

DOI: 10.4103/0971-5916.327496



Author's response

We appreciate the interest and the constructive criticism provided by the author of this letter¹. We agree that any significant variations from the State and National guidelines regarding treatment might have affected the outcome. The design of the current investigation with hospital-based in-patient recruitment would not suffice to identify association of different demographic variables attributable to difference in policy related to testing, investigations, *etc.* This has been discussed in the limitation section.

The National Clinical Registry for COVID-19 was initiated with a broad objective to collect real-time data, regarding the clinical and laboratory features, treatment and outcomes of hospitalized COVID-19 patients. As the current investigation used clinical data already collected by the treating team and did not have provision for additional interventions such as sample preservation and genomic analysis, data on COVID variants could not be generated. Currently, Indian SARS-CoV-2 Genomics Consortium is involved in sequencing and identifying the variants of SARS-CoV-2 in India². Vaccination was started in India on January 16, 2021. The data for the first wave

encompass admitted cases till January 31, 2021. It was not deemed worthwhile to collect data for 15 days retrospectively. The variable of receipt of vaccination has now been added to the registry and can be analyzed at a later point.

The proportion of asymptomatic patients did increase in the enrolled participants, as evidenced by the data. Almost all hospitalized patients who were being admitted due to reasons other than COVID-19 were being tested for COVID-19 and many of them tested positive. Effect of treatment on the outcome was not an objective of this analysis, hence not presented here. The collected data are not sufficient to comment on the reason for tocilizumab usage remaining same in both the waves of pandemic. The apparent paradox of shorter duration of hospital stay in the second wave has been discussed in the manuscript. Similar trend has been noted by another Indian study comparing the two waves of the pandemic³. Our opinion is that with the improvement in understanding of the treatment of COVID-19, patients who recovered could be discharged earlier. However, the more severe nature of the disease in those who succumbed led to a longer stay for patients in second wave.

The emergence of mucormycosis was not anticipated when the registry was initiated and means of fungal diagnostics was not included in the site selection matrix. Furthermore, we will need to consider that a substantial proportion of mucormycosis occurs among patients who have already recovered from COVID-19. Hence, this clinical registry of acute COVID-19 patients is not an appropriate study design for studying a rare complication such as mucormycosis.

We agree that the data lack representation from certain States, but we do have adequate representation from Karnataka and West Bengal, as it has been wrongly pointed out. This limitation has been discussed extensively in the paper. As the registry is dynamic and new sites are being added, we have already started enrolling patients from Maharashtra and are also striving to get a representation from other under-represented States. We want to re-iterate that the

National Clinical Registry for COVID-19 is a dynamic endeavour, and the questions are modified or added as per the need of the hour. Further, we are doing a follow up study in selected institutes as part of this registry, with the objective of collecting information regarding post-COVID sequelae.

We once again thank the author¹ for the keen interest in the study and for understanding the challenges involved in conducting such a project during an on going pandemic.

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