Author's response to reviews

Title: Clinical and Ultrasonographic Features of Abdominal Tuberculosis in HIV Positive Adults in Zambia

Authors:

Edford Sinkala (sinkalaeddie@yahoo.com)
Sylvia Gray (sylvia22a@hotmail.com)
Isaac Zulu (ZuluI@cdczm.org)
Victor Mudenda (mudenda2003@yahoo.co.uk)
Lameck Zimba (drlameck@gmail.com)
Sten H Vermund (sten.vermund@Vanderbilt.Edu)
Francis Drobniewski (f.drobniewski@qmul.ac.uk)
Paul Kelly (guts@coppernet.zm)

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Author's response to reviews:

Dear Dr Zauner

Thank you for your letter and for the helpful comments of the reviewers. We have revised the manuscript to take these into account and we submit the revised version. The changes we have made are tracked and we itemise below the revisions we have made.

Reviewer 1
No criticisms

Reviewer 2
1 We agree that identifying abdominal TB in patients with HIV-related diarrhoea is very challenging. As Dr Casali notes, this was the reason we adopted narrow inclusion criteria which require weight loss and fever. Most patients with HIV-related diarrhoea do not have fever, and those that do should be considered for anti-tuberculous treatment if there is supporting evidence from ultrasound and if blood cultures are negative. We have altered this part of the Discussion (p 10).

2 We discussed the issue of CD4 counts in our original manuscript. We think the likeliest explanation is that our patients tend to present late with advanced disease. There may be cultural factors here, but we think the state of the health services also contributes and we have included this point in the Discussion (p10).

3 We have included a comment that it would be desirable to identify patients earlier in the course of their disease (Conclusions, p11)

Reviewer 3
1 The purpose of our paper was to identify features of abdominal TB which may help health workers in low-resource settings to identify it in patients with HIV
infection. Our most important conclusions are that the clinical features do not differ dramatically from the pattern seen in immunocompetent patients and that ultrasound examination is useful. Our data indicate that the most worrying alternative diagnosis, lymphoma, is uncommon, only being found in one case. Our data do support the principle that in settings such as ours the highest priority is to treat conditions which are treatable and most of the sinister alternative diseases which may mimic abdominal TB (particularly malignancy) are not treatable. We disagree with this reviewer that our sample size is too small to make a recommendation about treatment, but we have added the important point that laparotomy may still be necessary in patients whose clinical features are consistent with abdominal TB but who do not respond to anti-tuberculous treatment (Conclusions, p11, and we have modified the last paragraph of the Abstract). There is a shortage of data on HIV-related abdominal tuberculosis and our sample size is not inconsistent with other studies. Although some of the Indian studies on abdominal TB have sample sizes of 209 (ref 23) or 90 (ref 12), the only paper which deals directly with abdominal TB in HIV infection (ref 8) had a similar sample size to ours (n=43). We started with a sample size of 140 but many patients had already received chemotherapy for TB and because of our dependence on mycobacterial culture we had to exclude them. We note that referee 1 accepts that a final sample size of 31 reflects the difficulties inherent in defining TB in a setting like ours.

2 The word “severe” should not have been included and we thank the reviewer for pointing out this error; we have deleted it (p5). We have added a definition of “laparoscopic findings consistent with TB” in the Methods (p6).

3 We have added a comment in the Methods to the effect that colonoscopic findings were not used to make a diagnosis of presumptive TB (“Collection of biopsies…”, p6). We have specified that biopsies were taken from any diseased mucosa (p6) and we have also, although not requested, added a definition of diarrhoea (p6).

4 No, TB treatment was not started on the basis of colonoscopic findings (see comment 3 above).

Reviewer 4

1 As noted, this was discussed.

2 We have added further information on IRB approval (University of Alabama at Birmingham) (p5).

3 We have added a comment on availability of HAART (it was made available to all patients) (p5).

4 Serum lipase and amylase were not measured. We have added a comment to this effect (p9).

We hope these changes are satisfactory and look forward to your responses.