

Reviewer's report

Title: The impact of antiretroviral therapy on HPV and cervical intraepithelial neoplasia: current evidence and directions for future research

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Reviewer: Isabelle Heard

Reviewer's report:

This review is aimed at summarizing the available epidemiological studies in the setting of the impact of antiretroviral therapy on HPV infection and related cervical lesions in HIV-infected women. Since these viruses have taken a heavy toll on women, and as new HIV infections remains high in women, such a work addresses a timely issue. The inconsistency in guidelines for prevention and treatment strategies for cervical cancer in HIV-infected women is also a problem.

This review provides a comprehensive review of literature documenting the impact of HAART on HPV infection and related cervical disease. Discrepancies in the definition of HAART and of cervical cytological abnormalities in published literature are well described.

Major Comment

The major issue of this article is that it provides no hypothesis on the discrepancies observed in the literature about the impact of HAART on HPV incidence, prevalence and clearance, on incidence, progression or regression of cervical lesions and finally on cervical cancer incidence.

The paper would benefit from conclusion at the end of each paragraph focused on the comparative and critical analysis of the described studies. The designs used in different studies should be presented. The way study designs may impact on the results should be addressed.

In order to discuss the role of CD4 T-cell counts, if any on HPV infection and related disease, studies should be divided according to the time periods: around the availability of HAART women had lower CD4 count and nadir than in more recent studies. The impact of HAART on a persistent infection with HPV might have been lower than in more recently HIV and HPV infected women.

The description of studies should take into account available access to screening for cervical cancer in the different populations.

A paragraph dedicated to interactions between HPV and HIV might be added.

The low, if any, impact of HAART on cervical cancer needs to discuss whether cervical cancer is an AIDS defining event.

Providing different study designs is controversial, since HAART will never be prescribed according to HPV infection or related disease.

As suggested in Background section, guidelines for ICC screening in the setting

of HIV are missing. Direction for policies taking into account HPV testing might be discussed according to the conclusions of the review.

Minor comments

Quality of language in the manuscript is acceptable. The authors should use "HAART" rather "ART" through the entire article.

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 no competing interests