Impact of Social Distancing Due to Coronavirus Disease 2019 on the Changes in Glycosylated Hemoglobin Level in People with Type 2 Diabetes Mellitus

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This study investigated the impact of social distancing due to coronavirus disease 2019 (COVID-19) on glycemic control in people with type 2 diabetes mellitus (T2DM). We retrospectively analyzed the change in glycosylated hemoglobin level (ΔHbA1c) in people with T2DM who undertook social distancing because of COVID-19. We compared the ΔHbA1c between COVID-19 and non-COVID-19 cohorts that were enrolled at the same time of year. The ΔHbA1c of the COVID-19 cohort was significantly higher than that of two non-COVID-19 cohorts. Subgroup analysis according to age and baseline HbA1c level showed that social distancing significantly increased the mean HbA1c level of participants of <50 years. The ΔHbA1c of participants of <50 years and with HbA1c <7.0% in the COVID-19 cohort showed larger changes than other subgroups. In adjusted model, adjusted ΔHbA1c levels in the COVID-19 cohort remained significantly higher than those in the two other cohorts. Social distancing negatively impacts blood glucose control in people with T2DM, especially those who are younger and have good blood glucose control.

Keywords: COVID-19; Glycated hemoglobin; Social distancing

INTRODUCTION

The spread of coronavirus disease 2019 (COVID-19) worldwide has resulted in changes in lifestyle in areas affected by COVID-19 [1,2]. To stem the transmission of COVID-19 infection, strategies aimed at reducing the frequency and close-