**Author's response to reviews**

**Title:** A CASE-CONTROL STUDY ON RISK FACTORS FOR EARLY-ONSET RESPIRATORY TRACT INFECTION IN PATIENTS ADMITTED IN ICU

**Authors:**

Teresa C Cardoso (cardoso.ymc@gmail.com)
Luis M Lopes (l.moreiralopes@sapo.pt)
Antonio H Carneiro (a.carneiro.ucip@hgsa.min-saude.pt)

**Version:** 2 **Date:** 29 June 2007

**Author's response to reviews:**

Dear sirs,

According to the revisors letters we have rewrite the article with particular incidence on the points raised. We have changed the title, the abstract, re-do the statistics which lead to the re-write of the methods and results, and the review of the discussion and updat of the references.

Please check bellow a point by point answering to the revisors:

1st Reviewer's report

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

**Version:** 1 **Date:** 2 January 2007

Reviewer: Surinder K Jindal

Reviewer's report:

1. One important issue which concerns me most is the methodology employed by the authors for analysis of the risk factors. Unfortunately, they have used univariate logistic regression analyses. This is likely to give fallacious results when a large number of variables are being analysed. Several of the causal variables are not really independent in predicting the outcome of the study. A multivariate logistic regression analysis with adjustment of several co-variables should be used to determine the significance of risk factors.---> we re-do the statistics of this study according to the revisors suggestions.

2. The other issue is related to the choice of the risk factors. It is not clear
whether the risk factors which have been analysed were present before the onset of infection. At least some of the variables may actually occur because of rather than being responsible for the infection. --> the risk factors were also reviewed.

2nd Reviewer's report

Early onset respiratory infection in patients admitted in intensive care unit: a case-control Title: 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 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. --> we have review the risk factors according to the reviewers suggestions.

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. --> we have reviewed and rewritte the methods.

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. --> we did.
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. --> done
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). --> done

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). --> done

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'. --> accepted with pleasure
Once revised the complete manuscript, I consider that the authors should re-write it and structure the abstract again. --> done

1.7 References.
Please check carefully the accuracy of the references format: review the references 4, 9, 10, 11, 12 and 14. --> done

Reviewer’s report
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: 9 May 2007
Reviewer: Ata Nevzat Yalcin
Reviewer's report:

General

1. Distribution of microorganisms according to clinic (tracheabronchitis vs pneumonia) must be exhibited. --> done

1. Instead of respiratory infections, respiratory tract infections must be used. --> corrected
2. More recent references must be used. --> done

Discretionary Revisions (which the author can choose to ignore)--> done