

# 31<sup>ST</sup> CLINICAL NEUROSCIENCE AND NEUROGENETICS CONFERENCE: MOBILIZING NEURONS TO REHABILITATE

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## Assessment of cognitive functions in middle aged patients suffering from type 1 and type 2 diabetes mellitus

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**Background:** Complications of diabetes mellitus have always been properly investigated and well known, however, cognitive impairment in young and middle aged diabetic patients needs to be evaluated and emphasized.

**Objective:** To assess and evaluate impairment in different cognitive function domains, and aspects of cognitive and mental dysfunction in type 1 and type 2 young diabetic patients.

**Subjects and Methods:** This study was done in MUST University on 40 patients suffering from diabetes mellitus for a period ranging from 5-35 years, they were stratified into 2 groups: group (A) 20 patients having type 1 DM, and group (B) 20 patients having type 2 DM. All the recruited patients underwent the following: proper history taking, neurological examination, blood pressure and BMI measurement. Laboratory investigations as fasting blood glucose and HbA1c were done. CT brain, and Neuropsychological assessment: using the following batteries: Mini-mental state examination (MMSE), Wechsler scale for memory and Hamilton scale for depression.

**Results:** In type 1 DM: 40% showed mild cognitive impairment in MMSE, 60% showed depression in Hamilton scale with p-value 0.38, 95% impairment in associate learning, 75% in digit span forward, 40% in logical memory, 95% impairment in mental control using WMS. In type 2 DM: 60% showed mild cognitive impairment, 80% had depression, 95% showed impairment in associate learning, 90% in digit span forward, 50% logical memory, and 90% mental control deficit. There is a statistical significant correlation between level of HbA1c (diabetic control) and memory loss with p-value 0.002, however we couldn't proof statistical significant correlation between glycemic control and MMSE nor with depression. Gender difference showed that 71.4 % of males had depression, 68.4% of females had depression with p-value 0.942 with no statistical significance.

**Conclusion:** young and middle aged diabetic patients suffering from Type 1 and 2 DM have shown to have mild cognitive impairment, depression, memory problems, deficits in associate learning, digit span forward, logical memory and mental control. A negative correlation between level of HbA1c (glycemic control) and memory assessment was found. Evidence suggests that cognitive dysfunction should be listed as one of the many complications of Diabetes mellitus.

### Biography

Pousette farouk is an Egyptian physician, worked as a specialized neurologist in Egypt in Ain Shams University hospitals since 2000 then worked in IBN Sina hospital in KUWAIT, currently I am in SAUDIA ARABIA, specialized in management of cerebrovascular stroke patients, epilepsy, movement disorders, and general neurology cases. worked in neurology, ICU management, teaching and researcher, experienced in EEG, experienced in TCD, Masters in psychiatry from Ain Shams university, Professional Diploma in the research statistics SPSS from American university in cairo.

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