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THE IMPACT OF COVID-19 LOCKDOWN ON THE GLYCEMIC CONTROL AND BODY WEIGHT IN TYPE 2 DIABETES MELLITUS ASSESSED DURING THE PROGRESSIVE UNLOCKING PHASE IN URBAN INDIAN SETTING

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Introduction: There is limited, yet varied evidence for the impact of the change of the metabolic parameters in T2DM during the COVID-19 lockdown. The impact of previous pandemics and natural disasters on metabolic derangements may not be replicated with COVID-19.

Objectives: To assess the impact of lockdown on glycemic control and body weight

Methods: We evaluated the change in body weight and HbA1c for patients (n=357) following up regularly, post the unlocking period in India (1st June 2020) with at least one visit in last one year before lockdown and on stable medications since last visit.

Results: The mean age (years) was 60 (± 12 , minimum 19, maximum 89, range 70, 95% CI 59 to 62). The mean HbA1c (%) before the lockdown was 7.4 (± 1.3 , minimum 5.2, maximum 14, range 8.8, 95% CI 7.3 to 7.6) which reduced by 0.29% at the follow up with mean HbA1c 7.2 (± 1.1 , minimum 5.1, maximum 11, range 6.3, 95% CI 7 to 7.3). The reduction was statistically significant ($p=0.0012$). The mean body weight (kg) before the lockdown was 75 (± 15 , minimum 44, maximum 131, range 87, 95% CI 73 to 76) which reduced by 0.9 kg at the follow up with mean body weight 74 (± 14 , minimum 42, maximum 129, range 87, 95% CI 72 to 75) ($p=0.40$ NS). 215 out of 357 patients (60.2%) achieved reduction in HbA1c. Out of 215 patients, 150 achieved HbA1c < 7%. Out of 215 patients, 152 also achieved weight loss. 233 patients out of 357 achieved weight loss. There was a significant positive correlation between the difference of HbA1c and the difference in the weight loss ($r=0.088$, $p=0.098$, 95% CI -0.016 to 0.190). The mean change in the HbA1c (-0.29%, $p=0.96$ NS) was similar in both the age groups, of age group ≤ 60 years ($n=159$) and age group > 60 years ($n=198$). Higher proportion of age group >60 years as compared to ≤ 60 years achieved HbA1c < 7, (53% Vs 47%, Odds ratio [OR] 1.28, $p=0.2839$ NS).

Conclusion: The reduction in the HbA1c was more prominent than the weight loss achieved during the lockdown phase, with greater number of elderly patients achieving good glycemic control than the younger patients. We attribute the virtual and in person consultations, as part of the diabetes continuity care program that enabled

the patients maintain the metabolic health and mitigate the potential detrimental effect of lockdown.

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