Reviewer's report

Title: Predictors of Mortality of Patients with Acute Respiratory Failure secondary to Chronic Obstructive Pulmonary Disease admitted to an Intensive Care Unit: A one year study

Version: 1 Date: 8 July 2004

Reviewer: Jean-Louis Vincent

Reviewer's report:

General
The authors report that the APACHE II score and serum albumin concentrations determined within 24 hours after ICU admission are the best predictors of mortality in patients with COPD admitted to their ICU in New Delhi. The discriminant value was excellent with an area under the ROC curve of 91.3%.

Although the data are not surprising, the paper is well written and the discussion is sound. The paper may benefit from a little more clinical information. Could hypoalbuminemia be due to particular disease states like cirrhosis?

Also, it would be nice to have a more complete list of the primary valuables that were included in the multivariable analysis. I suppose Table 2 only presents a partial list of these variables. Also the predictors of mortality should be best identified early after admission. As an example (referring to table 2), the time of development of sepsis is an important issue: Sepsis may in some patients represent a terminal, pre-morbid event. To push things to the limit, cardiac arrest is the best predictor of mortality… This remark of course does not invalidate the main result as both the APACHE II score and the albumin concentration were obtained within the first 24 hours after ICU admission, but they are pertinent for the data presentation: Data obtained during the first 24 hours after admission should be separated from those collected later during the ICU stay.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No