Reviewer's report

Title: Predictors of persistent cytologic abnormalities after treatment of cervical intraepithelial neoplasia in Soweto, South Africa: a cohort study

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Reviewer: Isabelle Heard

Reviewer's report:

This paper presents findings on efficacy of a surgical procedure, large loop excision of the transformation zone, LLETZ, for the treatment of cytologic abnormalities among patients attending a colposcopy clinic in Soweto, SA. LLETZ is the standard treatment for high grade lesions with a high rate of efficacy. This paper addresses an interesting and important question particularly in countries with high rate of cervical cancer and low rate of screening. The writing of the paper is acceptable.

In this study population, disease persistence was observed in almost 50% of the patients. Predictors of persistence included positive margins at histologic examination and HIV infection. The fact that HIV status depends on self-report and a high rate of lost for follow-up of 43% deeply weaken the strength of the article. The authors should consider the following:

Major Compulsory Revisions
- As mentioned above, HIV status is a major issue. The fact that it is self reported should be mentioned in the Abstract. Furthermore, the rate of 28% of women reporting an "Unknown HIV status" concurs to give a weak power to this variable. In case the HIV status of patients could not be confirmed, the variable may not be included in the univariate and multivariate analysis of association of clinical characteristics with abnormal Pap smear at follow-up. This major limitation is not clearly enough stated in the Discussion.
- The rate of persistence of cytologic abnormalities is calculated according to only one Pap test performed around 4 months after LLETZ. Due to low sensitivity of Pap test and in order to assess persistence, could the authors provide the result of either colposcopy/histology at follow-up visit (if performed) or the result of a second Pap test taken 6 months later?
- The authors should provide the rate of lost for follow-up according to the variable "self reported HIV status". Is it similar?

Minor Essential Revisions
- Therapeutic choice: the authors should justify the fact that LLETZ is performed in CIN1 in patients self reporting being HIV positive.
- As mentioned in Methods, the authors should use the Bethesda system terminology when reporting cytologic results.
- The authors should mention to which visit during the study (pre-operative Pap...
test, LLETZ, follow-up Pap test or any other?) is reported the value of CD4 count presented in the restricted analysis of self reported HIV-positive women.

- Could the authors comment on the 4 normal cytology results during follow-up after treatment of microinvasion with LLETZ?

- It has been suggested that despite not clearing the disease, surgical treatment may lead to lower grade cervical disease, thus delaying the possible aggravation to cancer. Could the authors provide data on histology of excised transformation zone and result of follow-up cytology?

Finally, this study shows low efficacy of LLETZ for treatment of cervical disease at the colposcopy clinic at CHB in Soweto. Due to major methodological issues, this study will presumably have a low impact.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

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 that I have not competing interests