Reviewer’s report

Title: High co-occurrence of anorectal chlamydia with urogenital chlamydia in women visiting an STI clinic revealed by routine universal testing in an observational study; an answer towards better anorectal chlamydia control in women.

Version: 1 Date: 4 February 2014

Reviewer: Marjan Javanbakht

Reviewer’s report:

General comment
This manuscript describes anatomic site distribution of chlamydial infections by routine anorectal testing among women attending an STI clinic. Data on rectal STIs in women are limited and findings from this report would add to the small number of studies reporting on this topic. However, some of the methodological issues limit enthusiasm for this manuscript and the paper would benefit from clarification, especially in the methods and results section. Specific comments are described below.

Major compulsory revisions
1. Abstract, results section: I would suggest restating the sentence starting with “Its prevalence was similar for women with indication…” to highlight the fact that there was no statistically meaningful difference by indication group, rather than stating that the prevalence was similar. In fact, the reported prevalence by indication group of 7.9%, 4.2%, and 9.2% is different.
2. Background section, first sentence: this sentence needs referencing/citation(s).
3. Background section, fourth paragraph: the first sentence is unclear. Presumably you mean that data on ‘universal’ screening in women is limited, not because of lack of data collection but rather because of lack of screening. Please clarify the language.
4. Methods section, study population: The percent of clinic population eligible for inclusion in this study seems unusually low; Of the 6,000 annual consultations, only 663 were eligible for inclusion in this study? Please clarify.
5. Methods section, study procedure and definition: The definition of sexual high risk seems very narrow. After all, there are many behaviors besides transactional sex and swinger status that would fall in this category. Was information collected on other high risk sexual behaviors such as number of partners, new or concurrent partnerships, substance use, condom use, etc? I would suggest renaming your high risk category as prostitution/swingers to more accurately reflect the data being considered.
6. Methods section, statistical analysis:
a. Per the description it sounds like you created mutually exclusive ‘indication’ categories, though it seem that there may be some misclassification relating to this particular exposure category. Were there really no women who reported symptoms/anal sex AND fingers/toy use? If so, which category were they placed in. Furthermore, please clarify the time frame for these behaviors. Was this in the past 6 months? Relating to the indication categories, additional information on anal symptoms would be useful.

b. Differences between indication categories were tested using chi-square methods, though you have some cell sizes that are small enough to warrant the use of an exact method such as Fisher’s exact test.

c. Sentence starting with “Determinants tested were…”, I’m not sure what is meant by “distribution categories.” Please clarify.

d. Reference category for age is listed as both #25 years and #29 years. Please clarify.

e. You specify two regression analyses, though it’s unclear what is being modeled. In the first, you are examining factors associated with ‘missed infections’ and the second relates to anatomic site infection. Is this correct?

7. Results section, first paragraph: prevalence of anal sex seems relatively high; again please clarify how this question was asked and/or how anal sex was defined and the time frame under consideration, lifetime, past 6-months, past 3-months, etc.

8. Results section, indication categories and chlamydia prevalence: This goes back to a comment from above relating to the abstract section. It seems that the prevalence of anorectal chlamydia is different by indication group, though you were not able to detect a statistically meaningful difference. Describing the prevalence as ‘similar’ is inappropriate/misleading given that there may not be enough of a sample size/power to detect this difference. You report on a total of 48 people who indicated rectal finger/toys of whom two had rectal chlamydia. I would suggest collapsing your two indication categories into one group and doing a 2X2 comparison, rather than a 3X2 comparison.

9. Results section, missed infections by selective testing indication: it seems that the differences noted in this section were not statistically meaningful (which again may relate to sample size), and it seems unnecessary to present Odds ratios/logistic regression results to reiterate this. Also, it’s unclear if these results were from multivariable analysis or unadjusted models.

10. Results section, anatomic site distribution: it’s a bit difficult to follow this data. I would suggest using a figure to highlight your findings.

Minor essential revisions

1. Abstract, results section: it would be useful to state the overall prevalence of chlamydia per anatomic site.

2. Background, second paragraph: define acronyms on first use – CT and NG in first line
3. Methods section, study procedures and definition: The first sentence is only partially correct and needs to be revised. There have been no validation/verification studies of self-collected rectal samples among women. The references cited are for self-collected vaginal swabs and rectal swabs in MSM. You may also need to address this potential limitation in your discussion.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

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