Reviewer’s report

Title: Characterization of the hepatitis B virus DNA detected in urine of chronic hepatitis B patients

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Reviewer: Eike Steinmann

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In this study Jain et al. investigated the nature of the DNA detected in urine from patients with chronic HBV infection to assess the potential infectivity and to correlate HBV DNA detection in urine with clinical parameters. Urine from 60 HBV patients were analysed for HBV DNA by PCR analysis of six regions of the HBV genome. The results show that only one patient contained HBV DNA detected by all six regions, but had evidence of blood in the urine. All other patients showed partial detection of the six genomic regions from the HBV genome. The authors conclude that urine from chronic HBV patients with healthy kidney function should not contain full-length HBV DNA and therefore should not be infectious.

The present study addresses an important topic in the prevention of HBV infections and suggests that the risk for HBV infection by urine is low. Previous studies have detected HBV DNA in the urine, however, only short PCR protocols were used. This study here closes the gap of knowledge in this regard. The experiments are well conducted and the conclusions are drawn in the data. I have only minor comments to improve the study:

- For tears, it has been shown that HBV DNA is present and infectious in humanized mice. This study as another example of body fluid transmission can be discussed (Komatsu et al. JID 2012).

- The high and low viral loads could be indicated in the table.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
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If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
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Acceptable

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