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## On-admission parameters based prognostication in COVID-19: an important missing link...



Dear Editor,

We read with great interest the research report by Oh et al. highlighting the on-admission anemia as an important predictor of all-cause mortality in a retrospective evaluation of 733 adult COVID-19 patients [1]. While early and parsimonious prognostication in COVID-19 is doubtlessly the need of the hour albeit an important missing link in their analysis merits elucidation.

The lack of presentation of the blood glucose levels in the index study captivates attention, particularly when there is an accumulating literature on the prognostic role of the on-admission hyperglycaemia in COVID-19 regardless of the diabetic status of the diseased subset [2–4]. In this context, a systematic review and dose-response meta analysis by Lazarus et al. (comprising of 35 studies and a total of 14,502 patients) reveal a 33% accentuation in the risk of COVID-19 disease severity for every 1 mmol/L increase in the on-admission fasting blood glucose [2]. The subsequent GRADE assessment tool yielded a high quality evidence for the fasting blood glucose association with a severe disease, and a moderate quality evidence for the resulting association with mortality and/or poor outcomes [2].

Needless to say, the stress-induced hyperglycaemic response is expected to exacerbate the ongoing COVID-19 related endothelial dysfunction, oxidative-stress, pro-inflammatory and pro-thrombotic milieu [5–7]. Herein, acute hyperglycaemia can understandably be peculiarly detrimental in the absence of defence mechanisms which develop to mitigate the oxidative stress owing to chronic hyperglycaemia [8]. Withstanding the abovementioned fact, many researchers suggest a rather adverse outcome with on-admission hyperglycaemia in the non-diabetics when compared to the diabetic counterparts [8]. Therefore, the authors' isolated account of the diabetic status of the included patients is far from holistic [1].

To conclude, stress hyperglycaemia is intricately linked to the outcomes in the critically ill [9], COVID-19 cohort being no exception [8]. As much as the authors need to be applauded for their research endeavours, missing out on the prognostic role of routine parameters such as on-admission glycaemia can definitely not be overlooked.

### Author roles

RM conceptualized and wrote the entire comment. JJ searched the literature.

### Declaration of competing interest

We do not have any conflict of interest, any commercial or financial interest in this material & agree to abide by the rules of your journal regarding publication of this article.

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7 April 2021