



Effects of short-term garlic supplementation on lipid metabolism and antioxidant status in hypertensive adults

Grażyna Duda¹, Joanna Suliburska², Danuta Pupek-Musialik³

¹Department of Bromatology, Poznań University of Medical Sciences, Marcelesińska 42, PL 61-354 Poznań, Poland

²Department of Human Nutrition and Hygiene, August Cieszkowski Agricultural University, Wojska Polskiego 31, PL 60-624 Poznań, Poland

³Department of Internal Diseases, Metabolic Disorders and Hypertension, Poznań University of Medical Sciences, Szamarzewskiego 84, PL 60-569 Poznań, Poland

Correspondence: Joanna Suliburska, e-mail: jsulibur@au.poznan.pl

Abstract:

This prospective and uncontrolled clinical study attempted to evaluate the effects of short-term supplementation with oily garlic formulation on lipid metabolism, glucose level and antioxidant status in patients suffering from primary arterial hypertension. Seventy subjects aged 30 to 60 years with primary arterial hypertension, including 38 females (mean age: 52.0 ± 8.3 years) and 32 males (mean age: 48.6 ± 8.2 years), took part in the study. In addition to receiving a standard antihypertensive pharmacotherapy they took 6 capsules of garlic preparation daily for 30 days. Before and after phytotherapy blood samples were collected to assay total cholesterol, HDL, LDL, triglycerides, lipid peroxidation products (TBARS) and vitamin A, C and E, β -carotene, glutathione and glutathione peroxidase activity, and arterial blood pressure was measured.

The analyzed garlic preparation was found to significantly lower lipid level and the level of lipid peroxidation products in the blood. It markedly increased vitamin E concentration in the serum, whereas the increases in the levels of other antioxidant vitamins and glutathione peroxidase activity proved insignificant. The product did not affect arterial blood pressure in the study subjects.

The results of this study suggest that the investigated garlic preparation may be tentatively used as an adjunct agent in treatment of arterial hypertension because of its hypolipemic and antioxidant properties.

Key words:

hypertension, oily garlic preparation, serum, lipids, antioxidants, vitamins, glutathione, glutathione peroxidase
