
Type 2 Diabetes, Cognitive Decline And Dementia - A Less Appreciated Link

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Longstanding Diabetes Mellitus adversely affects various neurological functions. Cognitive impairment is also linked with type 2 Diabetes. In a systematic review Cukierman and Williamsons [1] have observed a baseline reduction of cognitive function in diabetics, compared to general population. Type 2 diabetes is also identified as a risk factor for the declining cognition in other causes of dementia, such as Alzheimer's disease, Parkinson's disease and vascular dementia. The mechanisms underlying the causation of cognitive impairment in diabetics could be multiple. Insulin resistance, impaired insulin signalling, vascular dysfunction, hyperglycemia and hypoglycemia, inflammation and disruption of blood brain barrier may all be responsible. Yet another observation is that in diabetics the different domains of cognition are not affected to the same degree. In ACCORD-MIND study [2], the executive function was the one found affected. As far as the usefulness of anti diabetic medication in either delaying the onset of cognitive impairment or retarding the rate of decline, different studies report conflicting results. But studies with longer follow up do show that good glycemic control has a favorable effect.

In the current issue, we report a study [3] where in we assessed the prevalence and pattern of cognitive impairment in diabetic people above the age of 60 and compared with an age matched non diabetic population; using MMSE scores. There was an apparent increase in cognitive decline among diabetics compared to non diabetics, but it was not statistically significant. In the affected group, the most involved components were attention and language function. The degree of cognitive decline was proportional to the duration of diabetes. Patients who had more severe retinopathy and proteinuria were having the maximum cognitive impairment, representing micro vascular complications. But this correlation was not seen for macro vascular complications. Globally the aging population is increasing, so is the prevalence of diabetes. The multiple issues involved in managing dementia is known. When diabetes forming a compounding factor of cognitive decline in this sub group of patients, its early recognition and maintaining optimal glycemic control as a remedial measure is of utmost importance.

References
