Reviewer’s report

Title: Early onset respiratory infection in patients admitted in intensive care unit: a case-control study on risk factors, microbiological profile and effectiveness of first intention antibiotic therapy

Version: 1 Date: 11 May 2007

Reviewer: Josep-Maria Sirvent

Reviewer’s report:

REVIEW REPORT

1. Minor Essential Revisions:

1.1 General comments.
The study that is presented by Cardoso T, et al. is of moderate interest. It is a retrospective case-control study of respiratory infection in Intensive Care Unit and specifically early-onset respiratory infection. The reviewer identifies some questions for the authors to answer regarding this manuscript. The objective of the study is not clearly defined: ‘To identify possible risk factors for the development of an ERI and to review…’. The authors have not stated exactly what risk factors will be analyzed. More risk factors analyzed are represented by a lower percentage and are trivial in this investigation. This point is crucial to interpret cause-effect significance of the risk factors considered for the development of ERI. They considered risk factors (re-OTI and tracheostomy) that can not be risk factors for ERI because they don’t have a temporary precedence, usually both factors act after the fifth day. The study should be written and presented (tables) in a more simple way and with a univariate statistical analysis less exhaustive so that it will be more coherent.

1.2 Introduction.
The problem and the objectives are exposed correctly.

1.3 Methods.
The methods are appropriate but they are not accurately defined, there’s a lack of details for the risk factors considered as well as risk factors for development of ERI. They should explain the criteria considered for including some risk factors with influence in late-onset pneumonia: re-intubation and tracheostomy. The authors should make a more extend description of the statistical analysis applied. The study could benefit of an adjusted multivariate model.

1.4 Results.
From my point of view, I believe that the data presented is correct. They should present an initial table with all studied population’s characteristics. The results presented are too extensive (table 2, 3 and 4) and not correctly expressed. They should eliminate of the study those risk factors with few elements and not relevant for this investigation. The quantitative variables results should be expressed with mean?SD or median and compared with Student’s t-test or Mann-Whitney U test (table 7).

1.5 Discussion.
Discussion and conclusions are well structured. However, the authors should discuss in a more extended way the previous articles about early-onset pneumonia as Rello et al. (Am J Respir Crit Care Med 1999) and Sirvent et al. (Intensive Care Med 2000).

1.6 Title and abstract.
The title could be better: 'A case-control study on risk factors for early-onset respiratory infection in patients admitted in ICU'. Once revised the complete manuscript, I consider that the authors should re-write it and structure the abstract again.

1.7 References.
Please check carefully the accuracy of the references format: review the references 4, 9, 10, 11, 12 and 14.
2. Finally, in my opinion I think that this paper should be considered:

- Acceptable for publication if the authors make a suggested minor essential revisions.

**What next?:** Accept after minor essential revisions

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

Declaration of competing interests:

- 'I declare that I have no competing interests'.