bilateral median motor domains with decreased amplitude across right median motor and bilateral median sensory. Bilateral ulnar motor and sensory testing yielded no response. EMG of left first dorsal interossei demonstrated absent recruitment. Electrodiagnostics of lower extremities were not tolerated. Given history and electrodiagnostic findings, the patient was diagnosed with bilateral axonal ulnar neuropathy, suspected secondary to mononeuritis multiplex in the setting of vaccination. She was prescribed Gabapentin for neuropathic pain and weekly physical therapy for gait dysfunction. During one month follow-up, she reported significant pain reduction and improved ambulatory stability.

References

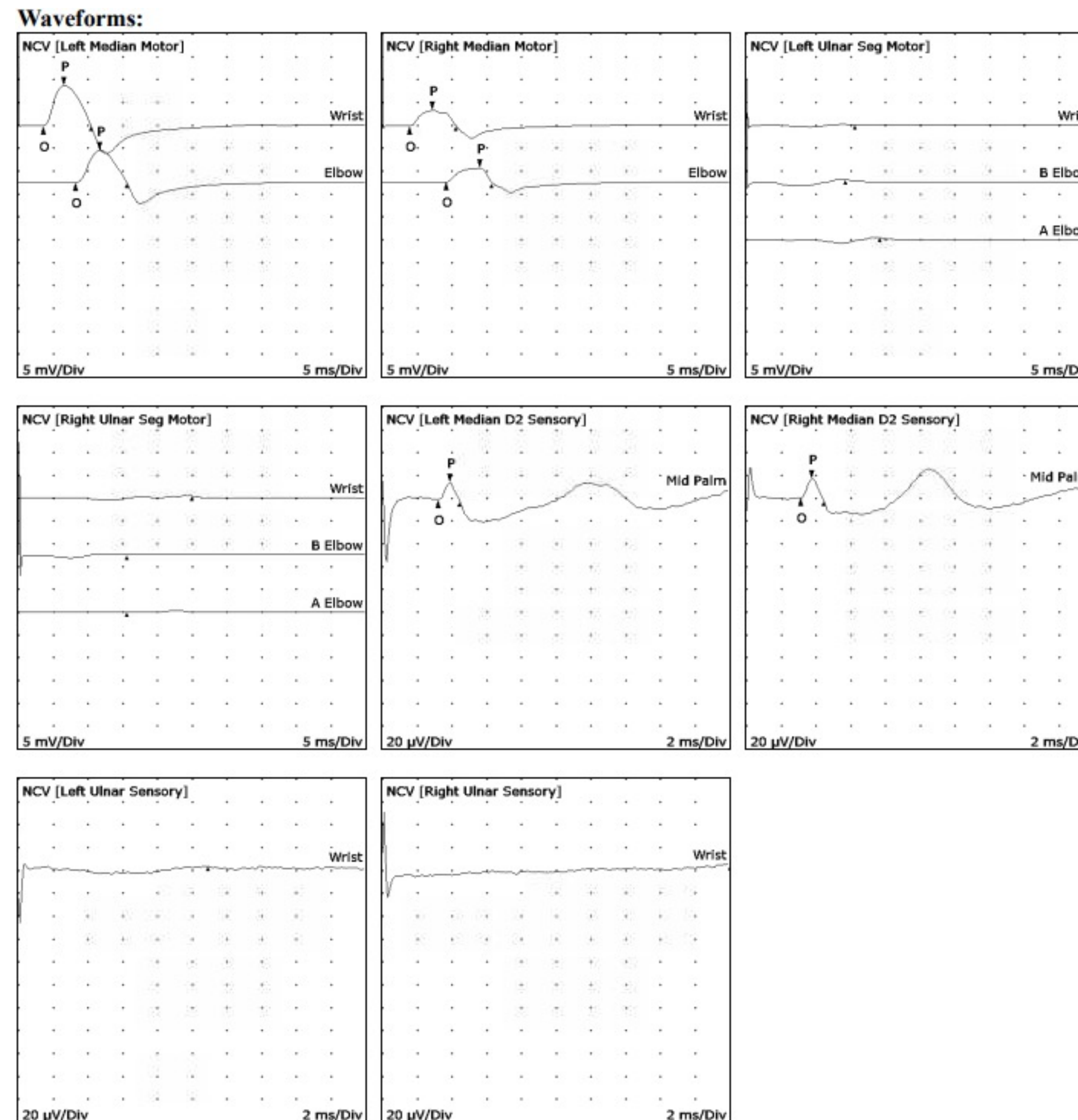
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Discussion

Mononeuritis multiplex is a form of multifocal peripheral neuropathy resulting from damage to two or more different nerve areas, owed to etiologies including inflammation, vascular compromise, compression and infection (1). As in this case, symptoms often include numbness, paresthesias, focal weakness and atrophy. The nerve insult is commonly axonal in nature and diagnosis is made via electrodiagnostic testing (2). A direct causal relationship between COVID-19 vaccination and peripheral nerve injury has yet to be established, however neuromuscular complications secondary to the vaccines have been increasingly reported in randomized clinical trials, case reports, and large-scale surveillance programs (1, 2, 3).

Conclusion

This case demonstrates a unique instance of peripheral nerve injury secondary to COVID-19 vaccination and is an important etiology to consider in patients with similar presentations..



Waveforms from NCS of bilateral upper extremities