

# Novel Use of Oxandrolone to Enhance Functional Recovery in Statin-Induced Necrotizing Autoimmune Myopathy on an Inpatient Rehabilitation Unit

Hetal Patel, MD, Brian Cervoni, MD, Scott Campea, MD

Department of Rehabilitation Medicine, University of Washington, Seattle, WA

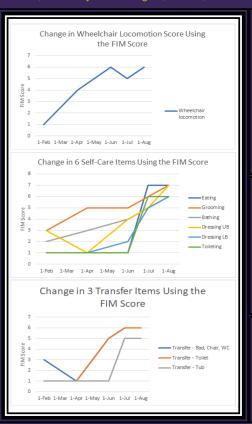


#### **CASE PRESENTATION**

A 68-year-old male with biopsy confirmed SINAM was admitted to inpatient rehabilitation. He presented with reduced strength in his upper and lower extremities and dysphagia, resulting in significant limitations in mobility, self-care, and swallowing. Physical, occupational and speech therapy was initiated with low resistance exercise and titrated to avoid worsening weakness.

After eight weeks, therapy was tolerated without adverse side effects, but there was minimal evidence of strength or functional improvement. At that time oxandrolone was initiated at 5mg BID for two weeks and then increased to 10 mg BID. Weekly monitoring of CBC, CPK, and liver enzymes was performed. Due to transaminitis, oxandrolone was discontinued after nine weeks. During oxandrolone administration, the patient was noted to have an 18-pound weight gain and improved ability to transfer, ambulate, dress, toilet and eat (swallow) as measured by the Functional Independence Measurement (FIM)¹tool.

Six months following initial diagnosis, the patient was able to successfully discharge home with his wife as caregiver.



## DISCUSSION

SINAM is a rare and very severe form of a statin-associated myopathy with a protracted course of recovery, often up to one or two years.² The impact of oxandrolone on this patient's functional recovery is not clear, as he was concurrently receiving therapy services. However, we noted significant functional improvement as measured by the FIM score after taking oxandrolone for several weeks, whereas we did not note significant functional improvement in the two months prior to oxandrolone initiation. Checking laboratory tests on a weekly basis seemed reasonable to monitor for, and ultimately detected, adverse side effects of oxandrolone.

## CONCLUSION

This is the first report of the use of oxandrolone to improve the rate of functional recovery in a patient with SINAM. Other studies have utilized oxandrolone to improve the rate of recovery following burns<sup>3</sup> and other catabolic disorders<sup>4</sup>. It is critical to monitor LFTs while administering oxandrolone. This case report suggests that the use of oxandrolone improves the rate of functional recovery in a patient with SINAM. Additional research on the safety and efficacy of oxandrolone is SINAM is warranted.

#### REFERENCES

- 1. https://www.va.gov/vdl/documents/Clinical/Func\_Indep\_Meas/fim\_user\_manual.pdf. Last accessed January, 7, 2021.
- Babu S, Li Y. Statin induced necrotizing autoimmune myopathy. J Neurol Sci. 2015 Apr 15;351(1-2):13-17. doi: 10.1016/j.ins.2015.02.042. Epub 2015 Mar 3. PMID: 25765229.
- 3.Diaz EC, Herndon DN, Porter C, Sidossis LS, Suman OE, Børsheim E. Effects of pharmacological interventions on muscle protein synthesis and breakdown in recovery from burns. Burns. 2015 Jun;41(4):649-57. doi: 10.1016/j.burns.2014.10.010. Epub 2014 Nov 16. PMID: 25468473: PMICID: PMC4417037.
- 4.Orr R, Fiatarone Singh M. The anabolic androgenic steroid oxandrolone in the treatment of wasting and catabolic disorders: review of efficacy and safety. Drugs. 2004;64(7):725-50. doi: 10.2165/00003495-200464070-00004. PMID: 15025546.