

LETTER

Infectious Diseases

Dexamethasone in COVID-19: Should we consider a "golden hour" practice?

Letter to editor

The coronavirus disease 2019 (COVID-19) represents a great challenge for healthcare systems worldwide. More than 115 million people have been infected, while approximately 2.5 million deaths have been recorded, since the beginning of the pandemic. Although the majority of patients presenting to healthcare departments appear with moderate disease, they tend to abruptly—within hours—deteriorate, in line with a progressing uncontrollable hyper-inflammatory response, leading to acute respiratory distress.¹ This timing usually coincides with approximately 8–11 days following symptom initiation, when most cases seem to present respiratory failure, despite well-tolerated hypoxia on admission. In this context, emergency departments bore a significant burden during respective pandemic waves, facing long queues of commonly severely affected patients, requiring admission and immediate management.² It is only reasonable to assume that—as for all other diseases—high rates of case presentation do not always allow for timely intervention and transfer to COVID-19 ward or intensive care unit, resulting in hours of delay and potentially loss of critical time.

At the same time, despite intense global efforts, only corticosteroid use, that is, dexamethasone has been shown to improve outcomes in terms of mortality rates in patients with COVID-19.^{3,4} Dexamethasone represents a cheap drug, easily stored and administered in any site, hence contrary to other COVID-19-related interventions, is readily available in emergency departments or primary care units. At the moment, it seems that no other intervention, either antiviral or immune-modulating, significantly differentiates outcomes.⁵ However, it seems that timing of dexamethasone administration is critical, but still under discussion. Contrary to findings suggesting earlier therapy demonstrates significant benefit,⁶ recent data did not find a mortality benefit when treatment was initiated prior to 72 hours from admission.⁷ Similar to RECOVERY trial,⁵ the latter study⁷ underlined once again the importance of administration following 7 days of symptoms, nonetheless did not manage to discriminate between patients that indeed presented within this time frame, hence would benefit from early corticosteroid use, even if given within 24 hours of presentation.


That said, we hypothesise that a "golden hour" similar to sepsis may apply for COVID-19 management. We suggest that early dexamethasone administration within the emergency department, as soon as a positive case is identified, is important in the context of imminent abrupt deterioration, in the presence of existing hypoxia, if

patients do present symptoms over a 7-day period.⁷ Similar to sepsis, that timely antibiotic administration is critical in improving survival rates,⁸ we support that COVID-19 patients presenting not so early at the course of disease, especially in presence of risk factors; hence at high risk of rapid deterioration,¹ should be considered as candidates for dexamethasone administration on site, before completion of time consuming diagnostic procedures that precede admission, including imaging.

In view of an ongoing pandemic, still struggling with mortality rates, design of a randomised clinical trial of that sort is feasible and could provide life-saving information in the future.

DISCLOSURE

The authors declared no conflict of interest.

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