

Hypoglycemia and Dementia Risk in Older Patients with Type 2 Diabetes Mellitus: A Propensity-Score Matched Analysis of a Population-Based Cohort Study (*Diabetes Metab J* 2020;44:125-33)

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We thank Dr. Kim for expressing interest and giving comments on our article entitled “Hypoglycemia and dementia risk in older patients with type 2 diabetes mellitus: a propensity-score matched analysis of a population-based cohort study” which was published in *Diabetes & Metabolism Journal* [1].

We agree with Dr. Kim’s suggestion of the potential impact of diabetes duration on the dementia risk. However, the Korean Health Insurance Review and Assessment Service database does not contain information on the duration of diabetes. Microvascular and macrovascular complications of diabetes were matched as factors for the severity of diabetes instead of the duration of diabetes. Concomitant diabetic complications are the final indicator of the severity of diabetes. In the subgroup analysis, hypoglycemia was associated with an increased risk of dementia in with or without type 2 diabetes mellitus microvascular or macrovascular complications.

Research into the link between glucose fluctuation and dementia risk has already investigated. Li et al. [2] showed that glycemic variability, determined by coefficient of variation of fasting plasma glucose and glycated hemoglobin was associated with Alzheimer disease independent of traditional risk factors in Taiwanese with type 2 diabetes mellitus. Rawlings et al. [3] demonstrated that serum 1,5-anhydroglucitol levels, indicative of glycemic peaks are a risk factors of cognitive decline

and dementia over 20 years in subjects with diabetes.

Based on your comments of the severity of hypoglycemia, we suspect that hypoglycemia coded in this study may indicate relatively severe hypoglycemia not mild. As we have already discussed this as a limitation, clinicians tend not to record hypoglycemia in practice, especially in mild case, when entering diagnostic codes. Smoking is well-known, modifiable risk factor for cognitive decline and dementia. Unfortunately, these data were not available for this study [4].


We also agree further prospective studies with long term follow periods are needed to confirm our findings in other populations. Thank you again for your interest in our research and your thoughtful comments.

CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

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