Abstract

Objective: Evaluate the influence of the glycemic index (GI) and glycemic load (GL) of the diet in the glycemic control of children and teenagers with type 1 diabetes mellitus (DM1). Methods: A total of 146 subjects, aged 7-19 years, monitored at the Division of Pediatric Endocrinology at the HC/UFMG participated in the study. The consumed diet was evaluated using a quantitative food frequency questionnaire previously validated and tested in a pilot-project. The GI of the participant’s diet was estimated according to the equation described by Wolever and Jenkins (1986). The GL was estimated using the equation proposed by Foster-Powell et al. (2002). The glycemic control was classified as good, intermediate or poor according to the average of two HbA1c values obtained six months prior to the dietary evaluation date. Results: Subjects that had good glycemic control consumed diets with significantly (Tukey test, p = 0.000) lower GI/GL (54.8 ± 2.7/118.3 ± 29.8) than the ones with intermediate (60.1 ± 3.8/142.5 ± 27.3) and poor (60.3 ± 4.1/153.7 ± 40.7) glycemic control. The diet consumed by 75.5% of diabetics with good glycemic control was classified as medium GL, suggesting that the consumption of medium GL diet may favor an adequate glycemic control. The low GI diet consumed by these participants also presented higher protein content, which might have contributed to the attenuation of the postprandial glycemic response and better glycemic control of these patients. Conclusion: The intake of a reduced GI/GL diet favors the glycemic control of the studied population.

Keywords

Diabetes mellitus, Glycemic index, Diabetic diet, Blood glucose.