

Format for ANSWERING REVIEWERS

August 25, 2014

Dear Editor,



Please find enclosed the edited manuscript in Word format (file name: 16182-review.doc).

Title: Seroepidemiology of hepatitis B virus infection and impact of a vaccination program

Author: Peng Huang, Li-Guo Zhu, Xiang-Jun Zhai, Ye-Fei Zhu, Ming Yue, Jing Su, Feng-Cai Zhu, Hai-Tao Yang, Yun Zhang, Hong-Bing Shen, Zhi-Hang Peng, Rong-Bin Yu

Name of Journal: *World Journal of Gastroenterology*

ESPS Manuscript NO: 16182

The manuscript has been improved according to the suggestions of reviewers:

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

(1) Authors examined the seroepidemiology of HBsAg and discussed the impact of hepatitis B vaccine. Of interest, immunization China national programs seem to be maintained to prevent resurgence 1. Please add "in Jiangsu province, eastern China" into the title. 2. How the prevalence of HBsAg in the population, who live in other area of China? Authors should show the data from the previous literatures and discuss more. 3. Readers may be unfamiliar to Jiangsu province and authors may indicate the map of China and Jiangsu.

Reply: Many thanks for the reviewer's comments. According to the Revision Policies, the title should be no more than 12 words. So we have added "Jiangsu" into Running title. We also have added more information about HBV prevalence in other area in the Discussion part. Finally, according to the reviewer's suggestion, a map of China and Jiangsu was given in the Supplemental Figure 1. Thanks for your suggestion again.

(2) The study has following flaws: 1. The authors should provide statistical evidence how the number of cases they included represent the regional population. 2. What is the sensitivity and specificity of the kit they used? 3. The reasons not using anti-HBsAb in such a population study? 4. The conclusions of the study are not very clear. The authors should have come out with a clear conclusions from the study (eg. waning of immunity in age group of 30 and more; re-vaccination in this age group; role of sexual transmission supported by evidence etc). 5. Literature is not reviewed critically and excessive self citation is evident.

Reply: Thanks for your kindly suggestions. We have added this information in Methods. Based on the manufacturer's instructions, the sensitivity and specificity of kit are both above 95%. We have test the anti-HBsAb in this survey, but this study focus on anti-HBsAg. In another paper, we will address on the information of anti-HBsAb. Finally, based on you suggestions, we have revised the conclusion and literatures. Thanks again.

(3) Huang et al investigated prevalence of HBV in China in order to evaluate hepatitis B vaccination program that introduced since 1992. They investigated 148,931 individual in Jiangsu Province and found that HBV prevalence were 7.70% which has not achieved the national goal for the whole

population, but the prevalence was just 0.77% among children under 5 years. The study is important to evaluate the HBV vaccination program in China, however the data obtained from the study are not well and constructively analyzed. Especially age-specific analyses are confusing. Age grouping is not consistent and the grouping criteria is not well informed. In some cases, the data presented does not have any means, like in Table 2, for example. So, I suggest to divide age group simply into 3 groups, which are group 1 (children, 1-4 yo), group 2 (adolescent, 5-19 yo) and group 3 (adult, 20 yo and above) for the whole manuscript. Furthermore, repeating of data presentation was also found, for instance Figure 1 and Table 2

Reply: Thanks for your suggestions. Because the samples in >20 age group are more than 80%, we more incline to divide this population by ten years. We are sorry to supply the repeating information in Figure 1 and Table 2. We have revised these parts, and supply the information in new Figure 1.

(4) Nice study, covering a large population in Eastern China. It does not mention vertical transmission as an important factor, which plays a major role in Western populations to day. Also more details on the vaccination strategy should be made (booster at the age of 10-12?)

Reply: Thanks to you kindly suggestion. It is difficult to obtain the information of vertical transmission, but we studied the familial history and the results are shown in new Table 5. Mothers with HBsAg-seropositive significantly increased risk by 257%. Finally, based on your suggestions, we have revised the conclusion. Therefore, free immunization of infants should be maintained, expanded vaccination is needed for adults, especially, in age group of 30 and more, and health education should be further strengthened to limit the spread of HBV infection. Thanks again!

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely yours,



Zhihang Peng, PhD
Department of Epidemiology and Biostatistics,
Nanjing Medical University,
Nanjing 211166, China
E-mail: zhihangpeng@njmu.edu.cn