

Epidemiological study of prevalence and risk factors for HBV among apparently healthy Mongolians

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BACKGROUND: Mongolia has one of the highest prevalence of hepatitis B, C and D (1). Consequently, leading mortality rates of liver cirrhosis and hepatocellular carcinoma (HCC) in the world (2,3). There were no random sampled population study that has been carried out in Mongolia in recent years. In order to formulate policies and strategy in combating viral hepatitis, it is imperative to assess the current situation. Therefore, the present study was conducted to survey seroprevalence of HBV in apparently healthy Mongolian adults aged above 20 years.

MATERIALS AND METHODS: The study was approved by the Ethics Committee at the Health Sciences University of Mongolia and the Health Ethics Committee of the Ministry of Health of Mongolia. Study subjects were chosen based on three-stage cluster sampling method. Total of 1158 subjects were enrolled in the study. All participants on-site tested for HBsAg using rapid tests (CTK Biotech, San-Diego, USA). Also, 5–10 mL of blood was drawn from antecubital vein and sera were separated following a standard protocol. Serum specimens were tested for anti-HCV by enzymelinked immunosorbent assay (ELISA). All answered detailed historical survey for risk factor analysis using a specifically designed questionnaire.

RESULTS: In this study, total of 1158 subjects were enrolled including 599 (43.1%) men and 659 (56.9%) female. The overall prevalence of HBsAg among study subjects were 10.6% (123/1158). While 11.8% of male were tested positive, 9.7% of female participants were HBsAg positive. The results of multivariate regression analysis for potential risk factors show that the risk factors for HBV were increased with dental treatment 4.2 times (OR = 4.293 95% CI 1.158–15.912, p = 0.029) and with hemodialysis 5.1 times (OR = 5.078 95% CI 1.199–21.511, p = 0.027).

CONCLUSION: It is estimated that currently in Mongolia 201 387 people infected with HBV. Male participants had higher infection rate of HBsAg positive. In addition, dental treatment and hemodialysis increase the risk of HBV infection.

REFERENCES

1. Tserenpuntsag B, Nelson K, Lamjav O, et al. Prevalence of and risk factors for hepatitis B and C infection among Mongolian blood donors. *Transfusion* 2010; 50(1): 92–9.
2. Alcorn T. Mongolia's struggle with liver cancer. *Lancet* 2011; 377(9772): 1139–40.
3. http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx.