

A Rare Case of Statin-Induced Necrotizing Autoimmune Myopathy

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Background

Statins are commonly prescribed medications for hypercholesterolemia and cardiovascular protection. They inhibit HMG-CoA reductase (HMGCR) enzyme, the rate-limiting step in the cholesterol synthesis pathway. Musculoskeletal manifestations are well-known side effects of statins. They range from myalgias and/or hyperCKemia, rhabdomyolysis, self-limited non-immune myopathy, and rarely to immune-mediated necrotizing myopathy (NAM) with positive anti-HMGCR antibodies. We report the case of a patient who developed statin-induced NAM in order to demonstrate the clinical presentation and management for this rare entity and to illustrate the importance of including it in the differential diagnosis for myopathy in a statin-exposed individual.

Methods

A 74-year-old male was referred to Endocrinology and Metabolism for hypercholesterolemia management in the context of a statin contraindication. He previously developed myalgia and rhabdomyolysis secondary to statin therapy, as well as proximal lower limb myopathy which persisted despite statin discontinuation. Rheumatologic work-up was negative and neurologic work-up revealed a myopathic pattern in the glutei on electromyography.

Results

Due to the persistence in myopathy despite statin discontinuation and myopathic pattern seen on electromyography, antibodies against HMGCR were sent and came back positive. The patient was treated with immunosuppressant azathioprine, which resulted in a reduction in CK level and

clinical improvement. The patient was also started on a PCSK9 inhibitor for hypercholesterolemia, which resulted in significant improvement in his lipid panel.

Discussion

This case discusses the presentation and management of statin-induced NAM due to the development of anti-HMGCR antibodies. We demonstrate the necessity for prompt diagnosis and timely management, as statin therapy is contraindicated and immunosuppressive therapy is warranted. Statin-induced NAM is rare, however it should be included in the differential diagnosis for persistent myopathy despite statin discontinuation. PCSK9 inhibitors are a good alternative therapy for hypercholesterolemia management in patients with statin-induced NAM.