

Evaluation of L-Carnitine efficacy in the treatment of non-alcoholic fatty liver disease among diabetic patients: a randomized pilot study

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Abstract :

Introduction: Non-alcoholic fatty liver disease (NAFLD) is one of the most common liver diseases worldwide and while its pathophysiology is still unverified, most of the present theories are based on Insulin resistance and oxidative stress as key factors. According to role of L-Carnitine in the process of fatty acid oxidation and glucose metabolism, it seems that this drug could be potentially effective in the treatment of diabetic patients suffering from NAFLD. This study has been designed to evaluate this potential therapeutic effect.

Method: 60 type 2 diabetic patients with NAFLD based on sonographic findings and elevated serum transaminases randomly divided into 2 groups. The intervention group (A) treated with L-Carnitine 750mg TDS while the control group (B) received placebo. After 3 months intervention the level of serum transaminases and sonographic degree of fatty liver compared between 2 groups.

Findings: In comparison of average level of AST and ALT between 2 groups, we found a meaningful effect ($P < 0.001$) while there were no significant reduction in serum level of Cholesterol, TG and FBS ($P > 0.05$) and also the sonographic degree of fatty liver didn't change among 2 groups.

Conclusion: It seems that L-Carnitine is effective in treatment of NAFLD among diabetic patients and could be a potential therapeutic approach in such patients. We recommend these findings to further be verified if future studies.

Keyword : NAFLD, L-Carnitine, serum transaminases, diabetic patients

Section : General