Reviewer's report

Title: Comparison of semi-quantitative and quantitative culture techniques for the diagnosis of catheter-related infections in newborns and molecular typing of isolated microorganisms

Version: 2 Date: 8 October 2013

Reviewer: Jane Turton

Reviewer's report:

This is a description of studies on catheter related infections in newborns with comparison of quantitative and semi-quantitative culture methods for recovery of organisms from the catheter and comparison by PFGE to see if the types found from the infection matched that recovered from the catheter. While I found the account thorough and detailed, it was, in my opinion, somewhat overlong, and would benefit from shortening and removal of some cases of repetition. For example, is the paragraph:

Catheter-related infections include colonization of the device with microorganisms, infection at the exit site, and microbiological confirmation of bloodstream infection related to the device. In view of the lack of a gold standard, the microbiological criterion is the subject of intense clinical research and its clinical relevance is frequently discussed by experts [17].

really necessary in the Discussion? That said, I did enjoy reading the account.

Minor Essential Revisions

1. In page 10, you say that 0.5 M TBE was used; this is unlikely to be correct. I think you mean 0.5 x TBE. Please correct this.

2. On page 20, you discuss clonal complexes - where did this come from? Your account provides no evidence for these, nor is the analysis you used appropriate to use this term.

3. Table 3. Do you mean 'numbers of organisms'? Would something like 'Incidence of organisms' be more appropriate?

4. PFGE Figures

It is not necessary to include every single isolate in the dendrograms - they are too extensive. Please include representative isolates to illustrate the points you are making, rather than including them all.

Other comments

6 minutes seems a very short time to do the restriction digests. My laboratory also uses fast digest enzymes, but we use an incubation time of at least half an hour, once the reaction is at the incubation temperature. I looked up the recommended time
and it is 10 minutes for genomic DNA with XbaI, and 5 min with Smal. It just worries me that perhaps the time used was unnecessarily short.

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

**Quality of written English:** Acceptable

**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