

SCCM AND ESICM GUIDELINES FOR THE DIGNOSIS AND MANAGEMENT OF CRITICALLY ILLNESS - RELATED CORTICOSTEROID INSUFFICIENCY (CIRCI)

DIAGNOSIS:

Is total cortisol response to synthetic adrenocorticotrophic hormone (ACTH; cosyntropin) superior to random plasma or serum total cortisol for the diagnosis of CIRCI?

- Recommendation: The task force makes no recommendation regarding whether to use delta cortisol (change in baseline cortisol at 60 min of $<9 \mu\text{g/dl}$) after cosyntropin (250 μg) administration or a random plasma cortisol of $<10 \mu\text{g/dl}$ for the diagnosis of CIRCI.

Is plasma or serum free cortisol level superior to plasma total cortisol level for the diagnosis of CIRCI?

- Recommendation: We suggest against using plasma free cortisol level rather than plasma total cortisol for the diagnosis of CIRCI.

SEPSIS:

Should corticosteroids be administered among hospitalized adult patients with sepsis without shock?

- Recommendation: We suggest against corticosteroid administration in adult patients with sepsis without shock (conditional recommendation, moderate quality of evidence).

Should corticosteroids be administered among hospitalized adult patients with septic shock?

- Recommendation: We suggest using corticosteroids in patients with septic shock that is **not responsive to fluid and moderate- to high-dose vasopressor therapy**.

What is the recommended dose and duration of treatment among hospitalized adult patients with septic shock treated with corticosteroids?

- Recommendation: We suggest using IV hydrocortisone $<400 \text{ mg/day}$ for ≥ 3 days at full dose rather than high dose and short course in adult patients with septic shock.

ARDS:

Should corticosteroids be administered among hospitalized adult patients with acute respiratory distress syndrome?

- Recommendation: We suggest use of corticosteroids in patients with early moderate to severe ARDS ($\text{PaO}_2/\text{FiO}_2$ of < 200 and within 14 days of onset)

- The task force suggested that methylprednisolone be considered in patients with early (up to day 7 of onset; PaO₂/FiO₂ of <200) in a dose of 1 mg/kg/day and late (after day 6 of onset) persistent ARDS in a dose of 2 mg/kg/day followed by slow tapering over 13 days.

This is from me. The pendulum is back in this regard. They are supporting the use of corticosteroids in ARDS based on Meduri's work including a recent individual patient data (IPD) analysis of the four largest trials ($n = 322$) investigating prolonged methylprednisolone treatment in early and late (on and after day 7 of onset) ARDS confirmed trial-level data demonstrating benefit with corticosteroids, with improved survival and decreased duration of mechanical ventilation.

With the exception of hyperglycemia (mostly within the 36 h following an initial bolus), prolonged glucocorticoid treatment was not associated with increased risk for neuromuscular weakness, gastrointestinal bleeding, or nosocomial infection

COMMUNITY ACQUIRED PNEUMONIA:

Should corticosteroids be administered to hospitalized adults with community-acquired pneumonia (CAP)?

- Recommendation: We suggest the use of corticosteroids for 5–7 days at a daily dose < 400 mg i.v. hydrocortisone or equivalent in hospitalized patients with CAP

INFLUENZA:

Should corticosteroids be administered to hospitalized adults with influenza?

- Recommendation: We suggest against the use of corticosteroids in adults with influenza

MENINGITIS:

Should corticosteroids be administered to hospitalized adults with bacterial meningitis?

- Recommendation: We recommend use of corticosteroids in patients with bacterial meningitis

CARDIOPULMONARY BYPASS SURGERY:

Should corticosteroids be administered in adults undergoing cardiopulmonary bypass surgery?

- Recommendation: We suggest use of corticosteroids in patients undergoing cardiopulmonary bypass surgery

CARDIAC ARREST:

Should corticosteroids be administered to adults who suffer a cardiac arrest?

- Recommendation: We suggest use of corticosteroids in the setting of cardiac arrest