

Abstract

Curr Med Res Opin. 2009 Sep;25(9):2223-8.

Effect of propionyl-L-carnitine, L-arginine and nicotinic acid on the efficacy of vardenafil in the treatment of erectile dysfunction in diabetes.

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OBJECTIVE: The association of diabetes-related vascular damage and the role of metabolic factors in erectile dysfunction are well known in the literature. The compounds propionyl-L-carnitine (PLC), L-arginine (L-Arg) and nicotinic acid have numerous metabolic actions which have been reported to improve endothelial function. This study investigated the administration of the combination of these three compounds alone and in association with an inhibitor of 5-phosphodiesterase (5PDE), vardenafil, on endothelial function in diabetic patients with erectile dysfunction.

METHODS: A total of 40 patients aged between 50 and 60 years with insulin-dependent diabetes (IDDM) for 3-4 years were selected from 509 patients presenting with erectile dysfunction. The patients were randomly subdivided into four groups of ten to be treated for 12 weeks. Group A was administered one sachet each day of test formulation containing PLC, L-Arg and nicotinic acid (Ezerex); group B with one 20 mg capsule of vardenafil (Levitra) twice a week; group C was treated with one sachet each day of the test formulation plus vardenafil 20 mg twice a week. Group D was administered placebo capsules twice weekly. Endothelial function was evaluated by examining flow-mediated dilation (FMD) and erectile function was estimated with the International Index of Erectile Function (IIEF5) questionnaire in all subjects.

RESULTS: At the end of treatment group A showed an increment of 2 points in the IIEF5; group B showed an increment of 4 points; group C, the group which was administered all the treatments, showed an increment of 5 points, and group D, treated with placebo, showed no increment in the IIEF5.

CONCLUSION: Although there was a small number of subjects in this study the data suggest that the test formulation may improve the endothelial situation in diabetes. The test formulation together with vardenafil was better than the 5PDE inhibitor alone, but further studies are needed to confirm these findings.

PMID: 19624286