Abstract


Comparison between orlistat plus L-carnitine and orlistat alone on inflammation parameters in obese diabetic patients.


Fondazione IRCCS Policlinico S. Matteo, Department of Internal Medicine and Therapeutics, University of Pavia, Pavia, P.le C. Golgi, 2-27100 Pavia, Italy.

OBJECTIVE: To evaluate the effects of 1-year treatment with orlistat plus L-carnitine compared to orlistat alone on body weight, glycemic and lipid control, and inflammatory parameters in obese type 2 diabetic patients.

METHODS: Two hundred and fifty-eight patients with uncontrolled type 2 diabetes mellitus (T2DM) [glycated hemoglobin (HbA(1c)) > 8.0%] in therapy with different oral hypoglycemic agents or insulin were enrolled in this study and randomized to take orlistat 120 mg three times a day plus L-carnitine 2 g one time a day or orlistat 120 mg three times a day. We evaluated the following parameters at baseline and after 3, 6, 9, and 12 months: body weight, body mass index (BMI), glycated hemoglobin (HbA(1c)), fasting plasma glucose (FPG), postprandial plasma glucose (PPG), fasting plasma insulin (FPI), homeostasis model assessment insulin resistance index (HOMA-IR), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides (Tg), adiponectin (ADN), leptin, tumor necrosis factor-α (TNF-α), vaspin, and high-sensitivity C-reactive protein (Hs-CRP).

RESULTS: We observed a better decrease in body weight, glycemic profile, HOMA-IR, LDL-C, and ADN and a faster improvement in FPI, TC, Tg, leptin, TNF-α, Hs-CRP with orlistat plus L-carnitine compared to orlistat alone. We also recorded an improvement in vaspin with orlistat plus L-carnitine not reached with orlistat alone.

CONCLUSION: Orlistat plus L-carnitine gave a better improvement in body weight, glycemic and lipid profile compared to orlistat alone; furthermore, a faster and better improvement in inflammatory parameters was observed with orlistat plus L-carnitine compared to orlistat alone.

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