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Diabetes and Cognitive Impairment

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Alzheimer's disease (AD) has been becoming an increasing impaction to our social-economic status. The increasing evidences have indicated that type 2 diabetic mellitus (T2DM) is the risk factor of AD because of the overlapping pathogeneses between T2DM and AD. T2DM increases the risk of all-cause dementia. The relative risk has been estimated at between 1.51 and 1.62 for all-cause dementia. Meanwhile, other studies have reported the risks appear to be increased for both AD and vascular dementia (VaD) (risk ratios 1.46-1.56 for AD and 2.48 -2.27 for VaD respectively.

Many factors from T2DM would contribute to the risk of cognitive impairment. These include T2DM-associated clinical course, hyperglycemia, changes of circulating insulin, or diabetes-associated dyslipidemia, treatment-associated

events, loads of exogenous insulin, hypoglycemia, or oral agents with potential brain effect, or situations clustered with T2DM, hypertension or hyperlipidemia, and importantly, the diabetic complications, macro- and micro-vascular complications.

In order to control and prevent AD, especially in diabetic mellitus (DM), many issues have been stressed including the early screening and identifying the dementia at its early stage or controlling DM and AD together through these possible primary and secondary benefits from DM treatment medicines. In this section, we are going to report the early screening of cognitive impairment and the possible benefits from DM treatment to cognition.