Author's response to reviews

Title: Pneumococcal pneumonia: differences according to blood culture results

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Version: 4 Date: 6 June 2014

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Responses to the specific comments of the reviewers.

1- Please include mention of congestive heart failure as a significant variable in the text description of Table 1.

Response:

According to the reviewers’ suggestion, we have already included congestive heart failure as a significant variable in the text description of Table 1 (page 10, section “Results”, 1st paragraph).

2- Please comment on whether female sex is a significant factor in the other studies cited and why this may be

Response:

As the reviewer suggests, we have already included the comment about sex differences (page 12, section “Discussion”, last paragraph)

3- In the methods, please clarify how patients were selected: how much patients with pneumonia were screened and how much of them had either positive BC or positive Urine AG

Response:
We have modified the text to clarify how the patients were selected (page 5, section “Material and Methods: study population, design and setting”, 1st paragraph).

The total of patients with bacteremic and non-bacteremic pneumococcal pneumonia are shown on page 10, section “Results”, 1st paragraph.

4- In the discussion: the Spanish Thoracic Society is quite aggressive in their 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 the topic of antibiotic treatment not meeting the guidelines should be clarified.

Response:
Following the reviewer’s suggestion, we have clarified this topic (page 6, section “Materials and methods: study variables”, last paragraph).

5- Patients with pneumococcal pneumonia in whom the diagnosis was made with sputum culture only were 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.

Response:
Diagnosis only based on sputum culture is controversial due to both nasopharyngeal carriage of pneumococci in healthy individuals and inadequate sputum specimen collection (inability of patients to produce good specimens; delay in transport and processing). A method of diagnosing pneumococcal pneumonia that does not depend on sputum culture is desirable.

Taking the reviewer’s suggestion into account, now this question is mentioned and also discussed in the text (page 15, section “Discussion”, 1st paragraph).

6- 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.

Response:
This interesting question is not included in the objectives of our study.

7- Blood urea nitrogen were higher in bacteremic patients. This means that probably they were more severely dehydrated. This should be discussed.

Response:
Older people with pneumonia had elevated risk for hospitalization with dehydration.

As the reviewer suggests, we have included this question in the discussion (page 12, last paragraph, page 13, 1st paragraph, section “Discussion”).