Reviewer’s report

**Title:** Evaluation of Ertapenem Use with Impact Assessment on Extended-spectrum Beta-lactamases (ESBL) Production and Gram-negative Resistance

**Version:** 1  **Date:** 4 July 2013

**Reviewer:** Emmanuel Forestier

**Reviewer’s report:**

Major Compulsory Revisions

1 - There are too many main objectives in this study and two of them cannot be properly assessed. Because of its retrospective design, the study cannot evaluate correctly ertapenem efficacy and tolerance. And since it is monocentric and the definition of “appropriateness” can be criticized, evaluation of the appropriateness of the ertapenem use is of limited interest.

In fact, the main interest of this paper is the evaluation of the impact of ertapenem use on local bacterial epidemiology, since there are a large number of patients treated in a single center. Thus results and discussion must focus on this point, and other elements should be cited as minor data.

Minor essential revisions

Introduction

1 - Must be shortened and should focus on reasons for which ertapenem use could impact on bacterial ecology in general, and in the specific case of Singapour Hospital.

Methodology

2 - A three years study could be considered as to short to evaluate the real impact of ertepenem use on local bacterial epidemiology.

3 - The definition of appropriateness can be criticized (to my mind, CNS infection and urinary tract colonization should be excluded, and penicillin allergy cannot justify by itself ertapenem use in case of enterobacteriaceae infection).

4 - Please precise ertapenem dose adjustment according to renal function.

5 – Statistical analysis: no demographic data with univariate analysis appear in the results.

Results

6 - In addition to the correlation statistical analysis, it would be interesting, and even necessary, to give the DDD of the antibiotics cited, and the incidence rate reported by NARSS (references 15 to 21) since they are not easily searchable.

7 – Table 5: legend is not appropriate since it describes “carbapenem-resistant microorganism” whereas ESBL enterobacteriaceae also appear in the table.
Discretionary revisions
1 - Results: Figure 1 is of limited interest. Only proportion of epilepsy and renal impairment (which must be defined) could be cited in the text.

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests