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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 randomised, 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: Thirty diabetic patients of both sexes, aged 50 to 70 years were enrolled in the study. Fifteen 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 in 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.

Speaker Biography

Julio C Fernández is a Senior Investigator in Clinical Trials Unit, National Centre for Scientific Research, Havana city, Cuba. He has completed his BSc in Pharmaceutical Sciences from Havana University Cube in 1996. He was awarded with PhD in Pharmaceutical Sciences in 2003. He has published more than 130 publications and presented more than 100 papers in various scientific events. His research interest mainly focuses on clinical trials phase I-IV of different natural products: Policosanol, Abexol, Prevenox, Palmex.

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