

Abstract

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Aged Garlic Extract Supplemented with B Vitamins, Folic Acid and L-Arginine Retards the Progression of Subclinical Atherosclerosis: A Randomized Clinical Trial.

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OBJECTIVES: Previous studies demonstrated that aged garlic extract reduces multiple cardiovascular risk factors. This study was designed to assess whether aged garlic extract therapy with supplements (AGE+S) favorably affects inflammatory and oxidation biomarkers, vascular function and progression of atherosclerosis as compared to placebo.

METHODS: In this placebo-controlled, double-blind, randomized trial (conducted 2005-2007), 65 intermediate risk patients (age 60+/-9 years, 79% male) were treated with a placebo capsule or a capsule containing aged garlic extract (250 mg) plus Vitamin B12 (100µg), Folic Acid (300µg), Vitamin B6 (12.5mg) and L-Arginine (100mg) given daily for a 1 year. All patients underwent coronary artery calcium scanning (CAC), temperature rebound (TR) as an index of vascular reactivity using Digital Thermal Monitoring (DTM), and measurement of lipid profile, autoantibodies to malondialdehyde (MDA)-LDL, apoB-immune complexes, oxidized phospholipids (OxPL) on apolipoprotein B-100 (OxPL/apoB), lipoprotein (a) [Lp(a)], C-reactive protein (CRP), homocysteine were measured at baseline and 12 months. CAC-progression was defined as an increase in CAC>15% per year and an increase in TR above baseline was considered a favorable response.

RESULTS: At 1 year, CAC progression was significantly lower and TR significantly higher in the AGE+S compared to the placebo group after adjustment of cardiovascular risk factors (P<0.05). Total cholesterol, LDL-C, homocysteine, IgG and IgM autoantibodies to MDA LDL and apoB-immune complexes were decreased, whereas HDL, OxPL/apoB, and Lp (a) were significantly increased in AGE+S to placebo.

CONCLUSION: AGE+S is associated with a favorable improvement in oxidative biomarkers, vascular function, and reduced progression of atherosclerosis.

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