COMMENT ON LACHIN ET AL.

The Beneficial Effects of Earlier Versus Later Implementation of Intensive Therapy in Type 1 Diabetes. Diabetes Care 2021;44:2225–2230

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The article by Lachin et al. (1) in a recent issue of *Diabetes Care* used the Diabetes Control and Complications Trial (DCCT) (2) and the Epidemiology of Diabetes Interventions and Complications (EDIC) (3) data set to model a 10-year period of early intensive glucose control and to demonstrate that this is more effective at reducing the subsequent risk of diabetes complications than an equivalent period of glucose control implemented later after diagnosis. The modeling provides compelling evidence to support the introduction of intensive glucose control soon after diagnosis (1,4).

We were interested to explore whether a period of intensive insulin therapy initiated soon after diagnosis with type 1 diabetes would facilitate subsequent long-term diabetes control. We were interested in this question because we and others have previously noted that HbA_{1c} remains remarkably stable in individuals with type 1 diabetes, a phenomenon that has been referred to as glycemic tracking (5). Implementing early intensive glucose control therefore could continue to longer-term glucose control. While the mechanisms for glycemic tracking remain to be fully elucidated, such a finding would provide even stronger reasons for implementing early intensive glucose control.

We also turned to the DCCT-EDIC data set (2,3) and compared HbA_{1c} using the Mann-Whitney *U* test and Kruskal-Wallis statistical analyses.

A total of 1,441 individuals with type 1 diabetes who entered the DCCT were included in the analysis, and 1,341 individuals subsequently entered the EDIC study. Of these, 711 and 730 individuals were in the DCCT intensive and standard treatment arms, respectively. Duration of diabetes at DCCT entry ranged from 26 to 108 months (median 49 months).

HbA_{1c} did not improve in participants randomized to standard treatment in the DCCT. Conversely, in the intensive treatment group, the change in HbA_{1c} from baseline to year one of DCCT was significantly different ($P < 0.0005$). This improvement, a median decrease of 4.3% (23 mmol/mol) (interquartile range [IQR] 3.5–5.1% [15–32 mmol/mol] reduction) in HbA_{1c}, was seen for all durations of diabetes at baseline. There was no significant difference in the effect size across the durations of diabetes at baseline. Following completion of the DCCT, there was an improvement in HbA_{1c} in the standard treatment group regardless of diabetes duration. Alternatively, in the intensive treatment group, HbA_{1c} deteriorated toward baseline values, and this occurred in participants who had a short as well as a long duration of type 1 diabetes at entry into DCCT.

Early intensive support in new-onset type 1 diabetes does not come with a long-lasting legacy effect on HbA_{1c}. However, HbA_{1c} tracks in people with type 1 diabetes can be altered with intensive diabetes support regardless of diabetes duration. We now need to explore what and how this support can be provided in the long term.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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