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Limb Paralysis in a Patient Diagnosed with COVID-19 Pneumonia

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Case Diagnosis

A 59-year-old female diagnosed with COVID-19 pneumonia and subsequently presented with left arm paralysis and hypoesthesia of unknown etiology.

Case Description

A 59-year-old female with a past medical history of type two diabetes presented to the acute inpatient rehabilitation unit for debility secondary to a complicated and prolonged hospital course for the treatment of COVID-19 pneumonia. She was intubated for 21 days during her hospital admission and was proned throughout. On physical examination, she exhibited a 0/5 on muscle strength and absent reflexes and sensation throughout her left upper extremity. There were no other neurologic deficits found on physical exam. Magnetic resonance imaging (MRI) of the brain and cervical spine showed no acute findings. An ultrasound and a computed tomography (CT) scan of her left upper extremity demonstrated a fluid collection in the left axilla that extended inferiorly along the biceps tendon to the level of the elbow. Another MRI of the cervical spine, with a focus on the brachial plexus, did not demonstrate an acute signal abnormality.

Discussion

Proning is a useful respiratory strategy to aid in improving oxygenation and has been shown to decrease the need for intubation and decrease mortality for those affected by COVID-19. Despite its benefits, proning has contributed to an increased number of upper extremity pathologies such as brachial plexopathy. This patient developed several medical complications that stemmed from her COVID-19 diagnosis, which disrupted further workup of her deficit. Concerned for a brachial plexopathy, further workup would have included a nerve conduction study and needle electromyography.

Conclusion

The etiology remains unclear for this patient's limb paralysis. Although ruled out on imaging, brachial plexopathy could be further evaluated by a nerve conduction study and needle electromyography. Proning has been shown to be beneficial in patients infected with COVID-19 and therefore should be monitored closely to prevent neuromuscular injury.

Resources:
1. Ahmad I, Rathore FA. Neurological manifestations and complications of COVID-19: A literature review. J Clin Neurosci. 2020 Jul;77:8-12. doi: 10.1016/j.jocn.2020.05.017. Epub 2020 May 6. PMID: 32409215; PMCID: PMC7200361