Reviewer's report

Title: Clinical characteristics and initial management of patients with tuberculous pericarditis in the HIV era: the Investigation of the Management of Pericarditis in Africa (IMPI Africa) registry

Version: 4 Date: 24 November 2005

Reviewer: alison elliott

Reviewer's report:

General

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

1. Abstract: It does not seem to be quite correct to say that the findings were identical when stratified by serological HIV status. First, is “stratified” the correct term? That would suggest that the authors looked at the associations with clinical HIV disease in the serologically HIV positive stratum and the serologically HIV negative stratum, and the associations found for clinical HIV disease were the same in each stratum as the associations observed overall. I think what is meant is that the associations with serological HIV status were identical to the associations with clinical HIV status. Might “similar” be a better word than “identical”? The weak association with PR segment changes which, according to the discussion, is the justification for suggesting myocardial involvement in patients with clinical HIV disease, was completely absent when analysed by serostatus. The association with pulmonary tuberculosis was not so marked and no longer statistically significant; this would be in keeping with a tendency for physicians to assume that patients with evidence of tuberculosis at more than one site have HIV infection. Thus, although one may conclude that clinical HIV disease is associated with myopericarditis and disseminated tuberculosis, it may not be helpful to do so, since the evidence from this study is that real HIV infection is not associated with myocardial disease and only weakly associated pulmonary disease. On the other hand the association with ST elevation and was stronger for serological HIV status and, interestingly, associations with haemodynamic instability and with radiological cardiomegaly emerged. Perhaps HIV positive people have a more rapid accumulation of a larger amount of fluid, causing greater compromise? Indeed suggesting, as the authors propose, that more intensive early management is warranted in HIV positive cases (and, perhaps, that the relatively lower rate of use of steroids in this group may be inappropriate).

2. Results: third paragraph. There was a bias in HIV testing, with tests done in 53/74 (72%) cases with “clinical HIV disease” and 43/111 (39%) of cases without clinical HIV disease (p<0.001). This would be worth mentioning as it may have affected the findings for sensitivity and specificity of clinical diagnosis and may have influenced the reliability of observations regarding associations with serostatus.

3. Thus, in the first paragraph of the discussion, it seems to me that rather strong assertions are made based on clinical diagnosis of HIV. It would be possible, in theory, that the associations observed were nothing to do with HIV and entirely the result of physicians preconceptions about HIV. To report this incautiously might lead to reinforcement of such preconceptions, so it is important to determine whether the associations are real. Now that some results by serostatus are available, the idea that HIV is associated with a more advanced functional disability is supported by the associations shown for serostatus and by the additional result regarding haemodynamic instability.
Thus it is of interest to suggest that this might be the case, pending further studies with a less biased assessment of HIV status. On the other hand, it may not be helpful to suggest that this study confirms that HIV-associated tuberculous pericarditis occurs in the context of disseminated tuberculosis: other studies suggest that, but this study could be interpreted as showing that concurrent pulmonary involvement is more common in HIV negative cases than physicians think it is!

4. The last two paragraphs of the discussion might also be reconsidered in this light. Does not the evidence from serostatus cast doubt on the evidence of myocardial involvement? Might it not be better to say that the conflicting results regarding the PR segment changes suggest the need for a more rigorous study? And the results for serostatus did suggest more radiological cardiomegaly in HIV positive cases (in contrast to the last sentence of the paragraph); thus a larger accumulation of fluid could explain the greater functional and haemodynamic instability. Incidentally, this paragraph is the first mention of greater dyspnoea or miliary disease in HIV-positive patients; if these were objectively measured they could be mentioned in the results; if these comments are speculative, they might be better omitted?

5. Paragraph on limitations of the study: Suggest addition of a sentence stating that associations with clinical HIV disease should be interpreted with caution, and that, given the low percentage tested, even associations with HIV seropositivity may have been subject to bias.

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

6. Results, second paragraph, last sentence: “association” might be a better word than “interaction” which has a specific statistical meaning which would not be correct here.

7. Supplementary table S1: It seems that row percentages are used except in the case of “women”? Would it be better to add men to this table (as in the corresponding main table) and change the percentage to a row percentage, for consistency?

8. Supplementary table S3: should the column headings be HIV-positive and HIV negative, as in the other supplementary tables?

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Discretionary Revisions (which the author can choose to ignore)

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

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

**Quality of written English:** Acceptable

**Statistical review:** No

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