

Impact Of Type 2 Diabetes Mellitus On Cognitive Function

Abstract:

Introduction: Diabetes Mellitus is a complex metabolic disease which has emerged as a pandemic worldwide. Type2 diabetes is the most common form of diabetes. The deleterious effects of type2 diabetes on renal, retinal, cardiovascular and peripheral nervous system are well known and widely acknowledged. Cognitive dysfunction is a less known and less addressed complication of type2 diabetes. **Aim:** The aim of the study is to assess the cognitive status in type2 diabetics and nondiabetics and also to evaluate the correlation of age, sex, duration of diabetes and HbA1c on cognitive function. **Materials and Methods:** Hundred type2 diabetic and 100 apparently healthy age, sex, BMI and education matched non-diabetics in the age group of 40-60 years were included in the study. Detailed history and thorough clinical examination was done. Blood investigation was done under aseptic precautions. Cognitive status was assessed using Mini Mental Status Examination (MMSE). Statistical analysis was done using Student's 't' test and Fisher's chi-square test. A p value < 0.05 was considered significant. Correlation coefficient was calculated using Excel software. **Results:** About 93% had mild cognitive impairment and 7% had moderate cognitive impairment in type2 diabetics. Mean MMSE score was significantly decreased in type 2 diabetics (23.04 ± 1.5) with p value of < 0.0001 when compared to non-diabetics (29.01 ± 0.51). There existed a significant negative correlation between HbA1c and MMSE score. There was also a significant association of the mean MMSE score with diabetic duration and glycemic control. **Conclusion:** The current study implies that cognitive dysfunction was significantly related with type2 DM and also there was a strong correlation between cognitive decline and diabetic duration as well as glycemic control. Routine assessment of diabetic complications should also include evaluation of the cognition status so that type2 diabetic people can lead an independent and competent life.

Key words: Type2 Diabetes Mellitus, MMSE, Cognitive status, HbA1c