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ORIGINAL RESEARCH

Relations of Well-Being, Coping Styles, Perception of Self-Influence on the Diabetes Course and Sociodemographic Characteristics with HbA1c and BMI Among People with Advanced Type 2 Diabetes Mellitus

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Purpose: Assessment of the relationship between psychological and sociodemographic factors with the levels of glycated hemoglobin (HbA1c) and Body Mass Index (BMI) among people with advanced type 2 diabetes mellitus (T2DM).

Patients and Methods: A total of 2574 persons, among them 1381 (53.7%) women, with type 2 diabetes, during the period of switching from biphasic mixtures of human insulin to insulin analogues. The age of participants ranged from 22 to 94 years (M = 63.5; SD = 9.58), and their treatment period was in the time frame from 2 years to 43 years (M = 10.2; SD = 6.1). Participants filled out a Scale for Perception of Self-Influence on the Diabetes Course, Well-Being Index WHO-5, two questions from the Brief Method of Evaluating Coping with a Disease.

Results: Statistically significant correlations were found between the HbA1c levels and (1) disease duration (r_s=0.067; $p < 0.001$); (2) number of complications ($r_s = 0.191$, $p < 0.001$) (3) the perception of self-influence on the diabetes course (r_s=- 0.16; $p < 0.001$); (4) well-being (risk of depression) (r_s=- 0.10; $p < 0.001$). The regression analysis showed that 7% of HbA1c variability is explained by age, a perception of self-influence on the diabetes course, the number of complications, place of residence, education, BMI. The most important findings concerning BMI were found in regression analysis, which indicated a week relationship between BMI and a number of complications, perception of self-influence on the diabetes course and coping styles (3% of the resultes' variability). The group at high risk of depression had the highest levels of HbA1c.

Conclusion: Sociodemographic and psychological factors show weak but statistically significant relationships with the current levels of HbA1c and BMI.

Keywords: type 2 diabetes mellitus, glycemic control, psychosocial factors, HbA1C, BMI, depression

Introduction

Optimal management of type 2 diabetes is a challenge for modern medicine as the consequences of pathological blood glucose levels often lead to serious complications and premature death. Improper adherence to medical recommendations for disease management is also common among patients with this disease. To improve this situation, research into the psychosocial aspects of diabetes is ongoing and its

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