

# Swings of Sugars in COVID Era

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The chronic condition such as type 2 diabetes mellitus (T2DM) can be managed well with certain positive adaptations to lifestyle and antidiabetic medications. This is the core responsibility of the patient with the collective efforts by a doctor, a dietician, and an educator to improve the life of the patient by prescribing appropriate medicines, by setting the dietary goal, and providing the understanding of the disease. Adherence to this regimen makes it easier to maintain or achieve the long-term desired health outcomes.

The lockdown situation forced everyone to restrict their routine activity and stay indoors. This scenario came up with an opportunity for few patients with T2DM to introspect the gaps and to improve their habits with diet, exercise, and to excel the compliance with medications and self-glucose monitoring. Many of them tried almost all possible measures to have a good glycemic control, which reflected in their hemoglobin A1c values. These values were at their worst prior to the pandemic. In addition, even the fact and/or fear that they belong to the vulnerable group forced them to be extra cautious. Nevertheless, this helped them to achieve the longing unachieved glycemic targets. Conversely, in the other chunk of T2DM patients, the outcome of this situation was worse. Their glycemic status was flipped from good to never seen worse. The probable causes of this have been sedentary

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life, stress, no visits to doctors, continuing same medication, fear of getting coronavirus infection. During this period, binge-eating became a larger issue as foodie people came up with series of newer and interesting recipes every day; it became a campaign or competition on social media for few months, which resulted in weight gain for many and that led to poor glycemic picture in people with T2DM. In addition, dependence on social media that gave everything within no time on their screen made individual lazier than before. This describes the two different outlooks on same situation by T2DM individuals.

The factors that helped in achieving the glycemic target were inadequately performed prior to the corona pandemic, may be due to negligence, insufficient time, or any other reasons. To them who had inadequate time to manage disease took this period to improve their health status. To the negligent, the situation might have not affected. As it is said that how we look at the situations makes a difference. Some people see the glass half full, and others see it half empty. The same was noticed in case of T2DM patients when lockdown was imposed.

► **Tables 1 to 3** and ► **Fig. 1** describe our experience in “Swings of Sugar” through comparison between two similar cases having the different outcomes.

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**Table 1** Comparison of anthropometric data and glycemic status of two patients<sup>a</sup>

|                          | Patient A (with the good outcome)  | Patient B (with the bad outcome)                |
|--------------------------|--|---|
| Age                      | 63 y   | 65 y  |
| Duration of diabetes     | 22 y   | 26 y  |
| Weight (before lockdown) | 95.6 kg  | 92.7 kg   |
| Weight (after lockdown)  | 90.3 kg  | 93.3 kg   |
| BMI                      | 29.9   | 30.7  |
| HbA1c (before lockdown)  | 8%   | 6.5%  |
| HbA1c (after lockdown)   | 5.3%   | 9.2%  |
| Medication               | Multiple OADs including SUs (with optimal dose)  | Multiple OADs including SUs (with optimal dose) |
| Follow-up pattern        | Two visits via telemedicine during lockdown and immediate visit at clinic after lockdown | Not in contact with HCP during lockdown         |

Abbreviations: HbA1c, hemoglobin A1c; HCP, health care provider; OADs, oral antidiabetic drugs; SU, sulfonylureas.

<sup>a</sup>Details of two patients with similar characteristics and different glycemic response.

**Table 2** Swings of sugar-I

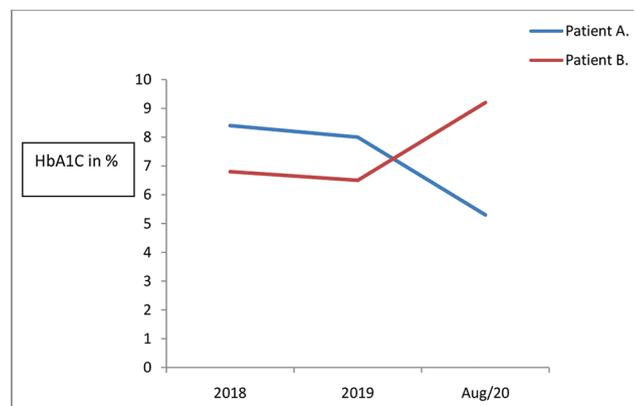
| Test name          | October 27, 2017 | February 7, 2018 | August 21, 2019 | August 18, 2020 |
|--------------------|------------------|------------------|-----------------|-----------------|
| FBS                | 191              | 161              |                 |                 |
| PPBS               | 280              |                  | 199             | 109             |
| HbA1C %            | 8.4              | 7.7              | 8.0             | 5.3             |
| Mean blood glucose |                  | 174              | 183             | 105             |

Abbreviations: FBS, fasting blood sugar; HbA1c, hemoglobin A1c; PPBS, postprandial blood sugar.

**Table 3** Swings of sugar-II

| Test name          | November 19, 2018 | December 12, 2018 | April 15, 2019 | October 5, 2019 | August 2, 2020 |
|--------------------|-------------------|-------------------|----------------|-----------------|----------------|
| RBS                |                   | 100               |                |                 | 253            |
| HbA1C %            | 6.8               | 6.9               | 7.0            | 6.5             | 9.2            |
| Mean blood glucose | 148               | 151               | 154            | 139             | 253            |

Abbreviations: HbA1c, HbA1c, hemoglobin A1c; RBS, random blood sugar.



**Fig. 1** First visit after lockdown. Patient A achieved the due target hemoglobin A1c (HbA1C) since many years. Patient B ended up with worst glycemic status of his life.

To conclude, it can be said that this pandemic affected the glucose targets of people living with T2DM. Further research is needed in this direction to study the glycemic control in patients with T2DM during lockdown and to understand the behavior pattern of patients living with diabetes during coronavirus disease (COVID). In addition, we are of the opinion that a positive outlook toward the situation proved good for the health and helped in managing the glucose levels.

#### Conflict of Interest

None declared.