Reviewer's report

Title: Staphylococcus aureus Bacteriuria as a Prognosticator for Outcome of Staphylococcus aureus Bacteremia: a case-control study

Version: 2 Date: 10 November 2009

Reviewer: Robert RR Muder

Reviewer's report:

- Major Compulsory Revisions

1. There is no description as to how the site of primary infection was assigned. This is particularly problematic for the category "GU Infection," (table 3) in which 10/22 patients are reported as having negative urine cultures. The authors should specify the definitions of site of infection, and who made this determination.

2. The authors included into their multivariate analysis for risk of mortality all factors having a p value of less than 0.2 in univariate analysis. By my count that would mean that 11 variables were included in the model. Although there are no absolute rules concerning this, a reasonable number of variables for inclusion in such a model is typically 1 for every 5 outcomes of interest. With 32 deaths a more reasonable number would be 6 variables, which could be achieved by lowering the P value for inclusion in the model.

- Minor Essential Revisions

1. The last sentence on page 5 is a "run on" sentence that is extremely difficult to read. It has a semi colon, a colon and a comma, which are entirely too many punctuation marks.

2. The authors' statement in the first paragraph of page 6 that "predictors of morbidity and mortality are essential for triage" is not plausible. Triage occurs at presentation for healthcare, when the results of blood and urine cultures are unlikely to be available.

3. The authors misstate mortality rates in the first full sentence of page 9. The figures 39% and 17% are not hospital mortality rates, but rather the proportions of patients who died and survived who had positive urine cultures.

- Discretionary Revisions

1. The abbreviation "CCH" in the abstract should be spelled out.

2. The second sentence in the first paragraph of the Methods section should end after "exempted from review." (The fact that patients were not harmed does not make it exempt from review. There are very specific criteria for exempting
research from IRB review, which I trust the IRB in question applied appropriately.)