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Letter to The Editor

Seroprevalence of Hepatitis B and C in Healthy Malaysian Adults: A Preliminary Report

Hui-min Neoh, Saberi bin Saimun, Rahman Jamal*

UKM Medical Molecular Biology Institute (UMBI), Universiti Kebangsaan Malaysia, Malaysia

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Viral hepatitis caused by Hepatitis A, B or C virus infection is a significant cause of morbidity and mortality in Malaysia. The national incidence rate for hepatitis A has dropped steadily in conjunction with successful public health measures; nevertheless, hepatitis B and C incidence and its clinical outcome remain a concern for health authorities¹.

In this study, previous hepatitis B (HBV) and C (HCV) virus prevalence in healthy Malaysian adults residing in Peninsular Malaysia was determined in a serosurvey. One thousand and twenty (1020) serum samples were randomly sampled from the Malaysian Cohort biobank. The Malaysian Cohort is a national project carried out to determine risk factors and biomarkers for diseases in the Malaysian population². For this serosurvey, samples were from participants aged 35-64 and residing in the states of Peninsular Malaysia. HBV and HCV prevalence of sampled subjects were determined using HBV surface antigen (HBsAg) and HCV antibody (HCV Ab) detection kits (RVR Diagnostics Sdn. Bhd., Malaysia), respectively. Briefly, 10ul of each tested serum was pipetted into the well of a test cartridge, which was later added with the kit's diluent reagent. The sample and diluent mixture was then incubated for 10 minutes prior reading of test result. A double band on the cartridge (one band for control, another for sample positivity) indicates a positive result, while a single band is indicative of a negative outcome. The HBsAg kit has a sensitivity and specificity of 100%, while the HCV Ab kit has a sensitivity of 98.7% and specificity of 99.6%.

Twenty-eight (28) or 2.8% serum samples were tested positive for HBsAg, while 10 (1.0%) samples were found to carry antibodies for HCV. No sample was positive for both HBsAg and HCV Ab. Interestingly, for the HBsAg positive samples, most (n=14, 50.0%) were from the older age group of 55-64 years old, and staying in rural areas (n= 18, 64.3%). While for the HCV seropositive subjects, most were from the older age group of 55-64 years old (n= 5, 50%), with more urbanites found to be seropositive (n= 6, 60%).

The prevalence of HBsAg in Malaysians was reported to be around 5 to 7% in the 1980s; this was before the nationwide implementation of hepatitis B vaccination for all new-born infants in 1989³. Even though the vaccination drive was aimed at infants, some young adults during the 1980s also received the vaccination; this might have subsequently lowered the seroprevalence to 2.8% as found in this study⁴. However, a previous report estimated 2.5% of the Malaysian population aged 15-64 years old to be positive for HCV exposure, an estimate higher than the results obtained in this study⁵. Despite its low prevalence, HCV seropositivity remains a healthcare concern as no vaccine is yet available; and without active screening surveillance the infected are usually diagnosed at a later stage with cirrhosis or liver cancer. In Indonesia, to our knowledge, only one study on HCV seroprevalence was performed in healthy subjects, where 2.2% were found to be HCV positive⁶; while HBsAg prevalence was found to be 1.1% in young adults of Singapore⁷.

This preliminary report shows low seroprevalence of HBV and HCV in adults residing in Peninsular Malaysia. A larger study involving representative participants for each demographic factor will be carried out in the future.

* Corresponding author:

E-mail: rahmanj@ppukm.ukm.edu.my (Rahman Jamal)

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