Reviewer's report

Title: Human papillomavirus prevalence and type-distribution in women with cervical lesions: A prospective study in Sri Lanka

Version: 1
Date: 1 December 2013

Reviewer: Megan Clarke

Reviewer's report:

1. Title

Major Compulsory Revisions:

1.1 – This is not really a “prospective study”. As you say in the Methods section, it is really more like a cross-sectional study. The title is therefore misleading.

2. Abstract

Discretionary Revisions:

2.1 – The mention of PCR in the abstract is unnecessary and somewhat distracting, as it was only used for amplification (according to Methods section) and was not used for HPV typing per se.

3. Introduction:

Major Compulsory Revisions

3.1 – It would be helpful for the reader, and for emphasizing the importance of this study, if the authors could elaborate more on the current cervical cancer screening programs that exist in Sri Lanka, including who is eligible and how they are utilized. Why are the cervical cancer rates so high? Is it due to lack of infrastructure or something else? In the same regard, what is known about the epidemiology of HPV in Sri Lanka?

3.2 – The authors mention the vaccine, but do not say what programs, if any, exist in Sri Lanka for vaccinating adolescents and young adults. Please elaborate here, and to save room, you could remove the sentence regarding the systematic review (this is already re-stated in the Discussion section).

Minor Essential Revisions:

3.3 – Last sentence: the study is not really aiming to provide data on HPV burden in Sri Lanka because it is not population-based, rather it is aiming to quantify HPV positivity and type distribution among a selected (small) sample of women with ICC and CIN2/3.

Discretionary Revisions:
3.4 – The authors should consider removing the sentence in the second paragraph regarding the meta-analysis, it does not provide additional information beyond what was previously stated above. You could site the study briefly, and say that findings are similar in Asian countries.

4. Methods

Major Compulsory Revisions:

4.1 – Please define the actual age range of participants. Age 21 is very young for cervical cancer, I would expect most cases are among older women in a more narrow age range?

4.2 – A table describing the study population is needed. Do you any have demographic and/or medical record data for these women other than age? If so, please consider making a table with these characteristics.

Minor Essential Revisions:

4.3 – The second sentence under the Statistical Analysis heading should be moved up to the paragraph regarding study design and population.

5. Results

Minor Essential Revisions:

5.1 – For consistency, and because they are etiologically different, please report the % HPV positive and type distribution for adenocarcinoma in your results.

Discretionary Revisions:

5.2 – The first sentence in this section is awkwardly phrased and should be rewritten. Consider the following:

“Of the 114 women enrolled in this study, 106 (93.0%) were included in the histologically confirmed cohort, with a mean age of 52.6 years.”

5.3 – In the last paragraph of the Results section, the authors switch between calling CIN2/3 cases HPV positive, and women HPV positive. Consider the following:

“Co-infection of HPV-16 and HPV-59 was observed in a single case (1.5% [95% CI: 0.0–8.2]) of ICC. All eight CIN 2/3 cases were HPV positive (100.0% [95% CI: 63.1–100.0]), with HPV-16 being the most predominant type detected (50.0% [95% CI: 15.7–84.3]) followed by HPV-33 (25.0% [95% CI: 3.2–65.1]), HPV-52 and HPV-56 (12.5% [95% CI: 0.3–52.7], respectively) (Figure 1).

6. Discussion

Minor Essential Revisions

6.1 – The authors suggest that there is selection bias in this study, but don’t
actually articulate it. If women are screened opportunistically then are the most severe cases (i.e., ICC) most likely to be detected? If so, this sample is non-representative as you say, because of selection bias, which should be stated. What does the literature say about HPV type distribution among CIN2/3 cases in this population?

6.2 – The authors did not calculate rates in this study, please change to prevalence or proportion.

Discretionary Revisions:

6.3 – I would restructure the Discussion so that your first paragraph is a summary of your main findings – overall HPV positivity and type distribution. Then move on to how your findings are in line/conflict with the evidence in a coherent paragraph (i.e., try aggregating some of the studies that have similar or different findings than you and citing the references at the end of the sentence, instead of individually highlighting each one).

6.4 – The reference regarding the low HPV prevalence in Sri Lanka (fourth paragraph) is somewhat contradictory to the burden of cervical cancer in Sri Lanka on which the importance of this paper is based. I would caution the authors to make more thoughtful statements regarding these other research findings, particular since so few studies have been done, rather than simply citing what each found.

6.5 – I am not clear on the last point made in the limitations paragraph. One would expect to see a difference in type distributions between SCC and ADC.

6.6 – The authors should consider deleting the last sentence in the third paragraph regarding the need for a broader vaccine. This is already well established with the nonavalent vaccine in clinical trials.

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

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare I have no competing interests.