Reviewer’s report

Title: Ventilator-associated pneumonia incidence in intensive care units within the first 48 hours after hospital admission: a surveillance-based study

Version: 1 Date: 7 April 2011

Reviewer: Saad Nseir

Reviewer’s report:

The authors analyzed data from a large prospective surveillance database in order to estimate VAP incidence during the first two days of mechanical ventilation. They used Poisson regression model and reported that the proportion of missed VAP during the first 48h of mechanical ventilation was 11%.

In fact, few data is available on pneumonia developing during the first 48h of mechanical ventilation. The strength of this study is the large number of included patients and high selected population allowing exclusion of some potential confounders. In addition, study limitations are recognized and discussed by the authors.

Major Compulsory Revisions:

1. In method section, authors stated that patients were eligible if they were intubated or tracheostomized during the first 24h after ICU admission. How many patients were tracheostomized during the first 24h of ICU admission? Further, in page 9, line 6 they stated that VAP incidence was expressed as the number of events per 1000 patient-days of exposure to ETT. I would suggest replacing exposure to ETT by exposure to invasive mechanical ventilation since some patients were tracheostomized. In addition, throughout the manuscript patient-days should be replaced by invasive mechanical ventilation days.

2. In discussion section, authors suggested that prevention of very early pneumonia might be different from that of early-onset or late VAP. Please clarify. Do you suggest using prophylactic antibiotics? Improving intubation procedure?..

3. The percentage of trauma patients should be given.

4. In Table 1, it seems that VAP incidence increased during the study period. Please comment.

5. There is a discrepancy in inclusion criteria between abstract and methods. In abstract, authors stated that ICU length of stay >48 was an inclusion criterion. This criterion is not stated in Methods.

Specific comments

Abstract:
Methods:

Page 8, line 6: please define increased oxygen need.

Discussion

Page 12, line 7: “Gram-negative”

Page 12, line 7: what means which did not favour aspiration pneumonia?

**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