COGNITIVE IMPAIRMENT IN PATIENTS WITH DIABETES MELLITUS TYPE 2 (DM2): DEVELOPING A PREDICTIVE MODEL

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OBJECTIVE: Patients with DM have higher risk of cognitive impairment and dementia. The aim of our study was to examine risk factors for cognitive impairment and to develop a simple predictive model for quick patient’s evaluation.

METHODS: We included 704 DM2 patients (351 women). Cognitive status was evaluated using Clock Drawing Test (CDT). Patients who scored 3 out of 4 points or less were considered cognitively impaired. Mean values for age, DM2 duration, duration of education and CDT score were compared between cognitively impaired and nonimpaired with independent t-test. In the logistic regression model we included age, gender, severity of hypoglycemia, duration of DM2 and education.

RESULTS: Fifty percent of patients (352) were cognitively impaired according to the CDT score (3 or less points). They were significantly older (67.3; SD 9.2 vs. 63.2; SD 9.2 all years), lower educated (10.9; SD 2.2 vs. 11.4; SD 2.0 all years) and had longer DM2 (14.6; SD 11.1 vs. 11.3; SD 7.2 all years). Statistically significant variables in logistic model (constant B: -2.401) were: gender (B: 0.273), age (B: 0.036), duration of DM (B: 0.033), years of education (B: -0.083). Hypoglycemia was not significant. I. e. chance for cognitive impairment in 70-year old man with primary education (8 years) and 20 years of DM duration is 60 %.

CONCLUSIONS: Cognitive impairment is common among DM patients in our group. Particularly vulnerable are older, low educated men, with long-duration diabetes. In everyday practice, we should be alert about men older than 67 years and/or DM duration of 14 years or more.