Abstract

Basis: Disorders of glucose metabolism, including prediabetes and diabetes, and obesity are very common diseases, the prevalence of which continues to rise worldwide. Overweight and obesity are usually associated with type 2 diabetes, and some authors use the term diabesity for the joint occurrence of these two diseases, but even in patients with type 1 diabetes, the prevalence of overweight and obesity is increasing. The basic measure in the treatment of an obese diabetic is a diet leading to weight reduction, ideally to achieve optimal body weight.

Objective: This work focuses on the prevalence of overweight and obesity in patients with diabetes, respectively in individual types of diabetes and on the differences in food intake of obese and non-obese patients with diabetes, with the aim of determining whether overweight and obesity, or excessive energy intake, are related to worse diabetes compensation.

Methodology: In the practical part of this diploma thesis, two methods of data collection were chosen, a questionnaire survey and anonymous data collection from electronic medical documentation. All data obtained were continuously recorded and then statistically analysed using the Welch t-test and the chi-squared test in the TIBCO STATISTICA 13 program.

Findings: In the entire research population of patients with diabetes, the prevalence of overweight was 29 % and obesity 44 %. In patients with DM 1, the prevalence of overweight was 47 % and obesity 13 %, in patients with DM 2 the prevalence of overweight was 20 % and obesity 64 %, in other specific types of diabetes the prevalence of overweight was 20 % and obesity 40 %. Overweight or obese patients (HbA_{1c} 55.6 mmol/mol) were not worse compensated than patients with normal body weight (HbA_{1c} 54.9 mmol/mol). The difference was not demonstrated in energy intake between obese and non-obese patients (2190 kcal vs. 1827 kcal), carbohydrates (225.2 g vs. 223.7 g), protein (94.4 g vs. 79.8 g) and fluids (1810.1 ml vs. 1818.4 ml), while a statistically significant difference in fat intake (92.5 g vs. 61.9 g) was demonstrated. Patients with higher than optimal energy intake (HbA_{1c} 61.1 mmol/mol) were not worse compensated than patients with lower or optimal energy intake (HbA_{1c} 51.2 mmol/mol).

Conclusion: Diabetes mellitus and obesity are very common diseases. The prevalence of overweight and obesity is typically high in patients with DM 2, but this work also highlights the high incidence of higher body weight in DM 1 patients. Although this work has not shown a link between overweight or obesity, and higher energy intake, with worse diabetes compensation according to glycated haemoglobin. Weight reduction should be the goal of therapy for every overweight or obese prediabetic and diabetic. The basic therapeutic measure is a diet in which, in addition to carbohydrate intake, it is necessary to focus on the total energy intake and choose foods with a lower fat content.

Keywords: diabetes mellitus, diabesity, dietary intervention, glycated haemoglobin, insulin resistance, obesity, prediabetes