ABSTRACT

The impact of artificial sweeteners on health is a very common topic of discussions nowadays. This thesis focuses on the effect of artificial sweeteners on metabolic parameters of patients with type 2 diabetes mellitus (T2DM).

The aim of this study is to clarify whether the consumption of artificial sweeteners affects metabolic parameters in T2DM patients. Another aim is to evaluate the awareness of T2DM patients about artificial sweeteners and the mean consumption of artificial sweeteners. Thirty patients with T2DM attending the diabetes outpatient clinic of the 3rd Department of Internal Medicine and 20 subjects in the control group were included in the study. Both groups completed a 16-question questionnaire. Laboratory metabolic parameters were obtained only in the patients group, and then evaluated in relation to the results of the questionnaire survey.

A statistically significant association was found only for higher LDL cholesterol levels in patients examining food labels, and poorer diabetes control in those consuming diabetic products. No association was found between total intake of artificial sweeteners, the main object of the observation, and the values of selected metabolic parameters. Compared to the control group, T2DM patients are more interested in the composition of foods and distinguish between sugar and artificial sweeteners, and they also consume artificial sweeteners in larger quantities.

T2DM is such a complex disease that a much larger, long-term intervention study would probably be needed to demonstrate a causal effect of artificial sweeteners on metabolic parameters.

keywords: type 2 diabetes mellitus, T2DM, artificial sweeteners, gut microbiome, antidiabetic drugs