

Review of: "HIV/HBV Coinfections Among People Living With HIV/AIDS in Yenagoa, Bayelsa, Nigeria"

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Potential competing interests: No potential competing interests to declare.

Thank you for inviting me to review this manuscript with title: HIV/HBV coinfections among people living with HIV/AIDS in Yenagoa, Bayelsa, Nigeria by Iheany Okonko, N. Shaibu. The choice of research topic is a good one. HBV is an important opportunistic infection among PLWHA and research on this topic is important to provide evidence for screening and management of HBV/HIV co-infection. I however have several major concerns with the manuscript which I have detailed below. The manuscript required major revisions before it can be deemed fit for publication.

TITLE

1. The title is concise and appropriate

ABSTRACT

1. The opening sentence of the abstract needs rephrasing. The use of 'another' in the sentence, "Coinfection is another major challenge..." implies that other major challenges had been mentioned previously.
2. Rephrase the sentence, "CD4 counts and viral load was an indicator for HIV/HBV coinfections."
3. There is a contradiction in the results. The authors report a higher HIV/HBV coinfection in females (3.0%) but further down state that males were more prone to HIV-HBV coinfection.
4. It is not clear what the authors mean by "At the same time, their female counterparts demonstrated a more excellent disposition to HIV infection only." I don't think 'more excellent disposition' is the right phrase to use here.
5. It is not clear also how the authors arrived at the conclusion that "HIV status did seem to influence the predisposition to HBV infection, as an increase in susceptibility was observed with HIV-infected patients in Yenagoa, Nigeria." Saying there is an increased susceptibility to HBV among HIV infected patients in Yenagoa implies that they were compared to people not infected with HIV and prevalence determined for both groups.

INTRODUCTION

1. The authors have demonstrated through the literature the burden of HBV in terms of its prevalence and mortality attributed to it. This is commendable. However, the introduction should go further to describe the similarities and relationship between HIV and HBV as well as the impact of HBV on HIV in terms of CD4 count, viral load, disease progression, mortality etc. (see Sheng et al 2004, Nikolopoulou et al, 2009). This will help situate this study in literature and justify the need to research this topic.

2. Similar to my comment on the abstract, the opening sentence of the introduction needs to be rephrased. Also “the disease” should be changed to Human Immunodeficiency Virus.
3. HIV infection is not now becoming epidemic. It began as an epidemic in 1981.
4. The aim of the study and research questions should be clearly delineated.

MATERIALS AND METHOD

1. In describing the study area, information such as the current HIV prevalence in Bayelsa state and other characteristics relevant to the study should be provided. The 2018 Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) is a good resource on this.
2. The IRB reference number for ethics approval should be provided.
3. How was the sample size for this study determined? Although the sample size appears small, it is possible it may be adequate in relation to the prevalence of HBV/HIV co-infection in a similar population but this needs to be clearly demonstrated.
4. Also the process of recruitment of the participants into the study i.e. the sampling techniques employed need to be clearly described.
5. The study population is described as those who “volunteered to have their stool samples examined.” Examination of stool samples is not relevant to this study and also contradicts venipuncture stated as the method of sample collection used in the study.
6. More information is required about the study population. Were they newly diagnosed HIV patients? ART-naïve or had been on ART? If yes, for how long? Being on ART impacts on CD4 count and viral load and is an important confounder in the relationships between HBV infection and CD4 count and viral load.
7. When was this study conducted and what were the start and end dates of for sample collection?

RESULTS

There is a contradiction between results presented in Figure 3 and the accompanying explanatory text “A higher HIV/HBV coinfection rate occurred among females (3.0%) than in males (0.0%)”

DISCUSSION

1. The authors did a good job comparing and contrasting the findings of their current study with those from previous studies. Unfortunately, they did not proffer reasons for the differences or similarities between their findings and those obtained in previous research. Furthermore, the implications of their findings for clinical practice and care of HIV/HBV co-infected patients have also not been presented.
2. There are contradictions in the discussion on the association between HIV/HBV co-infection and immunosuppression. The authors initially state, “In line with our expectation, the current study showed that HIV/HBV coinfection was associated with severe immunosuppression,” but go on later to say that. “the current study revealed that patients with HIV/HBV coinfection were not severely immunosuppressed.”
3. Some results are mentioned for the first time in the discussion without being presented in the results section e.g. the

comparison of presence of advanced disease between HIV-monoinfected patients and the HIV/HBV co-infected patients; the comparison of viral loads between HIV-monoinfected patients and the HIV/HBV co-infected patients. Means/medians of CD4 count and viral load should be compared between the two groups depending on the normality of the variables and appropriate tests of statistical significance should be applied.

4. This section should include discussion of the study limitations which would form part of the recommendations for further research in the conclusion.

CONCLUSION

1. Refer to comment 4 on the Abstract. The same applies here in the conclusion.
2. The authors state in the conclusion that “HIV/HBV was significantly correlated with low CD4 T cell count and high viral load” but this contradicts the results of p values of 0.60 and 0.88 respectively were initially presented.
3. The authors also state, “Moreover, among PLWHA who are currently on ART, a decreased prevalence of this HIV/HBV coinfection was seen. To fully comprehend the effect of ART on HIV/HBV coinfection among PLWHA, more research is advised.” This is the first time in the entire manuscript that ART is mentioned as a variable in the study. It was not presented in the results and discussion. As a result, the recommendation is not based on the results. Recommendations from the study need to be based on the results.

References

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