Reviewer's report

Title: Incidence and risk factors for mortality in HIV-1-infected patients in China: a cross-sectional study

Version: 1 Date: 25 April 2014

Reviewer: WM Raymond Leung

Reviewer's report:

Major Compulsory Revisions:

Title and objective
1. It seems that the study focused on the AIDS-related mortality rather than the overall mortality of the reported HIV-infected cases. Rephrasing is suggested.

Methods - Cause of death
1. Tuberculosis is prevalent in China, should those deaths be taken out from the analysis of AIDS-related death if the last CD4 did not fall below 200/ul? Otherwise the no. of AIDS-related deaths may be overestimated.

Minor Essential Revisions:

General
Standardize the terms HIV/AIDS deaths, HIV deaths, AIDS deaths, AIDS-related deaths throughout the text

Abstract - Results
1. First sentence, define exact period with which data is extracted from the databases, instead of "by the end of December 31, 2010"
2. Report of change in annual incidence during the period would be useful
3. Last sentence, revise "death" to "AIDS-related death"

Methods - Identify key variables
1. Line 50, first sentence is hard to be understood. Does it mean late diagnosis of HIV is defined as diagnosis of AIDS and death happened within one year from HIV diagnosis?
2. Line 54, prospective data is available in the database since 2004, why data in 2004 and 2005 not included in the analyses?

Methods - Statistical analyses
1. Why compare late diagnosis cases with untreated cases, but not treated vs untreated cases? That would lead to a more logical conclusion on the effect of HAART on survival.
2. Line 61, something missing after "Chi-square tests"? Statistical analyses other...
than chi-square such as t test performed for comparison of continuous variables?

Results
1. Line 68 - 70, better state the total number of AIDS-related death among all reported cases and the range of annual incidence during the period
2. Line 79, delete "age" after death
3. Revise title of Table 2 as "The provincial statistics of the cumulative reported cases and the cumulative death cases with HAART"
4. Put down the day range between diagnosis and death clearly in Table 3
5. Line 117, rephrase "Most of the death cases who had not initiated HAART .."

Discussion
1. Line 134-135, the manuscript does not provide data on the no. of reported HIV cases by gender. More importantly, comparison of death rates rather than the absolute no. of deaths between the two gender is required to substantiate the statements
2. Line 153-154, the sentence is not quite relevant, as higher rate of HIV transmission does not equate to higher mortality

Conclusion
1. Line 196, rephrase "early diagnosis maximize the effectiveness of HAART"

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests' below. If your reply is yes to any, please give details below.