

COMMENTARY

Corticosteroids for treating mild COVID-19: opening the floodgates of therapeutic misadventure

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As India continues to witness an unprecedented surge in cases of COVID-19,¹ the overburdened healthcare system of this developing country is being stretched thin. A deluge of critically ill patients has also led to an acute shortage of beds in many parts of the country.² While, mild COVID-19 cases are predominantly managed at home, the fear of progression of disease, in a backdrop of scarce health-resources, have led to massive rise in use of steroids, with or without the endorsement of local³ and national guidelines.⁴

To be sure, the use of steroids in COVID-19 is predicated on the mortality benefits accrued in only moderate and severe COVID-19 cases.⁵ No study, to date, has shown any tangible benefits of use of steroids in mild cases. Rather, some evidence suggests potential harm of steroids, when used in non-severe cases of COVID-19.⁶ However in India, use of steroids is being wilfully extended to cases of mild COVID-19, especially those with persistent fever or elevated inflammatory markers, increased 'severity' on computed tomography of thorax, persistent cough or fatigue—to name a few indications. This practice may have been further bolstered by guidelines, which recommends the routine use of steroids in mild COVID-19.³ While some guidelines are more cautious in their approach, suggesting steroids in prolonged symptoms (fever >7 days, worsening cough and breathlessness) and only after consultation with trained physicians⁴—the general mood seems to be in the favour of using steroids as a panacea even in mild forms of Covid-19.

Steroids have been used in only a few infectious diseases—after exercising due diligence. Steroids are used in severe forms of tubercular meningitis or pericarditis and pneumocystis jiroveci pneumonia^{7,8}—but only after robust trials have suggested a favourable risk-benefit ratio, and always in conjunction with specific anti-microbials. It is used in mild COVID-19 is fraught

with numerous risks and has far-reaching implications. First, it has the potential of augmenting viral replication, especially if used in the early phases of disease and causing significant harm to the patients. Second, it increases chances of causing life-threatening side-effects like hyperglycaemia, secondary infections as well as reactivation of latent infections—which can go unmonitored in a home-care setting. Third, the overuse contributes directly to shortage of steroids in pharmacies and hospitals, affecting the treatment of hospitalized patients of COVID-19⁹—who stand to benefit the most from this drug. Last, the widespread use, in the absence of any meaningful data, exposes a perilous trend to subvert the tenets of evidence-based medicine. Interestingly, use of steroids for persistent or recurrent fever—one of the common 'indications' in India, is based on the perceived risk of progression to severe disease. In a study by Ng et al.,¹⁰ persistent fever and saddle-back fever has been shown to be risk factors for severe disease. However, the outcome of hypoxia occurred in only 27.8% (persistent fever group) and 14.3% (saddle-back fever) patients. Also, the observational study did not address the effectiveness of any drug including steroids. No trial, incidentally, has shown that prophylactic steroids are helpful to prevent progression of mild cases. Even if it is theoretically 'deemed' to be effective in preventing progression in some patients, it seems unreasonable, to use steroids in all patients of persistent and recurrent fever of mild COVID-19 to 'prevent' hypoxia—when hypoxia itself is seen in a minority of cases.

The use of steroids for mild COVID-19 is further fuelled by the free availability of steroids as an over-the-counter drug in India. Most COVID-19 patients are mild (80–90%)—where only symptomatic treatment is recommended globally. Widespread use of steroids in this group of patients, for dubious indications, will entail use of a potentially harmful drug in millions of

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people—with unknown and potentially harmful consequences. Till the time well-designed trials address and prove the merit of steroids in mild COVID-19, it is imperative to exercise caution in its use— and relying on both evidence and common sense, to lead the fight against the pandemic.

Conflict of interest. None declared.

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