

# Evaluating the Role of Inpatient Rehabilitation in Critical Illness Related Myopathy and Neuropathy secondary to COVID-19

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## Case Diagnosis

Critical Illness Related Myopathy and Neuropathy (CRIMYNE) secondary to coronavirus disease 2019 (COVID-19)

## Case Description

- The patient is a 83 year old Caucasian female with a history of Diabetes Mellitus, Hypertension who developed CRIMYNE as a result of a prolonged hospitalization due to acute hypoxic respiratory failure and acute encephalopathy secondary to a COVID-19 infection.
- Prior to admission, patient was independent with basic ADL & mobility.

CRIMYNE secondary to COVID-19

PT, OT & SLP

Functional improvement

## Case Description

- Patient met criteria for CRIMYNE and was deemed hemodynamically stable for comprehensive inpatient rehabilitation program consisting of PT, OT & SLP for a minimum of 3 hours daily, 5 days per week with the goal to return home at the modified independent level.
- At the time of admission to inpatient rehabilitation patient demonstrated decreased functional activity tolerance, generalized weakness, and impaired standing balance/tolerance negatively impacting independence with ADL and mobility.
- After rehabilitation unit discharge, the patient had improvements in wheelchair locomotion, distance, gait distance, number of steps and walk distance.
- Importantly, there were no adverse events related to the rehabilitation program.

## Discussion

- SARS-CoV-2 infection and consequent COVID-19 is dramatically spreading all over the world, with consequences that are at present time (November 24th, 2020) still unpredictable.
- CRIMYNE is a well described illness frequently seen in patients with prolonged ICU hospitalizations, independent of the admission diagnosis <sup>1</sup>.
- It is known that very sick patients with coronavirus develop CRIMYNE2. At present time, there are growing clinical reports of CRIMYNE associated to COVID-19, mainly myopathic forms <sup>1</sup>.
- Currently, published evidences about the role of rehabilitative treatment to treat CRIMYNE secondary to COVID-19 is lacking.

## Conclusion

- This case report highlights the functional improvement with inpatient rehabilitation in a patient who developed CRIMYNE secondary to COVID-19.
- Future prospective studies should evaluate recommendations to reduce the consequence and risk of developing CRIMYNE secondary to COVID-19. Furthermore, the barriers, feasibility, and efficacy of early mobility in patients with CRIMYNE requires exploration in future clinical trials.

## References

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