Reviewer’s report

Title: Etiology and Outcome of Severe Community Acquired Pneumonia in Immunocompetent Adults.

Version: 1 Date: 7 August 2012

Reviewer: James D Chalmers

Reviewer’s report:

This is a retrospective study of 189 patients with “severe community-acquired pneumonia”. The aim of the study is to describe the etiology and outcome of patients with severe CAP in a South Asian population.

The study is retrospective without standardised microbiological testing limiting the usefulness of the data. The sample size is relatively small and I suspect strong conclusions cannot be made from 47 patients with positive cultures. I have a few general comments and questions

Comments:

1) It is important to be clear in the definitions of severe community-acquired pneumonia. The abstract says the study defined SCAP according to the ATS definitions but the introduction talks about SCAP referring to studies like Hirani et al which used ICU admission as the definition of SCAP.

2) The study methods say the authors used the ATS 2001 guidelines to define SCAP but the subsequent paragraph lists some of the 2001 criteria and some from the IDSA/ATS 2007 criteria for SCAP. The authors do not indicate how many minor criteria were required to qualify as SCAP.

3) Results: how many patients were screened during this period to identify 189 patients with SCAP, how many patients were excluded and why? A flow chart would be quite useful to demonstrate how patients were included in the study.

4) The authors should show where the organisms were isolated from. I presume that many of the Staph aureus and Pseudomonas were found in sputum and less commonly observed in bacteraemic infection.

5) How was hospital acquired pneumonia or VAP excluded? Of the 47 patients with an identified organism, at what stage of their admission was the organism isolated? The high incidence of Staph and Pseudomonas which are typically hospital acquired organisms make me wonder if these organisms were isolated late in admission due to hospital acquired superinfection. Can the authors clarify when the organisms were found and where from?

6) Only ¼ of the study population isolated an organism, which is low. This may represent selective testing in patients with more severe illness and is an important limitation of the study
7) Were all patients admitted to the ICU?

8) No details are provided on what was adjusted for in the multivariable analysis.

9) Did the authors consider evaluating the concept of healthcare associated pneumonia according to the ATS 2005 guidelines? A high proportion of patients seem to have received prior antibiotics and may have had previous hospitalisation. Some report higher frequencies of staph aureus and pseudomonas in these patients.

10) Can the authors perform an analysis of risk factors for staph aureus or pseudomonas to show the characteristics of these patients?

Abstract: consider including the dates of the study in the abstract. Indicate which ATS guidelines the SCAP definition was taken from.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests