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Short Communication

Quercetin Supplementation and metabolic disturbances in non-alcoholic fatty liver disease (NAFLD): A randomized, double-blind, placebo-controlled pilot study

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Abstract

Non-alcoholic fatty liver disease (NAFLD) is the most common liver disease which had become a public health concern, and its growing prevalence has been reported between 2.8%-43.8% in Iran. Since oxidative stress plays a crucial role in pathogenesis of NAFLD, antioxidant compounds such as quercetin could ameliorate the side-effect of oxidative stress. The aim of the current study was to assess the effect of quercetin on lipid profile, liver enzymes, and inflammatory indices in NAFLD patients. In a randomized, double-blind, placebo-controlled trial conducted as a pilot study, 78 patients with NAFLD were supplemented twice daily (500 mg) for 12 wk with either a quercetin or a placebo capsule. Both groups were advised to follow an energy-balanced diet and physical activity recommendations. Blood sample was obtained for laboratory parameters at baseline and the end of week 12. At the end of the follow-up, anthropometric parameters, cholesterol, LDL-C, high sensitivity C-reactive protein (Hs-CRP) and Tumor necrosis factor- α (TNF- α) significantly reduced in both groups. These changes were greater in Quercetin group. P-value for quercetin and placebo groups respectively are as follow: cholesterol (P<0.0001, P<0.0001), LDL-C (P=0.004, P=0.007), Hs-CRP (P=0.001, P=0.018), TNF- α (P<0.0001, P<0.0001). HDL-C Significantly increased in the intervention group (P=0.011). ALT and AST had a significant reduction in the group receiving Quercetin (P=0.007, P=0.002). Results showed positive changes in the considered parameters. Quercetin Supplementation in addition to lifestyle modification is superior to lifestyle modification alone for treatment of NAFLD. Whether these effects will be sustained with longer treatment durations remains to be determined.

Biography

Hosseinikia has completed his MSc at the age of 29 years from Kermanshah university of medical sciences. she has published more than 10 papers in reputed journals.

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