Reviewer’s report

Title: Pneumococcal pneumonia: differences according to blood culture results

Version: 3 Date: 15 April 2014

Reviewer: Rein Jan Piso

Reviewer’s report:

major compulsory revisions.

This is an interesting study showing differences between bacteriemic and non bacteriemic pneumococcal pneumonias. There are some issues that should be clarified:

In the methods is is not all that clear how patients were selected. Bacteremia in patients with pneumonia is relatively low, normally around 10 %. thes sensitivity of Pneumococcal antigen is not much higher, especially in non bacteremic patients. It therefore should be clarified: how much patients with pneumonia were screened and how much of them had either positive BC or positive Urin AG.

Discussion: the impact of double therapy on mortality is mainly seen in patients with severe pneumonia. However the spanish thoracic society is quite aggressive in there policy arguing with: " Furthermore, there could be patients who meet the admission criteria for ICU and are hospitalised in a conventional ward. Provided that in this case patients could benefit from a more aggressive antibiotic treatment, it is advisable to administer combination antibiotics instead of monotherapy". So I would recommend that the topic of antibiotic treatment not meeting the guidelines should be clarified.

Patients with pneumococcal pneumonia in whom the diagnosis was made with sputum culture only where not included. This should be mentioned and also discussed when comparing the data with other studies, especially when the criteria for non bacteremic pneumococcal pneumonia differed.

The higher mortality rate may be due to higher inflammatory reactions. It would be interesting if higher admission/peak CRP/WBC/PCT levels could be found in bacteremic patients.

Blood urea nitrogen were higher in bacteremic patients. This means that probably they were more severely dehydrated. This should be discussed. It would even be interesting if the mortality would still be higher if the values would be corrected for Blood urea nitrogen.

Level of interest: An article of importance in its field

Quality of written English: Acceptable
**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'