

Abstract

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Effect of coenzyme q10 on myopathic symptoms in patients treated with statins.

Caso G, Kelly P, McNurlan MA, Lawson WE.

Department of Surgery, Division of Cardiology, Stony Brook University, Stony Brook, NY, USA.

BACKGROUND: Treatment of hypercholesterolemia with statins (3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors) is effective in the primary and secondary prevention of cardiovascular disease. However, statin use is often associated with a variety of muscle-related symptoms or myopathies. Myopathy may be related in part to statin inhibition of the endogenous synthesis of coenzyme Q10, an essential cofactor for mitochondrial energy production.

OBJECTIVE: The aim of this study is to determine whether coenzyme Q10 supplementation would reduce the degree of muscle pain associated with statin treatment.

METHODS: Patients with myopathic symptoms were randomly assigned in a double-blinded protocol to treatment with coenzyme Q10 (100 mg/day, n = 18) or vitamin E (400 IU/day, n = 14) for 30 days. Muscle pain and pain interference with daily activities were assessed before and after treatment.

RESULTS: After a 30-day intervention, pain severity decreased by 40% ($p < 0.001$) and pain interference with daily activities decreased by 38% ($p < 0.02$) in the group treated with coenzyme Q10. In contrast, no changes in pain severity (+9%, $p = \text{NS}$) or pain interference with daily activities (-11%, $p = \text{NS}$) was observed in the group treated with vitamin E.

CONCLUSION: In conclusion, results suggest that coenzyme Q10 supplementation may decrease muscle pain associated with statin treatment. Thus, coenzyme Q10 supplementation may offer an alternative to stopping treatment with these vital drugs.

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