Reviewer's report

Title: Higher prevalence and characterization of hepatitis C virus/hepatitis B virus infection in an epidemic area of needle sharing in Northern China

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Reviewer: Yongshui Fu

Reviewer’s report:

The authors evaluated the endemicity and characterization of HCV/HBV infection in a region where people had been involved in injecting sodium benzoate or amphetamine using shared needles. The results show a higher prevalence of HCV/HBV infection. In addition, most of positive HCV RNA are aged >40 years. The author’s work are useful and suggestive, but still needs major revision requiring re-review.

1. Major Compulsory Revisions

The biggest problem was the definition of HBV/HCV coinfection and HCV spontaneous clearance. The HCV/HBV coinfection only means that subjects are anti-HCV positive and anti-HBc positive. How about the subjects are anti-HCV positive and HBsAg positive? No idea of the levels of HBV DNA. How about Occult hepatitis b (OBI)? Thus, the data should consider more carefully and need re-organization. Additional, HCV spontaneous clearance only means that subjects are anti-HCV positive but HCV RNA negative. There was not RIBA assay, some of anti-HCV positive and HCV RNA negative individuals may be a false positive.

In the results, it was controversial that the anti-HBc S/CO ratio as a factor to evaluate HBsAg status in all participants.

2. Minor Essential Revisions

Some of the information in the conclusions could be included in the discussion section with appropriate references to help explain the results, or the consequence of the results.

There were many mistakes need to avoid. Such as:

In the results, paragraph 3, “The overall prevalence of anti-HBc and HBsAg was 67.7% (577/852) and 10.7% (91/852). HBsAg was detected in 87/578 (15.1%) of those who were positive for anti-HBc.” The number of anti-HBc and HBsAg was 577 or 578?

In Figure 1, the group positive anti-HCV was blue, but in Figure 2, the blue represents positive HBsAg group, other groups are also confusion.

3. Discretionary Revisions

None
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 interest