

Lipid-lowering and antioxidant effects of policosanol in diabetic patients: A pilot study

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Introduction: Coronary artery disease is the major complication and leading cause of death among patients with diabetes mellitus. Oxidative stress and dyslipidemia plays an important role in the pathogenesis and complications of diabetes. Policosanol is a mixture of primary aliphatic alcohols purified from sugar cane wax. The objective of this randomized double-blinded and placebo-controlled pilot study was to investigate the effect of policosanol treatment on lipid profile and plasma oxidative variables in diabetic patients with hypercholesterolemia.

Methods: 30 diabetic patients of both sexes, aged 50 to 70 years were enrolled in the study. 15 patients were treated with policosanol (10 mg/day) and 15 with placebo for 12 weeks. The primary efficacy variable was to significant reduced low-density lipoprotein-cholesterol (LDL-C) values. Plasma oxidative markers were secondary variables.

Results: Baseline characteristics were well matched in both groups. After 12 weeks policosanol produced significant reductions of LDL-C and total cholesterol, and increase high-density lipoprotein-cholesterol. In addition, serum malondialdehyde significantly decreased and the total antioxidant capacity of the plasma increased. There were no significant changes in any of the variables in the placebo group. Treatments were safe and well tolerated. No patient withdrew from the study.

Conclusions: Policosanol treatment favorably modified lipid profile and plasma oxidative variables in diabetic patients. Further studies should expand more data on the effects of policosanol treatment in diabetic patients.

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