

Advisory for rational use of Steroids and Tocilizumab in the treatment of Covid - 19 patients

MOHFW, AIIMS and ICMR have jointly issued treatment guidelines for Covid-19 patients in the form of a guidance/ algorithm on 23.4.2021 available at: <https://www.mohfw.gov.in/pdf/COVID19ManagementAlgorithm22042021v1.pdf>. This guidance/ algorithm is easy to understand, practice and is widely followed. But this guidance/ algorithm does not prevent misuse/ overuse of Steroids and Tocilizumab.

The purpose of this document is to stop the irrational use/ over use of Steroids and Tocilizumab (experimental/ off – label drug). For this reason, Joint Monitoring Group under the Chairmanship of DGHS took into account the following facts:

Steroids:

In the most recent guidelines published by the Infectious Diseases Society of America (IDSA), updated on 14th April 2021, steroids were strongly recommended for treatment of hospitalized moderately severe and critically ill* Covid 19 cases.¹

Steroids are indicated for treatment of moderate and critically ill hospitalized cases.

Recommended dose: Dexamethasone 6 mg IV or per oral for 10 days (or until discharge) or equivalent glucocorticoid dose may be substituted if dexamethasone is unavailable: by Methylprednisolone 32 mg (per oral or IV) or 50 mg hydrocortisone intravenously every 8 hours or Prednisone 40 mg (per oral).

Evidence from observational studies suggests that steroids prolong viral shedding, and that use of high-dose steroids is associated with increased mortality as compared to low-dose steroids in patients with severe COVID-19. Use of steroids even for short duration (less than 14 days) is associated with increased incidence of complications such as Hyperglycaemia, GI bleeding, sepsis, heart failure as well as risk of reactivation of latent infections like Hepatitis B Virus, Herpes Simplex Virus and Tuberculosis.

Therefore, steroid are not indicated and may be harmful in mild and asymptomatic cases (with SpO₂ > 93% and not requiring supplemental oxygen).²

In view of the above, Physicians/ Doctors are advised to exercise **extreme caution** in using Steroids on Covid – 19 patients to curtail it's overuse/ irrational use.

References:

1. ¹Bhimraj A, Morgan RL, Shumaker AH, et al. Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. Infectious Diseases Society of America 2021; Version 4.2.0 : <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management>.
2. World Health Organization, 2020. WHO/2019-nCoV/Corticosteroids/2020.1

Inhalational Budesonide:

An open-label, parallel-group, phase 2, randomised controlled trial (Steroids in Covid - 19; STOIC) of inhaled budesonide, compared with usual care, in adults within 7 days of the onset of mild COVID-19 symptoms, demonstrated that early administration of inhalational Budesonide in the dose of 2 puffs of 400 µg twice daily reduced the likelihood of need for urgent medical care and also reduced time to recovery (low quality of evidence).

Use of inhalational budesonide is conditionally recommended in the dose of 1600 µg / day (400 µg/ 2 puffs twice daily) in patients having mild disease(oxygen saturation more than 93%) and persistent cough.

Tocilizumab

This has been advised by joint team of AIIMS, ICMR and JMG as an off – label drug for use only in severe and critically ill patients of Covid – 19.

Tocilizumab is an immunosuppressant. It's use is indicated in severe Covid – 19 disease, if the patient is not improving despite administration of Steroids, and has significantly raised inflammatory markers (C Reactive Protein \geq 75 mg/L).¹. It may be used after 72 hours of using steroids if patient does not show any improvement and requires increasing ventilatory support to maintain SpO₂ > 92%. However, care should be taken by the treating physician/ intensivist to ensure that the patient is not having any bacterial/ fungal/ tubercular infection at the time of administration of tocilizumab.

Dosage: single dose of 8 mg/kg body weight (not more than 800 mg) in 100 ml normal saline over one hour.

In view of the above, Physicians/ Intensivists are advised to exercise extreme caution while using Tocilizumab to prevent it's overuse/ irrational use.

Reference:

1. Bhimraj A, Morgan RL, Shumaker AH, Lavergne V, et al. Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. Infectious Diseases Society of America **2021**; Version 4.2.0. Available at: <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>.