

COVID-19 and Upper Extremity Compression Neuropathy: Viral Sequela or Random Association?

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BACKGROUND

Clearly COVID-19 is now recognized as a multifaceted systemic disease prone to neurologic complications. While most attention has focused on inpatient, life-threatening central nervous system (CNS) disorders, this study reports the authors experience with outpatients who were highly exposed to COVID-19 and subsequently presented with overt entrapment neuropathy of the upper extremity.

METHODS

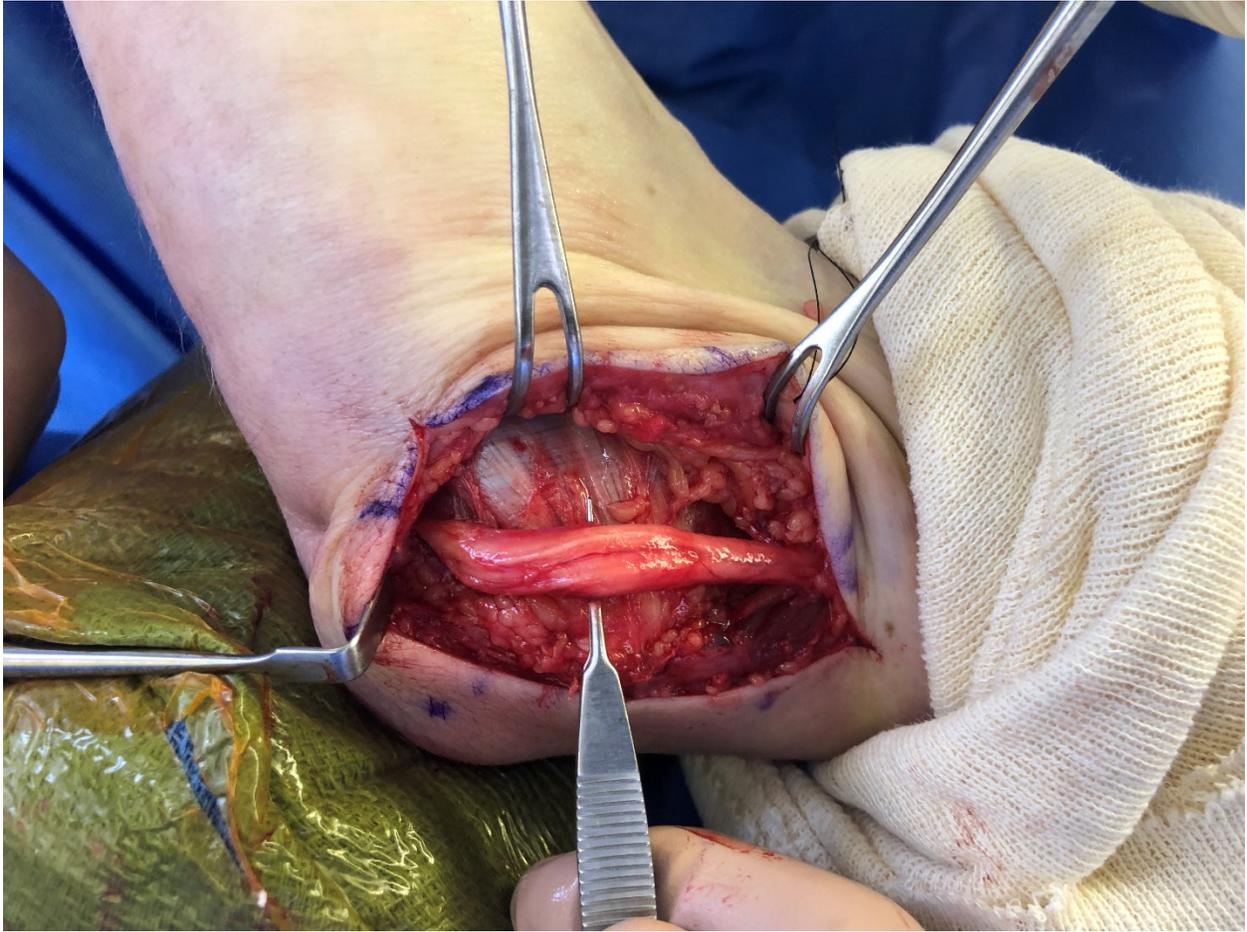
Between March 2020 and February 2021, patients who presented to our hand surgery center with acute onset of upper extremity peripheral neuropathy, and a history of coronavirus exposure, documented infection, or positive antibodies.

RESULTS

Six patients were identified who presented with a characteristically abrupt onset upper extremity neuropathy during this period of time, and had either a confirmed history of COVID infection or probable infection based on documented intimate exposure. Patient age ranged from 34 years to 67 years. The group comprised two females and four males. A total of eleven nerves were involved: one anterior interosseus, five ulnar nerves, and five median nerves. Four patients developed upper extremity symptoms within two months of respiratory symptoms. All patients characteristically reported rapid progression of symptoms. Additionally, on presentation all patients with ulnar nerve involvement had notable intrinsic muscle atrophy, weakness and deformity. The patient afflicted with AIN involvement responded well to anti-inflammatory medication and physical therapy. While the remaining five patients required neurolysis of the affected nerves. Intraoperatively all nerves were excessively edematous, erythematous and grossly inflamed. All patients who underwent neurolysis demonstrated a prompt and progressive recovery.

CONCLUSION

This preliminary assessment suggests a close correlation between COVID-19 and concurrence of an inflammatory upper extremity entrapment neuropathy, which is rapidly and remarkably responsive to decompressive surgery. Reinforcing the impression of a close correlation between virus and neuropathy, this study also revealed a considerable increase in our cases of upper extremity nerve decompression, especially at the cubital tunnel, during the COVID-19 surge.





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