Reviewer's report

Title: Use of an automated blood culture system (BD BACTECTM) for diagnosis of prosthetic joint infections: easy and fast

Version: 2 Date: 23 February 2014

Reviewer: Carolyn C Hemsley

Reviewer's report:

No major compulsory revisions

Minor compulsory revisions:

The numbers in the second paragraph of the results section need to be checked. Line 150 - can the authors add the percentage in brackets. Line 151 the number 79 must be incorrect please can the authors check this. Should this be 40?

The authors should check the percentages stated for gold standard neg and gold standard positive in the boxes in Figure 1. They are the wrong way round

Discretionary revisions:

The authors state that they did not include any bacteriological component to the definition of gold standard with their reasons. There is no comment on what percentage of patients had histology sent although given that 16 of 22 with frank pus did not have cultures not all patients had histology routinely sent. Please can the authors state how many patients had histology sent along side the cultures. Although sending paired histology may be recommended it many institutions it may not always be sent by the surgical team

Table 1 and figure 1 show that there were 7 patients with positive cultures and 236 patients with negative cultures (2 or more samples with identical organisms and antibiograms) who did not have either positive histology or clinical gold standard features. Did all these patients have negative histology? Could there be any bias because of lack of histology because none was sent?

With reference to Butler Wu paper where they suggested that significant growth of propioni often had negative histology, can the authors comment on the organisms from the 7 culture postive but gold standard negative patients. Was histology available for these patients? What were the organisms in theses 7 patients. Were these then considered to be 'true' pathogens or ignored?

Lines 206 and 207 are not completely clear on this point wrt propioni and histological features

Level of interest: An article of importance in its field

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