Clinical Focus: Pulmonary and Respiratory Conditions - *Review*

The role of steroids in severe CAP

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ABSTRACT

Community-acquired pneumonia (CAP) is a leading cause of morbidity and mortality despite adequate antibiotic therapy. It is the single most common cause of infection-related mortality in the United States. An exaggerated host inflammatory response can potentially be harmful to both the lung and host, and has been associated with treatment failure and mortality. Modulation of inflammatory response may, therefore, be theoretically beneficial. The anti–inflammatory and immunosuppressive effects of steroids seem an attractive therapeutic option in severe CAP patients. Available datapoint to overall shorter time to clinical stability and decreased length-of-stay in CAP patients, with a potential mortality benefit in severe CAP. The level of evidence is, however, low to moderate regarding mortality due to high heterogeneity and insufficient power of data. Furthermore, steroids were deleterious in influenza pneumonia and in patients with pneumococcal pneumonia data suggest a lack of efficacy and potential harm. Both European and American guidelines recommend not using corticosteroids in CAP. Patients who might benefit and those that can be harmed from steroids remain to be clearly identified, as does the ideal steroid for CAP patients, based on pharmacokinetic and pharmacodynamic properties. It is essential for future studies to avoid the same methodological bias present in the available data so that high-quality evidence on the true role of steroids in CAP can be provided.

KEYWORDS: Community-acquired pneumonia steroids outcomes mortality