Reviewer's report

Title: Dynamic comparison between Daan real-time PCR and Cobas TaqMan for quantification of HBV DNA levels in patients with CHB

Version: 1 Date: 21 July 2013

Reviewer: Chia-Yen Dai

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Cai et al. designed the prospective cohort study to investigate potential differences in detecting HBV DNA levels between Cobas TaqMan and Daan PCR assay. In the study, they found that The Cobas Taqman was more sensitive than the Daan test at low viral loads and this could affect clinical decisions. They concluded that Cobas Taqman may be more appropriate for HBV DNA level detection.

This study is quite well-designed. However, there are still some comments raised and need to be clarified.

Major Compulsory Revisions

1. Are the HBV genotype data available? Does HBV genotype play any role?

Minor Essential Revisions

1. The reason of different period of enrollment in the Methods: "Subjects -#From July 2011 to June 2012, we enrolled a cohort….#" and "Follow-up -#The enrolled patients were seen from July 2011 to September 2012 in …#" was ?.

2. Please make sure the statement of tests for week 12 in the study: "Serum ALT and HBeAg levels were assessed at week 12 by the Daan test and the Cobas TaqMan assay, at week 24, ALT, HBeAg and HBV DNA were evaluated by both tests" in the section "Follow-up" of Methods (P6).

3. Authors may add more data about the distribution of viral load of the 26 samples with low viral load only detected by Cobas Taqman assay.

4. In the section#Comparison at low, linear range, and high HBV DNA levels#of Results, there was a describe "samples ranging from 3 log to 7 log (by the Cobas TaqMan) showed…………….between the Daan test and Cobas TaqMan (n =27; 4.51±1.29 log versus 4.24±2.03 log…..)". Please confirm the data are exactly from these 27 patients with HBV DNA levels 3-7 logs.

Discretionary Revisions

1. In the first section "Demographics" of Results, "Forty-one out of the 67 (71.6%) received...". It should be "61.2%" but not "71.6%". Please confirm and revise.

2. Of the 27 baseline samples which were quantitated by the Daan test and needed to be diluted for quantitation by the Cobas Taqman test, what is the percentage of patients with difference greater than 0.5 log, and 1 log? And are there any factors associated with the greater difference? Ex. HBV genotypes?
3. Did any difference of viral load between the 2 assays in LAM/ADV or ETV groups?

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

**Quality of written English:** Needs some language corrections before being published

**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.