CHEST

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Adjunctive Systemic Corticosteroids for Severe Community-Acquired Pneumonia

To the Editor:

A systematic review and meta-analysis by Wan et al[1] in *CHEST* concerning adjunctive corticosteroid therapy for patients with community-acquired pneumonia (CAP) impressed us greatly, because our meta-analysis on exactly the same topic was just published in September 2015.[2] There has been heated discussion concerning the efficacy and safety of corticosteroid treatment of CAP since Torres et al[3] and Blum et al[4] reported results from moderate- and large-size randomized trials in early 2015. Siemieniuk et al[5] also conducted a systematic review and meta-analysis on the same topic, published in October 2015.

Among the three meta-analyses,[1,2,5] there is no discrepancy concerning the following points: adjunctive corticosteroids (1) do not decrease death in the overall population, (2) shorten the length of hospital stay, (3) shorten the time to clinical stability, and (4) prevent acute respiratory distress syndrome. However, the three meta-analyses were not in complete agreement on whether adjunctive corticosteroids can prevent death in severe CAP subgroups. While Siemieniuk et al[5] and our paper[2] suggested that corticosteroids can potentially prevent 60% of deaths in severe CAP, Wan et al[1] suggested that corticosteroid treatment is not associated with decreased mortality rates in patients even with severe CAP. This discrepancy basically stemmed from how the researchers classified the severity of disease in patients in each original meta-analysis. In meta-analyses, researchers often have difficulty making subgroups on the basis of patient background characteristics. In the current topic, the authors of the original studies used a variety of descriptions about CAP severity: intensive care unit cases, American Thoracic Society criteria, British Thoracic Society criteria, CURB-65 (confusion, urea nitrogen, respiratory rate, blood pressure, and age 65 years or older) score, pneumonia severity index score, and severity based on authors' judgment. Furthermore, some authors of the original reports did not comment about CAP severity.[1,2,5] Even though Wan et al[1] did not conclude that corticosteroids decreased death in severe CAP, the L'Abbé plot in their study indicated a possible advantage of corticosteroids in most patients with severe CAP.

Whether corticosteroid treatment reduces death from severe CAP needs to be further evaluated in a randomized controlled trial focusing on severe CAP. In either case, corticosteroid treatment is indicated for severe CAP because it is beneficial when considering the length of hospital stay, the length of time to clinical stability, and the risk of acute respiratory distress syndrome. We hope adjunctive corticosteroids will support millions of patients with severe CAP.

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