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A Comparative Study of Effects of Omega-3 Fatty Acids, Alpha Lipoic Acid and Vitamin E in Type 2 Diabetes Mellitus.

Udupa A, Nahar P, Shah S, Kshirsagar M, Ghonqane B.

Department of Pharmacology, B J Medical College, Pune, Maharashtra, India.

Abstract

BACKGROUND:

Diabetes Mellitus is a metabolic disorder characterized by abnormal lipid and glucose metabolism. Various modes of adjuvant therapy have been advocated to ameliorate insulin resistance.

AIM:

This study was intended **to assess the effects of antioxidants; alpha lipoic acid (ALA), omega 3 fatty acid and vitamin E on parameters of insulin sensitivity (blood glucose and HbA1c) in patients of type 2 diabetes mellitus with documented insulin resistance.**

SUBJECTS AND METHODS:

It was a prospective, randomized, double blind, placebo controlled, single centered study. 104 patients with type 2 diabetes mellitus with insulin resistance were recruited. They were given ALA, omega 3 fatty acid, vitamin E or placebo. Fasting blood glucose and HbA1c were measured at first visit (V1) and after 90 days (V2). Statistical analysis was carried out by paired *t*-test by using SPSS software version 11 (SPSS, Chicago, USA).

RESULTS:

Analysis of baseline (V1) vs. end of treatment period (V2) parameters, showed **significant decrease in HbA1c in the three treatment group. We also observed decrease in fasting blood glucose in the three treatment group but it was not statistically significant** (Gr. I = 0.51, Gr. II = 0.05, Gr. III = 0.22, Gr. IV = 0.88).

CONCLUSION:

ALA, Omega 3 fatty acid and vitamin E can be used as add on therapy in patients with type 2 diabetes mellitus to improve insulin sensitivity and lipid metabolism.