Reviewer's report

Title: Treatment of bloodstream infections in ICUs

Version: 3
Date: 23 July 2014
Reviewer: Benito Almirante

Reviewer’s report:

The authors of this article review the basis for selection of antimicrobial therapy in patients with BSI admitted to the ICU. The drafting of article contents is adequate and addresses most of the elements taken into account in clinical decision making in this clinical situation.

In order to improve its scientific content, authors should assess the following major compulsory revisions:

1) In the section "At the initiation of antimicrobial therapy" the authors has to include and comment the recent article by The Process Investigators (N Engl J Med 2014, 370:1683)

2) The arguments incorporated in the subsection of "Epidemiology of resistant bacteria" are very superficial and sometimes may be anecdotal, as referring to the choice of antimicrobial therapy in patients returning from endemic areas of ESBL Enterobacteriaceae. The authors need to incorporate accurate frequencies of multidrug-resistant organisms (MDROs) in different geographical areas (ex: EARSS data for Europe) or information in different areas (ex: ICU-acquired BSI vs acquired outside the vs ICU or community-acquired BSI)

3) In the Table 1 the importance of MDROs and its relevance to the selection of antimicrobial therapy is not specified

4) The scientific content of the subsection on "Timing of BSI versus hospital admission" is very superficial

5) The selection of antimicrobial therapy depending on the source of infection should be developed more precisely, with the inclusion of a table supporting the text, highlighting clear recommendation in each clinical situation (BSI from respiratory source, BSI from abdominal source, catheter-related bacteremia, between others)

6) The arguments favoring combined antimicrobial therapy in BSI of ICU patients are not precisely described. A recent study (Peña C, et al Clin Infect Dis 2013 Jul; 57 (2):208-16) was unable to demonstrate the superiority of combination therapy vs adequate monotherapy in a large cohort of patients with P. aeruginosa BSI

7) No mention is made to antifungal coverage in the initial empirical therapy of ICU patients with unidentified BSI

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 not competing interests to review this article.