Reviewer's report

Title: Ertapenem versus piperacillin/tazobactam for the treatment of complicated infections: a meta-analysis of randomized controlled trials

Version: 4 Date: 30 June 2009

Reviewer: Petros Rafailidis

Reviewer's report:

1. Is the question posed by the authors well defined? Yes
2. Are the methods appropriate and well described? Yes
3. Are the data sound? Yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? Yes
6. Are limitations of the work clearly stated? Yes
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes
8. Do the title and abstract accurately convey what has been found? Yes
9. Is the writing acceptable? Yes

Reviewer's report

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- Major Compulsory Revisions

1. Ideally, the contents of the tables should have been included in the meta-analysis figures and not in separate tables.
2. page 8: Please check that the word “thrombocytosis” is correct as “thrombocytopenia” is probably what is meant.
3. The last sentence of the conclusion in the abstract section is not a conclusion of what is presented. This sentence must be deleted as this is not concordant with IDSA guidelines.
4. The second sentence in the conclusion section (“The present . . . costs”) must be modified to “The present evidence suggests that the clinical use of ertapenem is associated with decreased emergence of antimicrobial resistance and lower costs.”
5. The manuscript needs extensive linguistic/typographic editing. I cite some of the modifications needed:
“Ertapenem” instead of “ertapenem”
“and” instead of “or”
“good” instead of “well”
Please leave one space after the dot after the second sentence in the results section of the abstract.
Please delete the word “casual”.
Please change font size.
Please delete “et al”.
Please change font size.
Please change font size in lines 3,4,7,8,9.
Please change “contact” to “contacted”.
Please replace “in fection” to “infection’.
Please leave a space before the word assessed.
The sentence “Except …6 hours”: has to be modified.
Please modify “effect” to “effects” and “was” to “were”
6. Please delete in the first paragraph of the discussion: “although the success….(Table 2, Figure 2)”.
7. While the approach of the authors to review together different types of infection (APIs, cSSIs and cIAIs) is to be respected, this should not be based on a methodological principle to increase the statistical power. In addition the syntax (“meta-analysis…did not conduct an additional analysis”) needs improvement.
Please delete the last line of the third paragraph, page 9: “ This additional analysis…power.” Please also delete the second sentence: “But…tazobactam” Please add after the “recommended antimicrobial regimens” a parenthesis: (piperacillin/tazobactam, ceftriaxone plus metronidazole and ticarcillin/clavulanic acid).
Please modify the sentence “So…meta-analysis” to “The focus of our meta-analysis was to compare the effectiveness and tolerance of ertapenem with piperacillin/tazobactam, a well-established therapeutic agent, in patients with complicated infections”. Then please move the third paragraph after this modified sentence.
8. Page 9, line 4 in the third paragraph: Please delete “et al “(the authors
propably mean etc.)
9. Page 9, first line of the fourth paragraph: Please delete "is"
10. Page 9, third line of the fourth paragraph: Please delete “causal”
11 Page 9: change the font size of staphylococcus in the third paragraph
13. The last sentence of the conclusion needs probably modification to “
   However, there is rather limited evidence for the effectiveness of ertapenem
   compared to piperacillin/tazobactam, in patients with severe complicated
   infections caused by one or more pathogens.”
14. Page 9: Please specify the study with the reference following directly the
   word “study”
15. Please modify the sentence “Notably…. (Figure 2,3).” To “Notably, in our
   meta-analysis ertapenem had a comparable effectiveness (Figure 2, 3), to
   piperacillin/tazobactam an agent possessing antienterococcal and good
   antipseudomonal activity”.

- Minor Essential Revisions
  None

- Discretionary Revisions
  None

- Accept after the proposed revisions (which the authors can be trusted to make)

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

**Quality of written English:** Needs some language corrections before being published

**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'