

Abstract:

Introduction: Majority of type I diabetes (type I DM) patients do not reach satisfactory levels of compensation regardless of the advances made in the available treatment. One of the basic pillars of successful type I DM treatment is thorough education.

Objective: The aim of this thesis was to describe changes in glycosylated haemoglobin (HbA_{1c}) in patients that completed a four day long educational program.

Method: The retrospective analysis evaluated 40 patients with type I DM (age 32 y.o. \pm 13, HbA_{1c} before the program 67,1 mmol/mol \pm 11,75, diagnosed with DM for 12,5 years \pm 7,01). HbA_{1c} was measured before the educational program and then again in a period of 3, 6, 12 and 24 months after the program completion. The program provided the patients with classes focusing on carb counting, flexible insulin dosing, effective ways to manage hypoglycemia and physical activity. Statistical data were obtained by non-parametric tests. (Kruskal-Wallis, ANOVA-repeated measures).

Results: Three months after the program completion, a significant drop in HbA_{1c} levels could be observed (67,1 mmol/mol \pm 11,75 vs. 60,2 mmol/mol \pm 9,52; p=0,0093). This improvement was consistently observed after the period of 6 (59,7 mmol/mol \pm 9,59; p=0,0174), 12 (56,5 mmol/mol \pm 9,02; p=0,0006) and 24 (57,6 mmol/mol \pm 8,43; p=0,0221) months.

Conclusion: By conducting the above mentioned experiment it has been shown that the educational program had a positive effect on the levels of glycosylated haemoglobin in patients with type I DM. The improvement has been consistent for 2 years. The results of this study prove the influence a complex education has on patients with type I DM.

Key words: diabetes mellitus type I, educational program, compensation, continuous monitoring of glycemia.