COMMENTS AND RESPONSES

Relationship Between Baseline Glycemic Control and Cognitive Function in Individuals With Type 2 Diabetes and Other Cardiovascular Risk Factors: The Action to Control Cardiovascular Risk in Diabetes-Memory in Diabetes (ACCORD-MIND) Trial

Response to Abbatecola and Paolisso

Abbatecola and Paolisso suggest that the association found in the ~3,000-person cross-sectional analysis of baseline data from the Action to Control Cardiovascular Risk in Diabetes Memory-Memory in Diabetes (ACCORD-MIND) study between higher A1C values and lower cognitive test scores may be mediated at least partially by postprandial glucose levels and its variation index (1). This is based on their findings in 156 people with type 2 diabetes that a composite cognitive score and the Mini-Mental State Examination score are associated with postprandial and fasting glucose variation indexes (2). As A1C reflects both fasting and postprandial hyperglycemia, it is quite possible that glucose variation due to events such as meals is at least partially responsible for its association with cognitive test scores reported in the ACCORD-MIND baseline analysis.

Abbatecola and Paolisso's comment provides further support for our hypothesis that chronic hyperglycemia is associated with diabetes-related cognitive dysfunction. While strategies for glycemic control in ACCORD include monitoring and treatment for postprandial hyperglycemia, ACCORD is not designed to tease out the role of postprandial hyperglycemia; in fact, postprandial glucose levels were not systematically recorded. Rather, ACCORD is designed to evaluate the effect of intensive A1C lowering on the consequences of diabetes in persons with A1C values above 7.5 (3). Whether such a strategy reduces cognitive decline will be answered by ACCORD-MIND and other trials.

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