

# Diabetes in COVID-19: Steroid effect

To the Editor,

We read with keen interest the case report of three cases with new-onset diabetes in the context of coronavirus disease-2019 (COVID-19) by Suwanwongse and Shabarek.<sup>1</sup> The authors have presented a brief review on the link between diabetes and COVID-19, which is essential to understand in the management of these patients. Although authors have well presented the issue of hyperglycemia and its management, the one issue that needs to be added to the relation of diabetes and COVID-19 is the hyperglycemia which may worsen with steroid therapy for patients with moderate to severe disease. It is not clear from the manuscript if these patients received steroid therapy at any point of time for management of COVID-19. The recently published RECOVERY trial has demonstrated a survival benefit with the use of dexamethasone therapy in this subgroup of patients with COVID-19.<sup>2</sup> Dexamethasone, being a potent glucocorticoid, is likely to worsen the glycemic control. However, we do not have any evidence for the same in COVID-19 as of now. This may lead to worsening hyperglycemia which may be more during the early daytime (as the dose is usually given in the morning) and may require modification of antidiabetic therapy dosing especially in patients on insulin.<sup>3</sup> It has been shown in patients undergoing abdominal surgery that single-dose dexamethasone leads to significant rise in blood glucose levels even in nondiabetic individuals and the hyperglycemic effects peaks at around 2 h following the dose.<sup>4</sup> Second, this may lead to precipitation of diabetic ketoacidosis in patients who previously had poor glycemic control. As per current guidelines from the National Institute of Health, dexamethasone is recommended for use in the subgroup, and various national guidelines also suggest the use of steroid in patients with moderate to severe COVID-19.<sup>5</sup> In view of these concerns, it is imperative to judiciously use steroid therapy in patients who are being treated for diabetes and monitor blood sugar levels for non-diabetics as a combination of steroid with COVID-19 may lead to worsening of glycemic control.

## CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

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