Severe Course of COVID-19 Infection in 31-year-old with No Known Risk Factors: A Case Report

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Case Diagnosis

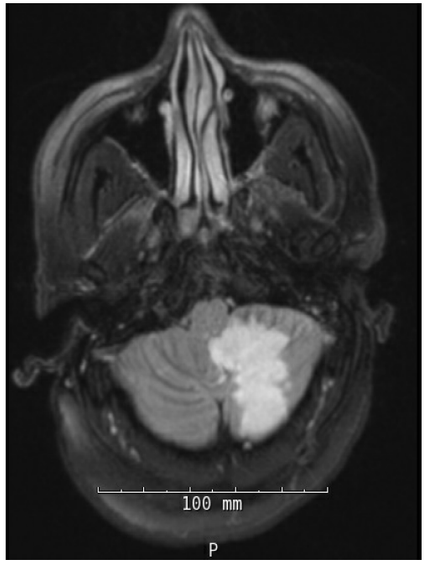
COVID-19 hypercoagulability state leading to multiple bilateral cerebellar, medullary, cortical infarcts, complete occlusion of the left vertebral artery and right subclavian and bilateral upper extremity arterial thrombi.

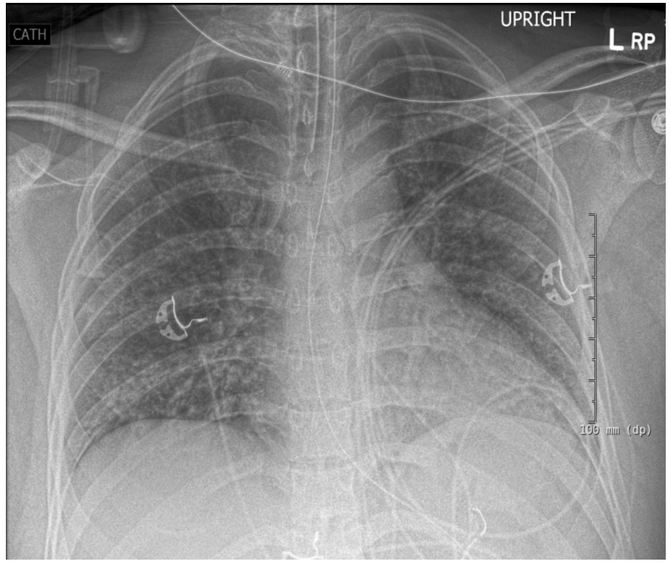
Case Description

A 31-year-old male with no past medical history other than recent COVID pneumonia presented with worsening shortness of breath and right-sided neurologic deficits. He had been discharged 7 days prior following presumed recovery from COVID-19 infection. Imaging showed numerous infarcts in the bilateral cerebellum and paramedian medulla, occipital and parietal cortex, a complete left vertebral artery occlusion, thrombi in the right subclavian artery and bilateral upper extremities. SARS-CoV2 PCR was positive, and his many infarcts and thrombi were thought to be due to COVID infection as a hypercoagulability panel was unremarkable. He experienced acute hypoxic respiratory failure requiring intubation for airway protection before undergoing tracheostomy with transition to trach collar. After 28 days of intensive care, he was transitioned to acute inpatient rehabilitation. He remained aphonic but was able to speak with a Passy-Muir valve. He progressed to perform wheelchair mobility at a supervision level.

Discussion

It has been widely published that age, particularly over 65 years, and medical comorbidities including obesity, hypertension, diabetes and chronic respiratory diseases are risk factors for morbidity and mortality in COVID-19 infection[1]. Our patient was 31 years old with no known risk factors and suffered a severe course of COVID-19 infection leaving him wheelchair-bound and tracheostomy dependent. Despite the grave consequences of his disease course, acute inpatient rehabilitation was integral in maximizing functional capacity.





Conclusions

More research into the pathophysiology of SARS-CoV2 must be done to better understand the risk factors associated with severe complications of the disease. Acute rehabilitation is especially essential in severe cases of COVID-19 infection for functional recovery optimization.

References

1. Zheng Z, Peng F, Xu B, et al. Risk factors of critical & mortal COVID-19 cases: A systematic literature review and meta-analysis. J Infect. 2020;81(2):e16-e25. doi:10.1016/j.jinf.2020.04.021