

Effect of raw garlic on blood biochemical factors in hyperlipidemic and hyperglycemic individuals

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ABSTRACT

Introduction: Nowadays, the patterns of diseases have been changed from acute and infectious diseases to chronic and noninfectious. Atherosclerosis is one of the main factors of morbidity and mortality in developed countries. Diabetes mellitus (DM) and hyperlipidemia are two of the main risk factors of atherosclerosis. For the treatment of these two disorders various herbal and synthetic drugs have been used. The aim of the present work was to study the effect of garlic (*Allium staivam*) on blood biochemical factors in hyperglycemic and hyperlipidemic individuals.

Methods: This clinical trial was carried out in 25 volunteer individuals with fasting blood glucose (FBS) higher than 126 dl/mg and blood cholesterol higher than 245 mg/dl. Fasting blood samples were collected for biochemical tests. The volunteers consumed 5g raw garlic twice a day for 42 days. Second fasting blood samples were collected and the individuals were told to not use any garlic for next 42 days. After 42 days of stopping garlic consumption the third fasting blood samples were collected and the biochemical factors was measured in a specialized pathobiology laboratory.

Results: The mean of FBS ($P < 0.01$) and cholesterol ($P < 0.001$) were reduced, respectively after 42 days of garlic consumption but after cessation of garlic consumption increased again. The mean of HDL-C was increased significantly ($P < 0.05$) and HbA1C was reduced significantly ($P < 0.05$). Urea, Creatinin, Uric Acid, liver function test, LDL-c, did not change during the study.

Conclusion: Regarding to the results of this study, garlic consumption can decrease total cholesterol, FBS and hbA1C and increase HDL-C. Therefore, garlic can be used in mild hyperlipidemia and diabetes mellitus, especially in individuals who can not tolerate chemical drugs.

Key words: Hyperlipidemia – Hyperglycemia – Garlic

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