Reviewer's report

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

Version: 2 Date: 11 March 2005

Reviewer: Anna S Levin

Reviewer's report:

General

This is a retrospective description of the cases of 7 patients infected and/or colonized by multidrug resistant gram-negative bacteria. It is well written and very clear.

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

- The objective of the study was not stated.
- The methods used to define susceptibility should be further described especially for colistin. Was disk diffusion used? What breakpoints were considered? It is not clear if confirmation of susceptibility was done by a dilution method.
- The criteria used to consider a microorganism as the cause of the infection are not clear in the study. It would seem that in 4 of the 7 cases the multiresistant organism caused colonization but could not be clearly implicated as the cause of the infection. Most of the patients were treated with a combination of drugs. Because of these factors it is difficult to evaluate the role of the microorganism and the efficacy of the treatment with drugs such as colistin.
- It would seem that, as the authors mentioned in their discussion, MDR bacteria were markers of the severity of a patients' condition and the effect of the infection (or colonization) and of the treatment on the outcome of the patients could not be adequately evaluated.
- The discussion on the mechanisms of polymyxin resistance is very interesting.

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

- On page 5, 3rd line, gentamicin was referred to by its brand name. This should be changed.
- Table 1 repeats the information in the text.

Discretionary Revisions (which the author can choose to ignore)

- In most patients the MDR microorganism emerged after prolonged and extensive use of antibiotics, usually used to treat other multi-resistant infections. As molecular typing was not done it was not possible to evaluate if MDR isolates derived from the previous isolates. This is not intended as the focus of the paper but could be an interesting aspect.

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

Level of interest: An article of limited interest
Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.