Reviewer's report

Title: Late Presenters to HIV Care and Treatment, Identification of Associated Risk Factors in HIV-1 Infected Indian Population

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Reviewer: cyrille delpierre

Reviewer's report:

This is an interesting paper aiming at assessing the immunological profile of HIV-infected Indians patients at their first CD4 cell count testing, and identifying late presenters. Late testing is a major topic for HIV management because it is one of the main risk factors of aids progression and death since the advent of HAART. As the majority of these studies have been conducted in Western or European countries, it is useful to have information from emerging countries.

Results show that the proportion of late presenters is dramatically high in India. Male gender, older age and heterosexual transmission route were risk factors to be late presenter. The paper is well written, structured but sometimes not so clear. That is why I make some suggestions to improve the quality of the paper:

Intro

Discretionary Revisions: Last paragraph, page 1: I would delete this paragraph because I do not think it adds new information on the importance to be treated early.

Method section

Minor Essential Revisions

Study subjects: I think it is necessary to describe a little bit more characteristics of HIV epidemic in India and more precisely in New Delhi. In the same idea, some information about the management of HIV infected people in India is needed to know if the situation described in the study is the same than in the rest of the country: which is the testing policy? What is the treatment accessibility? Is there a free access to care and treatment? This information is useful to understand why people use or not care system, and to know if the population managed in the Institute of Medical Sciences is comparable to HIV infected people managed elsewhere.

Criteria for categorization as “late presenters to care”: As the definition chosen in this paper for late presenters in not the “classic” one, I would rewrite this paragraph as follows: “As made classically, all subjects with CD4 T+…………..late presenters to care. Subjects were stratified into late and very late……………………….. 50 cells/uL respectively. Further, subjects with CD4+ T cell counts above 200 ………………..immediate start of HAART.”

Data collection: Was it possible to have information on social situation of HIV infected people (occupation, education), as the date of HIV diagnosis?
Statistical analysis: Authors should add that they have performed a multinomial logistic regression

Results section
Minor Essential Revisions
First page: the year of the first CD4 testing should be presented as a result and included in Table 1.
First page, third paragraph: I would start this paragraph with the sentence “Patient characteristics according to CD4+ T cell counts are summarised in table 2.” P-value may be added for the comparison of CD4 median between men and women.

Regarding analysis, as HIV policy changed in India, did authors tested the effect of year of diagnosis, of CD4 testing on the risk to be late presenters?

Major Compulsory Revisions
First page, last paragraph: I think the first sentence is not clear at all. Authors should indicate more precisely numbers and proportions of people late and very late presenters, plus those classified late presenters because of CD4 level count<200 or because of symptoms with CD4>200. Indeed these results are the main results of this work. Without these data, it is very difficult to understand for example how authors calculate 17.42% (which denominator?) and how many people are late presenters.

Regarding multinomial analysis, it is needed to indicate the reference class for each variable.

Discussion
Minor Essential Revisions
The first paragraph may be included in introduction. However as authors introduce well the importance of late diagnosis in the management of HIV infection, they should consider the possibility to suppress this paragraph.

Tables
Minor Essential Revisions
Globally, percentages could be presented with only one character after the comma.

Table 1: percentages of people with AIDS related or defining illnesses, with TB or STI should be presented in Table 1. CDC stage should also be added.

Major Compulsory Revisions
Table 1: Maybe there is a mistake for symptoms: it misses 291 observations (I think it is probably more than 453 asymptomatic people).

Table 2: why the sum for people with and without symptoms is higher than 3680, which is the number of included patients?

Table 3: The presentation of the table should be improved and should follow the
classic way to present results for multinomial analysis. The main difficulty is that, for each variable, we do not know the reference group (class with OR=1). Maybe the group of non-late presenters should be added.

**Level of interest:** An article of importance in its field

**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