

COVID-19 and diabetes: Covidiabetology

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The COVID-19 pandemic has affected virtually every country across the world. Though a respiratory virus, its impact can be felt across all organ-systems, by all medical and surgical specialties. COVID-19 has a multifaceted relationship with diabetes. In this editorial, we describe this complex, evolving relationship, and its clinical as well as public health significance.

Diabetes can be viewed as a system of triage, a prognostic factor, a therapeutic target, a limitation, or a clinical challenge, with respect to COVID-19. However, it should be taken as a window of opportunity, and a tool to improve outcomes as well (Table).

Table: The diabetes and COVID-19 relationship.

Diabetes may be viewed, in COVID-19 infection, as a

- ◆ Prognostic factor
- ◆ Complication (stress hyperglycaemia)
- ◆ Tool for triage
- ◆ Therapeutic target (euglycaemia)
- ◆ Clinical challenge

COVID-19 pandemic offers, in diabetes, a window of opportunity to

- ◆ Encourage lifestyle modification
- ◆ Underscore importance of good control
- ◆ Promote glucovigilance through glycaemic monitoring
- ◆ Motivate timely insulin use
- ◆ Manage complications and comorbidities

The presence of diabetes has been taken as a poor prognostic factor in COVID-19 patients.¹ This is partly true. The exact statement should be that uncontrolled diabetes leads to impaired immunity.² In persons with suspected, asymptomatic or symptomatic COVID-19 infection, it makes sense to screen, diagnose, treat and monitor dysglycaemia aggressively. Thus, glucovigilance must be promoted for the containment of the COVID-19 epidemic. As highlighted in the JPMA earlier, glucovigilance should be coupled with consideration of other endocrine system health.³ All persons with COVID-19 who are noted to have

dysglycaemia need not have preexisting diabetes. Stress hyperglycaemia is a common illness, which should be recognized and treated appropriately.⁴

Diabetes may have to be used as a means of triage. In unfortunate situations where a health care system is overwhelmed by the scale of the COVID-19 pandemic, some physicians may “tick-box” diabetes as a disease which confers low ‘utility’ on a particular patient. Such a blanket approach to triage should be discouraged. Diabetes is a heterogenous syndrome, and various factors such as duration of diabetes, degree of control, presence or absence of complications and comorbid conditions play a role in determining prognosis and survival.⁵ More work will be needed to assess the validity of a diagnosis of diabetes as a tool for triage.

Diabetes can be taken to be a tool for improving outcomes. Achieving and maintaining optimal control in COVID-19 patients is essential to their survival. Thus, euglycaemia becomes not only a target in itself, but a tool and technique to achieve the target of overall health. Persons with diabetes can play an active role in their healthy management by stocking necessary drugs and ancillary supplies in adequate quantity, maintaining a healthy life style and keeping strict watch over their metabolic control.

Diabetes can be used as a decision-making tool while deploying medical and other health care professionals. Presence of long standing, poorly controlled, or complicated diabetes in a health care professional suggests that she or he should not be used as a front-line worker in the fight against COVID-19.

Endocrinologists can play a major role in this scenario by sharing the nuances of glucose monitoring and control with other health care professionals. Simple algorithms for glucose control in outdoor, hospitalized and critical care patients must be created. Biosafe techniques for insulin injection and disposal should be revised.⁶ Public awareness can be created regarding lifestyle modification during the epidemic, and beyond. Creating healthy diet plans and exercise regimens, during a time of limited choices, calls for a mastery of both the science and art of medicine. A similar situation may be encountered in

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settings of drug shortages.

We pray to the Almighty that the COVID-19 epidemic abates. An understanding of the complexity of covidabetology will help us contain this unwanted disease.

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