COVID-19 related Critical Illness Neuromyopathy: an increasingly common Rehabilitation Challenge Stefanie Lai, D.O.¹, Mark Steinhauer M.D.², Se Won Lee M.D.¹

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Introduction

COVID-19 was primarily thought to be a respiratory illness but we have since learned that it the body systemically, with particular affects microvascular destruction. The systemic nature of the disease, dearth of consensus on best practices and a pandemic has led to prolonged recoveries and increased Rehabilitation needs especially in ventilator dependent COVID-19 patients.

Background

We present a 58 year old Asian-American female with past medical history of insulin-dependent Type II Diabetic and anemia who was admitted to the CCU in mid-April with chief complaint of fatigue and hyperglycemia found to have COVID-19 pneumonia. Day 5 after her positive test, the patient was intubated and ventilated. By Day 41, she had tracheostomy and PEG tube placement. After a prolonged stay in critical care, on day 62 she arrived to Acute Rehab. She was tracheostomy, ventilator and PEG dependent and her first Rehab admission lasted one week, as on day 69 she was readmitted to Acute Care for bilateral pneumonia recurrence. The patient returned to Rehab on day 79 and weaned off the ventilator. By day 90, she only required 2-3L of supplemental oxygen via nasal cannula. On day 108, she was finally decannulated and her PEG tube removed.

The casino where she worked is likely not where she was exposed to COVID as the casinos closed on 03/17/20 and the patient presented nearly 30 days afterwards. She denied smoking, drug use, alcohol use, though her risk facts for a severe COVID-19 infection would have included her occupational 2nd hand smoke exposure

Date

4/14/2020 5/12/2020 5/12/2020 5/14/2020 5/21/2020 5/22/2020 7/02/2020 7/16/2020

Table 1. COVID Test Positivity by Day. As you can see, on 5/12/2020, the patient was tested twice. It is unclear if the first test was a false positive or the second was a false negative. The medical record did not reflect whether the above tests were nasopharyngeal specimens versus a tracheostomy site specimen.

This research was supported (in whole or in part) by HCA and/or an HCA affiliated entity. The views expressed in this publication represent those of the author(s) and do not necessarily represent the official views of HCA or any of its affiliated entities.



COVID Test Result

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One of the challenges for this patient has been

the uncertainty regarding her level of infectivity. The patient has been tested 8 times throughout her 100+ day hospital LOS. 5/8 were positive—with no clear pattern. One of her positive tests, threatened to send her to a COVID unit where she would not receive intensive therapies. Another challenge was her severe muscle wasting and debility. Particularly, her ankle instability and plantar flexion contractures have made it difficult for her to ambulate.

Furthermore, this patient was intubated in early April, one of the earlier cases in Nevada. On April 14th 2018 there were only 3,145 cases in Nevada, 2508 in Clark County, with only ~100 new ones being reported daily. Only 353 confirmed hospitalizations.



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Discussion

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