Editorial

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Early Glycosylated Hemoglobin Target Achievement Predicts Clinical Outcomes in Patients with Newly Diagnosed Type 2 Diabetes Mellitus

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Type 2 diabetes mellitus (T2DM) is a complex group of disorders sharing the common characteristic of hyperglycemia. Persistent hyperglycemia increases the risk of micro- and macrovascular complications as well as mortality in patients with T2DM [1-4]. Previous studies provided evidence that long-term durable glycemic control can decrease the incidence of diabetic complications [5]. Although previous studies have suggested the potential benefit of early intensive glucose-lowering therapy, most of the current practice guidelines recommend serial escalation of diabetic medications in patients with newly diagnosed diabetes unless those patients are severely hyperglycemic [6,7]. The optimal duration to target glycosylated hemoglobin (HbA1c) achievement and its potential benefits in a clinical setting are poorly understood.

In this issue, Kim et al. [8] demonstrate that early HbA1c target achievement predicts clinical outcomes in patients with newly diagnosed T2DM. In this observational study, authors classified newly diagnosed diabetic patients into three groups according to the time needed to achieve target HbA1c (<3, 3 to 6, and ≥6 months) and compared composite complications, microvascular complications (retinopathy, nephropathy, and neuropathy), macrovascular complications (ischemic heart disease, ischemic stroke, and peripheral artery disease) and long-term glycemic durability for 6 years. Interestingly, longer time to achieve target HbA1c was associated with an increased risk of composite complications as well as microvascular and macrovascular complications. Moreover, patients who achieved target HbA1c early after diagnosis were more likely to maintain durable glycemic control than those who took longer to achieve target HbA1c.

This article suggests two messages. First, achieving target HbA1c early is important for long-term outcomes in newly diagnosed T2DM patients. This finding encourages clinicians to put more effort into achieving target HbA1c when their patients are initially diagnosed with T2DM. Second, this research suggests that there are subgroups of newly diagnosed T2DM patients who have more difficulty achieving target HbA1c than others. As this was an observational study, all subjects underwent standard care for diabetes. The difference in the time needed to achieve target HbA1c might have been due to different characteristics or pathophysiology of the disease. Interestingly, fasting C-peptide level was lower in the subpopulation of patients who took longer to reach target HbA1c. A similar subgroup of patients with newly diagnosed T2DM were proposed in a large-scale cohort study in Sweden and Finland [9]. This subgroup was severely insulin deficient without glutamic acid decarboxylase auto-antibodies, had difficulty achieving durable HbA1c control, and were at high risk of developing micro- and macrovascular complications [8,9]. Careful characterization and potential benefit of tailored management in this subpopulation should be studied in future research. Overall, this study highlights the clinical importance of early target HbA1c

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achievement and suggests that some newly diagnosed T2DM patients may require more intensive therapy.

CONFLICTS OF INTEREST

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

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