

# Abstract

Expert Opin Pharmacother. 2009 Aug;10(12):1875-82.

## Effects of simvastatin and carnitine versus simvastatin on lipoprotein(a) and apoprotein(a) in type 2 diabetes mellitus.

Galvano F, Li Volti G, Malaguarnera M, Avitabile T, Antic T, Vacante M, Malaguarnera M.

University of Catania, Department of Biological Chemistry, Medical Chemistry and Molecular Biology, Viale A. Doria 6, 95125 Catania, Italy.

**AIM:** The aim of the present study was to compare the effects of simvastatin and L-carnitine coadministration versus simvastatin monotherapy on lipid profile, lipoprotein(a) (Lp(a)) and apoprotein(a) (Apo(a)) levels in type II diabetic patients.

**PATIENTS/METHODS:** In this double-blind, randomized clinical trial, 75 patients were assigned to one of two treatment groups for 4 months. Group A received simvastatin monotherapy; group B received L-carnitine and simvastatin. The following variables were assessed at baseline, after washout and at 1, 2, 3 and 4 months of treatment: body mass index, fasting plasma glucose, glycosylated hemoglobin, total cholesterol, low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol, triglycerides, Apolipoprotein A1, Apo B, lipoprotein(a) and apoprotein(a).

**RESULTS:** At the end of treatment in the carnitine and simvastatin combined group compared with the simvastatin alone group, we observed a significant decrease in glycemia ( $p < 0.001$ ), triglycerides ( $p < 0.001$ ), Apo B ( $p < 0.05$ ), Lp(a) ( $p < 0.05$ ), apo(a) ( $p < 0.05$ ), while HDL significantly increased ( $p < 0.05$ ).

**CONCLUSIONS:** The coadministration of carnitine and simvastatin resulted in a significant reduction in Lp(a) and apo(a) and may represent a new therapeutic option in reducing plasma Lp(a) levels, LDL cholesterol and Apo B100.

PMID: 19618992