Reviewer’s report

Title: Cloxacillin versus Vancomycin for Presumed Late-Onset Sepsis in the Neonatal Intensive Care Unit and the Impact upon Outcome of Coagulase Negative Staphylococcal Bacteremia: A Retrospective Cohort Study

Version: 3 Date: 12 July 2005

Reviewer: Michael Höfler

Reviewer’s report:

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. The wording "a test failed to show non-inferiority.." is misleading because it sounds as if one would yet know that one treatent is non-inferior to the other (in this case this study would not be necessary).

2. Since it appears that the treatment was allowed to be adjusted over time this study evaluates rather the effectiveness rather than the efficacy of two treatments (first page of methods section). Because adjustment was done according to measurements that could be related to the outcome it's difficult to see what the results mean for efficacy. This needs to be discussed.

3. More information is required on the definition of CONS sepsis. How was lethargy assessed? What is an "increased frequency of apneic spell"? What time period does temperature instability refer to?

4. Baseline characteristics should rather be evaluated descriptively than with statistical tests. For instance, the degree of confounding introduced by birth weight solely depends on the mean difference between the groups (and the effect of birth weight on the outcome), p-values are functions also of the group sizes. See the textbook D Altman: Practical statistics for medical research. Some of the differences found might require adjustment (lethargy, increased frequency of apneic, need for increased ventilatory support, both cloxacillin and gentamicin resistance).

5. Comparisons between groups should be quantified with the confidence intervals rather than reported just in terms of statistical tests.

Discretionary Revisions (which the author can choose to ignore)

1. In the abstract the number of individuals in the treatment group should be mentioned.

2. "Presence of a central line" (just above "Results") requires explanation.

3. The aggregated comparison presence of a line vs. no presence of a line over both groups hardly makes sense when the effect of that factor is different in both treatment groups (adjustment for treatment does not solve this problem).

What next?: Accept after minor essential revisions
Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:
I declare that I have no competing interests.