

Abstract:**Title: The effect of apple cider Vinegar tablet on metabolic syndrome**

Introduction and Objective: The metabolic syndrome is a risk factor for cardiovascular disease and diabetes and is associated with an increased risk of steatohepatitis. In patients with metabolic syndrome increase the relative risk of developing cardiovascular disease 1/5 to 3 times, the diabetes 3 to 5 times and stroke 2.2 times. Its prevalence has increased in the last twenty years and it is growing in the world as a serious problem. This study was designed and performed to investigate the effect of apple cider vinegar tablets on the metabolic syndrome.

Method: This study was a randomized controlled clinical trial in which 110 patients 20 to 60 years of age with metabolic syndrome were divided into two groups; intervention group (53 patients) and placebo (57 patients). Apple cider vinegar tablets for the intervention group and placebo pill for the placebo group, was administered twice a day for three months immediately after lunch and dinner. Serum levels of FBS, HDL-C and TG, waist circumference and blood pressure was recorded in all patients before the intervention and after its completion. Data analyzed by using SPSS16 software and processed with T test and chi-square tests.

Results: FBS changes before and after the intervention, in apple cider vinegar tablets group ($P = 0/004$) and placebo ($P = 0/303$) was a statistically significant difference. differences in changes in TG, HDL, waist circumference, systolic and diastolic blood pressure before and after the intervention were observed between the two groups ($P < 0/001$). Two groups were compared in terms of the treatment of metabolic syndrome and the difference was significant ($p < 0.001$).

Conclusion: This study shows that apple cider vinegar tablets has a significant impact on the improvement of metabolic syndrome and its individual components and prevent its adverse effects.

Key Words: apple cider vinegar tablets, metabolic syndrome, lipid profile, blood pressure, obesity