Corticosteroids in Sepsis, ARDS, and CAP

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Educational background

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Professional experience

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This presentation provides updated recommendations for the use of corticosteroids in critically ill patients with sepsis, acute respiratory distress syndrome (ARDS), and community-acquired pneumonia (CAP). For sepsis, the panel conditionally recommends corticosteroid therapy for patients with septic shock who remain hypotensive despite adequate fluid resuscitation and vasopressor support. This recommendation is supported by trials showing hydrocortisone improves shock reversal and reduces vasopressor requirements, though mortality benefits remain less consistent across studies. The panel strongly recommends against the use of high-dose, short-duration corticosteroids in sepsis, as such regimens have been associated with increased adverse events and no survival advantage.

In ARDS, the panel conditionally recommends corticosteroid therapy for critically ill patients. Clinical studies, including those on methylprednisolone and dexamethasone, have demonstrated improved oxygenation, shorter duration of mechanical ventilation, and potential mortality reduction. However, evidence remains heterogeneous, and uncertainty persists regarding the optimal corticosteroid molecule, dose, and treatment duration, preventing more specific guidance.

For CAP, the panel makes a strong recommendation for corticosteroid use in hospitalized patients with severe disease. Randomized trials and meta-analyses consistently show reduced mortality, shorter hospital stays, and decreased progression to mechanical ventilation among patients receiving corticosteroids. In contrast, no recommendation was made for patients with non-severe CAP, as available data do not indicate clear benefit.

Overall, the guideline underscores that corticosteroids play a significant role in managing septic shock, severe ARDS, and severe CAP, with benefits ranging from hemodynamic stabilization to improved respiratory outcomes. The recommendations highlight the importance of disease severity in guiding therapy and caution against indiscriminate use, particularly high-dose or short-duration regimens in sepsis and in less severe CAP.