Remdesivir in the Management of COVID-19!
Is there a Way Out of the Predicament?

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Dear Editor,

We came across the original article on the study of the efficacy of injection remdesivir in patients of coronavirus disease 2019 (COVID-19) by Chaudhary et al.¹ In the index study, authors have tried to elucidate
the beneficial effects of injection remdesivir by highlighting the significant reduction in days of hospital stay and change in the inflammatory marker levels. Since the beginning of the COVID-19 pandemic and the landmark ACTT-1 trial, it has been a rollercoaster ride for remdesivir. We would like to share certain experiences and viewpoints on the subject.

At the outset, COVID-19 has three main phases: viral phase, inflammatory phase, and long-COVID-19 phase. Pulmonary involvement, which is the leading cause of mortality, is an outcome of the inflammatory phase, and that is why corticosteroids have been found to reduce mortality. However, remdesivir has been shown to have no impact on mortality among COVID-19 patients with pulmonary involvement, which, in itself, is a case of exceeding expectations from an antiviral drug. The supportive evidence comes from the PINETREE trial, where remdesivir was used in the first week of illness (corresponding to the viral phase). The study demonstrated that just a 3-day course of early remdesivir prevented progression to hospitalization or death in 87% of nonhospitalized COVID-19 patients. This matches our unpublished results of using remdesivir on 10 unvaccinated high-risk subjects presenting in the early/viral phase of illness. We concur with the findings of Chaudhary et al. that remdesivir may be associated with a reduction in hospitalization duration. However, we have reservations regarding the timing of remdesivir, which could have been analyzed and presented.

Additionally, different durations of remdesivir courses have been analyzed from 10 to 5 to 3 days. Considering the noninferiority of a 5-day remdesivir course, the availability of similar data from the index study could have added value to the current evidence. The data regarding the ideal duration of remdesivir use among Indian subjects is still missing. Similarly, the timing of the treatment initiation by reporting the illness’s duration at the time of presentation could have made the readers wiser. Finally, the dose of steroids and other immunomodulatory agents like tocilizumab and tofacitinib could have been analyzed, given that these agents were commonly used during the mentioned time period.

In contrast to the current evidence, All India Institute of Medical Sciences/Indian Council of Medical Research national task force on COVID-19, in their latest version, recommend the use of remdesivir in moderate to severe cases. Evidence exists for the contrary, which supports the use of remdesivir in the early phases of viral illness. Similarly, the duration as well is recommended for 5 days, whereas the only study demonstrating mortality benefit with remdesivir has used it for only 3 days.

In conclusion, we would like to highlight that, in support of evidence-based medicine, remdesivir use should be restricted to cases who are at high risk and for 3 days only. Judicious and timely use of remdesivir will improve equity in availability and reduction in futile use of remdesivir.

**Contributorship Statement**
The conception was done by PKS and OK. PKS and OK wrote the manuscript. Proofreading was done by DC. PKS is the overall content guarantor.

**Manuscript Approval Statement**
The final submitted manuscript has been read and approved by all authors.

**References**