Dermatomyositis Secondary to COVID-19 Infection: A Case Report

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Case Description

Patient is a 58-year-old female with no past medical history who presented with 2 weeks of worsening dyspnea associated with cough, fever, generalized weakness, dysarthria, left upper extremity swelling and myalgias. Patient was found to be COVID (+). Patient was admitted to inpatient neurology for rule out of stroke.

Although her initial presentation was concerning for stroke, CT head and brain MRI were negative. During her hospitalization, she developed right eye ptosis, facial weakness and progressively worsening dysarthria, dysphagia and proximal muscle weakness prompting work-up of a neuromuscular cause of these symptoms. After failing multiple bedside swallowing tests, speech pathology recommended percutaneous endoscopic gastrostomy (PEG) placement as she was high risk for aspiration.

Assessment/Results

MRI of bilateral lower extremities showed diffuse edema and enhancement of musculature with right vastus medialis myonecrosis (**Figure A**). EMG/NCS was concerning for an inflammatory myopathy given the presence of fibrillations, PSWs; MUAPs were small and short (**Figure B**). Anti-bodies for neuromuscular disorders such as Myasthenia Gravis were negative. Left thigh biopsy indicated inflammatory myopathy indeterminate of dermatomyositis vs polymyositis. Anti-SAE IgG and anti-SSA 52 KD, antibodies specific for dermatomyositis, were positive.

Rheumatology was consulted and patient was started on a course of pulse dose and oral prednisone. While on the inpatient rehab unit, patient's strength, dysarthria, and dysphagia improved while on steroids. Patient was eventually cleared by speech language pathology for oral diet and PEG was removed. Patient was discharged home with outpatient follow up for rehabilitation services.

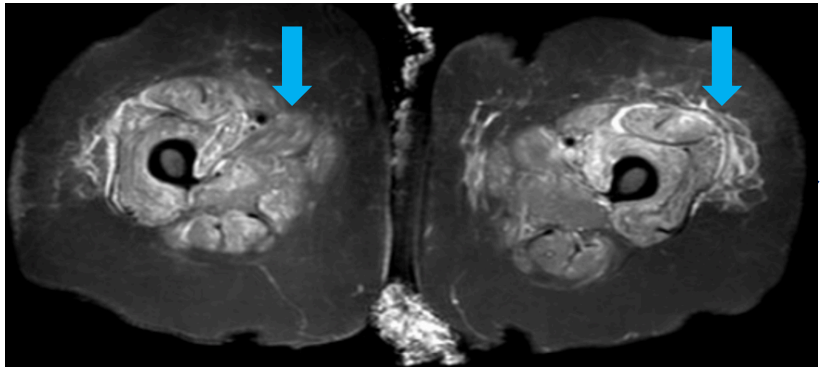

Figure A: MRI example of bilateral femora demonstrating diffuse edema and enhancement throughout musculature.

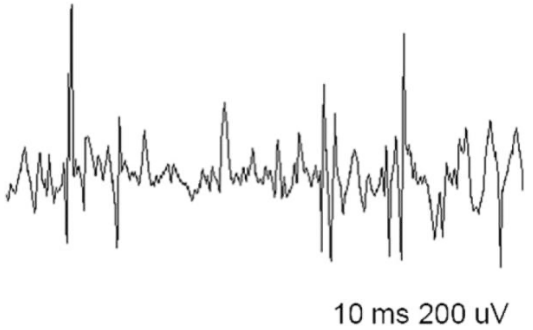

Figure B: Illustration of MUAPs in myopathies. Myopathies are represented by polyphasic, short-duration, low-amplitude MUAPs.[1]

Discussion

While COVID-19 can present with many possible complications, COVID-19 related dermatomyositis is a possible complication that is being recognized more frequently as data continues to be collected.[2] This patient had proximal muscle weakness, which is one of the most common clinical features in dermatomyositis. Also, markers were positive for anti-SAE and Anti-SSA 52 KD, which are specific for dermatomyositis. Of note, this patient did not present with any abnormal skin findings and malignancy work-up was negative.

Conclusion

While COVID-19's effect on the respiratory system and its tendency to render patients hypercoagulable have been well documented, cases of neuromuscular complications are still being discovered and their mechanisms elucidated.

References

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*Images do not reflect the condition of the patient and are for illustration purposes only.