Reviewer’s report

Title: HIV and pre-neoplastic and neoplastic lesions of the cervix in South Africa: a cross-sectional study

Version: 1 Date: 2 March 2006

Reviewer: Stephen E Hawes

Reviewer’s report:

General

This article is generally well written. It is quite simple in its presentation of results, and lacks some detail which would be interesting and useful. For example, the authors do not present a standard Table 1 containing the demographic and laboratory characteristics for which they have information. They refer to a previously published paper regarding the study details and design, but this referenced paper also does not contain the relevant information. Please provide more information about the study populations (cases and controls separately).

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

The authors initially attempt to adjust for a number of measured factors (age, ethnic group, sex partners, education, marital status, contraception, STDs, etc) in the analysis, but 1) do not report the prevalence of these factors and 2) give no justification for attempting to adjust for these. Are they potential confounders? Why did you start with a full model? What about missing data?

The statement “Systematic elimination of variables resulted in odds ratio estimates adjusted for age and ethnic group only that were similar to the estimates for the full model” is a bit disconcerting. Did your final model confirm confounding (adjusted OR which differed from the crude OR)? If not, then why did you adjust?

Instead of starting with a full model and going backwards, perhaps each factor should have been considered singly to determine if confounding was present.

The statement that “subgroups were too small to present data separately…” implies that you thought about addressing potential effect modification, but did not carry this out. With over 500 cases and over 1500 controls, it seems likely that you could have attempted to assess effect modification for at least some of the factors in your study.

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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)

Abstract: In the result section, you need to specify that the odds ratios are for risk associated with HIV infection. For example, “The adjusted odds ratios associated with HIV infection were:……”

Abstract: “HIV positive women were nearly 5 times more likely…..”.
Methods: p7 - need a space between 1541 and controls

Methods: p7 – the use of the term “series-matched” seems non-conventional to me. Do you mean “frequency matched”? Was the ratio meant to be 3:1 controls per case? If so, please specify in the text.

Methods: p7 - It doesn’t seem relevant that the cervical cancer cases were all considered HPV positive. Since this information is never analyzed, I would omit the statement.

Methods: p8 – The 40 cases of HSIL should really be 50 according to the tables and sum of all patients.

Results: p8 – Why the term “original” in the first sentence “Overall, 5.7% of the original controls and 6.0% of the original cases were HIV positive? This is confusing and perhaps not correct. On p7, you state that HIV data were available for only a subset of the cases and original controls. Don’t you mean 5.7% of the tested controls and 6.0% of the tested cases?

Results: p9 – Need to say what your odds ratio is for. “With normal women as the reference category, the adjusted odds ratios associated with HIV infection were:”

Results: p9. In the HIV, HPV, and cervical lesions section, you state that 193 of 1287 HIV- women were HPV+. However, in Table 2, there are only 1286 HIV- women listed.

Results: p9. As in abstract, “….nearly 5 times more likely…..” when the OR is 4.6.

Discussion: p10. Remove 2nd 5% from the Kenya line.

References: p16 – 2nd reference needs reformatting

References: p16 – Reference 6 has mistake in title (should be “and” instead of “or”).

Table 2 – Add adjustment variables, as in Table 1

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