COVID-19 Induced Bilateral Foot Drop: A Case Report

Sukhdeep Bains, DO; Parini Patel, DO; Neal Rosario, MD; Hameer Thatte, DO; Gurpreet Sarwan, DO; Daniel Scura, DO; Adam Isaacson, MD
Department of Physical Medicine and Rehabilitation
Nassau University Medical Center, East Meadow, New York

Setting

Outpatient Clinic

Patient

58-year-old female with bilateral foot drop in the setting of prolonged COVID-19 hospital course

Case Description

The patient presented to the rehab clinic for evaluation of bilateral foot drop after a three-month hospital course for COVID-19 infection that required intubation and mechanical ventilation. The patient developed stage 2 pressure ulcers bilaterally around the fibular heads, likely due to poor positioning while intubated. Prior to infection, the patient was fully independent with ambulation and had no prior nerve damage. After the infection, she became wheelchair-bound with a bilateral foot drop. She endorsed numbness and tingling in both feet.

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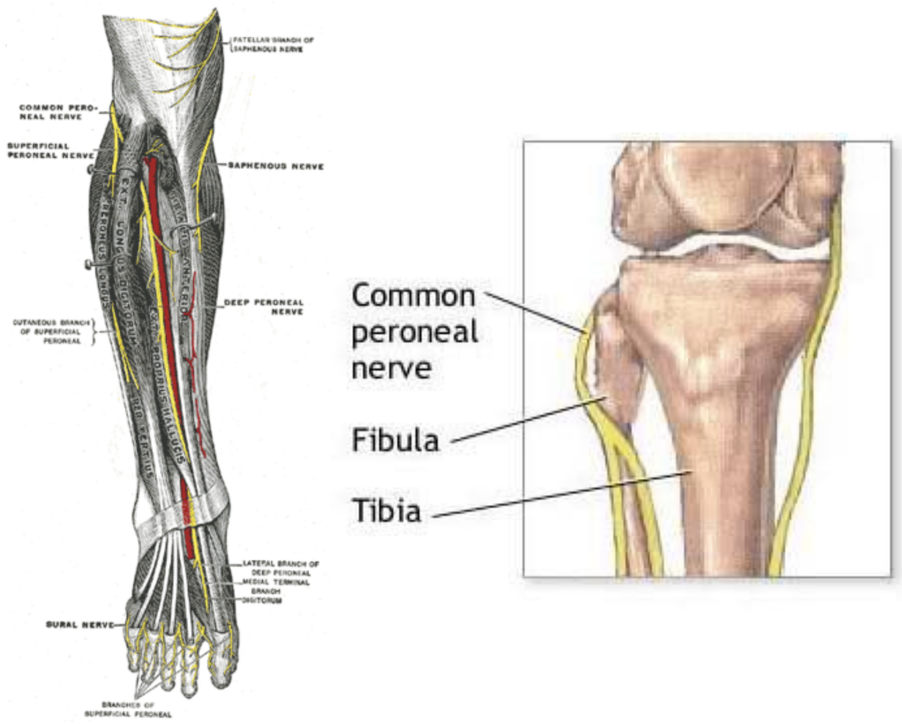

Figures 1 and 2: Anatomical diagram of the peroneal nerve coursing the fibular head leading to a possible site of compression and subsequent foot drop

Assessment

The patient was evaluated in the PM&R clinic. On physical exam, the patient was noted to have decreased muscle strength in the bilateral lower extremities along with healing pressure ulcers at the fibular heads. She was able to participate in physical therapy where she was able to ambulate short distances with a rolling walker. She was advised to obtain an EMG/NCS at her next visit.

Discussion

Foot drop is most commonly caused by compression of the peroneal nerve leading to weakness of the dorsiflexion muscles of the foot. In this case, the development of stage 2 ulcers at the fibular heads could have caused compression of the peroneal nerve leading to foot drop. COVID-19 is a multifaceted, rapidly evolving disease that is not yet entirely well understood. There has been an increasing number of studies associating COVID-19 infection with neurological damage. Treatment options remain the same and include orthotics, splints, physical therapy, nerve stimulation, and surgery in severe cases.

Conclusion

Foot drop is most commonly caused by compression of the peroneal nerve leading to weakness of the dorsiflexion muscles of the foot. In this case, the development of stage 2 ulcers at the fibular heads could have caused compression of the peroneal nerve leading to foot drop. COVID-19 is a multifaceted, rapidly evolving disease that is not yet entirely well understood. There has been an increasing number of studies associating COVID-19 infection with neurological damage. Treatment options remain the same and include orthotics, splints, physical therapy, nerve stimulation, and surgery in severe cases.

References:

1. Carolus, Anne Elisabeth et al. “The Interdisciplinary Management of Foot Drop.” *Deutsches Arzteblatt international* vol. 116,20 (2019): 347-354. doi:10.3238/arztebl.2019.0347