

MSHS COVID-19 CORTICOSTEROID GUIDELINE

BACKGROUND:

The overall mortality for patients with COVID-19 is high and even greater in those who require invasive mechanical ventilation.^{1,2} A substantial portion of patients with confirmed COVID-19 infection will develop a respiratory illness, which will require hospitalization and need for oxygen support. The Society for Critical Care Medicine (SCCM) initially provided a conditional, weak recommendation in favor of glucocorticoids in severe ARDS.³ Despite initial controversy regarding the administration of systemic corticosteroids, emerging literature shows that systemic corticosteroids may reduce overall mortality, ICU length of stay and duration of hospitalization.⁴⁻¹⁰ The U.K. RECOVERY trial showed that use of dexamethasone reduced mortality by 33% in patients on invasive mechanical ventilation and by 20% in those requiring O₂ without invasive ventilation.⁷ Based on the current literature, the guidelines below are recommendations on criteria for administration and dosage.

CRITERIA:

1. COVID-19 confirmed
2. Need for supplemental oxygen (peripheral oxygen saturation <92%) either in the form of low flow oxygen, high flow oxygen, invasive or non-invasive ventilation
3. Absence of major contraindications

DOSING

1. Dexamethasone 6mg PO or IV daily for up to 10 days
Alternative: Methylprednisolone 40mg IV daily or Prednisone 40mg oral daily for up to 10 days

OTHER CONDITIONS

1. Refractory septic shock: Hydrocortisone 50mg Q6h +/- fludrocortisone 0.1 mg/day.
2. Steroid-responsive obstructive lung disease: methylprednisolone/prednisone dosing as per usual practice.

CONSIDERATIONS:

1. Corticosteroids use has NOT been shown to be beneficial in COVID-19 patients who do not require respiratory support and can be potentially harmful.
2. Benefit of corticosteroids are seen in patients with >7 days since symptom onset. A risk-benefit assessment should be performed in those with advanced age.
3. Systemic steroid use is cautioned against in the setting of active bloodstream infections including fungemia. Hyperglycemia and secondary infections are the most common adverse effect with corticosteroid use.
4. Please note that gastrointestinal perforation is a reported adverse effect with the concomitant use of corticosteroids and tocilizumab (IL-6 inhibitor).
5. Clinical questions regarding initiation or dosing of corticosteroids should be addressed to Pulmonary and Infectious Disease consultants.

REFERENCES:

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