

The effect of *Trachyspermum ammi* on functional dyspepsia, severity liver steatosis and liver enzymes in patients with nonalcoholic fatty liver disease: A double blind randomized clinical trial

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Abstract:

Background and Purpose: Non-alcoholic fatty liver disease (NAFLD) is one of the most common diseases in the world with prevalence of 21.5% to 31.5% in Iran. No definitive treatment has yet been determined. *Trachyspermum ammi* (*Carum copticum*) commonly known as ‘Ajwain’ have long been used in traditional Persian medicine (TPM) as a digestive and liver tonic. The purpose of this study was to compare the effect of aqueous extract of *C. copticum* seeds with placebo in improving dyspepsia and treatment of NAFLD.

Methods and Materials: Fifty-five patients with NAFLD were randomly divided into two groups: drug (n = 27) and placebo (n = 28). All subjects in both groups received three 500 mg capsules (Drug or placebo) daily for 8 weeks in addition to lifestyle modification education. Liver enzyme levels, liver steatosis, dyspepsia and its severity and anthropometric indices were determined at the beginning and end of the study. Statistical analysis was performed by SPSS 21 software.

Results: The majority of patients (72.7%) were in the age group of 30-50 years. Both groups were similar in demographic characteristics. At the end of 8 weeks of intervention, ALT level ($p < 0.001$), hepatic steatosis (RR = 2.49, $p = 0.033$) and dyspepsia severity ($p = 0.025$) were significantly improved in the drug group. However, despite a significant decrease in AST enzyme levels in both groups, it was not significant between the two groups ($p = 0.098$). Weight and body mass index (BMI) were significantly decreased at the end of the study in drug ($p = 0.016$) and placebo ($p = 0.007$) groups, but waist-hip ratio (WHR) decreased only in the drug group ($p = 0.011$).

Conclusion: Since the use of *Carum copticum* capsules is effective in the relative improvement of non-alcoholic fatty liver disease, its use in the treatment of patients can be recommended.

Keywords: *Trachyspermum ammi*, Dyspepsia, Liver Enzymes, Non-Alcoholic Fatty Liver, Persian Medicine

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