Reviewer's report

Title: Molecular Characterization of Hepatitis B Virus in Liver Disease Patients and Asymptomatic Carriers of the Virus in Sudan

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Reviewer: Christophe COMBET

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Yousif et al. described in their manuscript a work to molecularly characterize circulating hepatitis B viruses in Sudan. This interesting and reliable work linked clinical data with viral sequences, which were extensively analysed. It will give a better picture of hepatitis B in Sudan, in the frame of the WHO-EMR request. Some comments are given below in order to improve the manuscript.

Minor essential revisions:

1) The authors must be acknowledged for summarizing the data in Table 1. This helped reading of the paper. However, the table could be split in two tables, with one dealing with demographic/clinical data and the other with genotypic data. This remark comes from the fact that genotype D/E and A column are not available for lines like Male:Female

2) The paragraph “HBV serology and viral loads” in “Results” should be rewritten in order to better understand the given numbers. For example, the mean age could be put between round brackets. The 22 Females should be highlighted too.

3) In the paragraph “HBV genotyping and phylogenetic analysis” in “Results”, 81 HBV isolates were successfully genotyped by different techniques. Could the authors give precision about the choice of the different methods (why not only sequences were used ?) ? What about the 18 remaining isolates ?

4) If the analyses of genotype, recombination and mutation patterns are of clinical interest, more caution should be taken with the subtype analysis.

5) In the “Discussion”, the percentage should be 48% and not 60%, 60% is 48 genotype D isolates over 81 total isolates, not 99.

6) Did the authors look for why the sM133T was observed ?

7) Did the authors look for resistance mutations in their sequence ?

Level of interest: An article whose findings are important to those with closely related research interests

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