Reviewer's report

Title: Prevalence of Trichomonas Vaginalis Infection in Egyptian Women: Cross-Sectional Study

Version: 2  Date: 28 July 2014

Reviewer: Barbara Body

Reviewer's report:

Major compulsory Revisions

I am troubled that other causes of vaginitis were not examined in this population of women with a complaint of vaginitis such as bacterial vaginitis and candidiasis and would like to see a rationale for this choice. Although we often believe that each type of vaginitis has a typical presentation, I believe that it is the rule that more often than not the presentation is not perfectly typical. For this reason, I believe the authors need to comment on why they limited their examination to only T. vaginalis, especially because the percent of infected women found to be positive by culture is so low overall. This is in contrast to studies in the US and Europe where much higher rates of trichomoniasis are found in symptomatic women.

In their results section (line 97 as well as 152) the authors state that the Modified Diamond culture is their reference/gold standard but in consideration of the data for Table 3 through 7 they use the number of 50 cases which corresponds to the Kalon assay not the culture. I believe this is a significant issue, as neither the work presented here or the peer reviewed literature have performed sufficient discrepant analysis to deem those specimens positive by the Kalon test to be ‘true positive’. In the package insert for the Kalon test such specimens are called ‘false positives’. The Tables 3-7 need to reflect those positive by culture verses those positive by culture and Kalon and finally those positive by Kalon only. Some discussion of this issue beyond the single sentence (line 169-171) is warranted in this manuscript. Now that there are at least two commercially available nucleic acid amplification assays for T. vaginalis these authors could be the first to suggest this as a path toward finally resolving the performance of the Kalon test. (I am not suggesting they actually perform this comparison). If two different nucleic acid amplification tests are positive and culture is negative this could be seen as strong evidence to support the possibility of improved performance compared to culture by nucleic acid amplification and if the Kalon test also was positive, it would establish whether some or all of the present false positives are true positives.

The Kalon test, if accurate, performed much better than culture, finding 60% more positives, but no discrepant analysis was performed to attempt to resolve this issue. I believe the specificity needs to be addressed in the discussion. I do not believe their conclusion is warranted because no experiments were performed to show that the culture negative – Kalon positive specimens were
truly positive.

Minor Essential Revision –
There are numerous typographical errors of periods and spacing that need to be addressed

Discretionary revisions
The statements line 49-52 do not anything to this manuscript I suggests removing them.

Please confirm that the swabs used were cotton-wool with wooden shafts (line 63) verses Dacron with plastic shafts.

The detail of figure 2 is not very good I recommend deleting it all together.
Figures 2 and 3 each have unnecessary duplicates, I recommend inclusion of only one photo for each of them (if Figure 2 is to be included).

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have participated in clinical trials for the clearance of nucleic acid amplification tests for Trichomonas vaginalis from both Gen-Probe (now Hologic) and Becton Dickinson. This work was contracted through LabCorp Clinical Trials; I received no direct compensation. As an officer and employee of LabCorp I own stock in the company. I have no additional competing interests.