

The effect of balneotherapy on the nutritional status and lipid status parameters of the obese persons - pilot study

Jokic A⁽¹⁾, Todoc A⁽¹⁾, Markovic S⁽¹⁾, Antonic D⁽¹⁾

⁽¹⁾Specialized Rehabilitation Hospital Banja Koviljaca, Serbia
drjokic@banjakoviljaca.rs

Introduction. Obesity is a chronic disease which is caused by an excessive accumulation of fat in the organism and an increase in body weight.

Purpose. The purpose of this pilot study was to examine the effect of balneotherapy on the nutritional status and lipid status parameters of the obese persons.

Method. There were 8 patients who participated in this study. During 2014, they have been using a program called "Weight Reduction using Balneotherapy" at the Specialized Rehabilitation Hospital in Banja Koviljaca, Serbia. During their 14-day stay, the patients used sulphuric water, peloid, sauna, gym, pool and Ai-Chi. Body weight and height measurements were done for each patient at the beginning and at the end of the program, as well as body mass index (BMI), waist circumference, and the classification was done according to the WHO recommendations. In order to determine lipid status, the tests for triglycerides, total cholesterol, HDL and LDL fraction, blood sugar were done, and blood pressure was measured.

Results. Patients that were on this program lost 3.350 kg on average, while the average waist circumference was reduced by 4 cm. Average BMI was 34.2 kg/m² before, and 33.0 kg/m² after the program. Average values for blood sugar were lower by 0.16 mmol/L, and triglycerides by 0.29 mmol/L. Lower values were noticed for total cholesterol (0.56 mmol/L), and LDL cholesterol (0.37 mmol/L), while HDL values showed no changes after the program. Systolic blood pressure was on average lower by 10 mmHg, and diastolic by 8 mmHg.

Discussion and Conclusions. The obtained preliminary results indicate the significance of balneotherapy in treating obesity and regulation of blood sugar and some of the parameters of lipid status. These patients need further monitoring and to conduct more research on a larger number of patients for more consistent data.