Reviewer’s report

Title: Predictive factors of virological success to salvage regimens in HIV-1 infected children

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Reviewer: christophe piketty

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The aim of this study is to evaluate the predictive factors of virologic success in HIV-infected children. This is a retrospective study that included a very small sample size of only 33 children. Thus, if data regarding predictive value of resistance mutations in pediatric populations are rare by contrast to adults, I am not convince that this study will provide additional information of great value. Indeed, the predictive value of genotypic and phenotypic resistance testing has been widely investigated in adults. In this setting, some prospective studies with large sample size have failed to demonstrate the predictive value of resistance testing (e.g. phenotype tests).

In this study, genotypic mutations of HIV protease and reverse transcriptase have been sequencing. Resistance has been measured by means of virtual phenotype test provided by Virco. A logistic regression model has been constructed to assess predictive factors of virologic response.

Variables including number of active PIs in salvage regimen and the number of drugs considered as susceptible according to virtual phenotype have been found to be significant predictive factors in univariate analysis and simultaneously entered in multivariate analysis. There is probably a bias to do that because these variables regarding genotypic resistance are not independents. The authors should consider to enter these variables separately in the multivariate model. In addition, the authors should consider to test the number of active NRTIs in the salvage regimen as variable in univariate analysis.

What next?: Reject because scientifically unsound

Level of interest: An article of limited interest

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

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