Reviewer's report

Title: Outcome of infections due to pandrug-resistant (PDR) Gram-negative bacteria

Version: Date: 2 March 2005

Reviewer: Jian Li

Reviewer's report:

General

This manuscript provides information on the use of colistin (methanesulfonate) to treat multidrug-resistant gram-negative bacterial infections in patients from intensive care units. It is helpful for understanding the application of this promising antibiotic, which is the last line for infections caused by gram-negative non-fermenters, particularly Pseudomonas aeruginosa and Acinetobacter baumannii, but with limited experience so far. This manuscript can be accepted after revisions.

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

1. Based on our recent reports (Antimicrobial Agents and Chemotherapy 2001, 45:781-785), colistin sulfate is more active than colistin methanesulfonate (sodium) against P. aeruginosa. The latter is used intravenously given that colistin sulfate is more toxic. Furthermore, this manuscript is a case report. Therefore, it is essential to provide detailed information of sodium colistin methanesulfonate (provider, batch number, and potency) and dosage regimen (the amount dosed, formulation and infusion duration) in the RESULTS section. In susceptibility tests and clinical settings, the term of “colistin” is confusing without mentioning the salt form. This is an important point which has been missed in many recently publications on colistin.
2. From January 2005, NCCLS has been changed to CLSI. Therefore, CLSI should be used (paragraph 3, page 10).
3. The DISCUSSION was not well-written. Given that the results mainly focus on the clinical use and susceptibility, it is not necessary to discuss the presumed mechanisms of resistance to colistin in three paragraphs. It should be shortened.
4. Provided some information about the patients is presented in the Table, there is some redundancy in the RESULTS. This should be avoided.
5. Please provide a reference for “there is generally agreement in the results obtained from agar dilution and broth microdilution methods regarding testing of colistin sulfate” on page 10. In the paper of Journal of Antimicrobial Chemotherapy (2004) 54, 1057–1061, the microdilution method produced lower polymyxin MICs than the agar dilution method.
6. The information on the breakpoint of colistin methanesulfonate might be misleading provided CLSI redrew it in 2000. Furthermore, it is colistin sulfate, rather than methanesulfonate that is used for the breakpoint values.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
1. Please follow the journal requirements for the nomenclature of microorganisms.
2. Change “Mg+2” to “Mg2+” (paragraphs 2 and 3, page 9).
3. Confirm the pH value (paragraph 1 page 10). It should be “5.8” rather than “5,8”.

Discretionary Revisions (which the author can choose to ignore)

1. It would be helpful to provide the MIC values of these isolates.
2. Given that the use of such combination therapy is empiric, it would be helpful to provide some in vitro data, such as fractional inhibitory concentrations of the combinations, if possible, to support the presumption.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

No. I declare that I have no competing interests.