Reviewer’s report

Title: The Utility of Endotracheal Aspirate Bacteriology in Identifying Mechanically Ventilated Patients at Risk for Ventilator Associated Pneumonia: a Single-Center Prospective Observational Study

Version: 0 Date: 26 Feb 2019

Reviewer: Cristina Dominedo

Reviewer's report:

This is a single center prospective observational study focusing on the association between bacterial colonization and VAP development in mechanically ventilated patients. The authors found that 32.4% of patients heavily colonized with S. aureus developed VAP associated with S. aureus compared to 17.6% of those slightly colonized. The same trend was found in patients heavily and slightly colonized with Gram negative pathogens (30% and 0% respectively). The paper is well written and the findings are interesting since they support the use of surveillance cultures for the early detection of VAP. Authors should do an effort to report more clinical variables which does matter in this subset, such as comorbidities, previous antibiotic use, empirical antibiotic treatment.

Mayor comments

* The authors define the aim of the study. Could the authors state what the hypothesis of the study was and define exclusion criteria?

* Could the authors state the primary outcome of the study? Are there any secondary outcomes?

* Could the authors provide more details regarding the statistical analysis? How are variables reported? How was the level of significance set?

* Could the authors provide more details about the baseline characteristics of the study population? (Smokers, previous antibiotic use, previous corticosteroids use, comorbidities, severity scores)

* What was the rate of MDR pathogens in the three ICU involved in the study?

* Was SDD administered?
* Could the authors provide data regarding empiric antibiotic therapy?

Minor comments

Pag. 3 line 66: I suggest correcting the sentence as follows: "In the case of VAP radiological and clinical signs…"


Pag. 3 lines 97-98: How were MDR pathogens defined?

Pag. 4 line 108: How data were collected?

Pag. 5 line 124: Were other samples collected for VAP diagnosis?

Pag. 6 line 151: I suggest changing the title since the paragraph refers to all pathogens isolated in ETA cultures.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.