

Population-Based HCV Prevalence Study among Apparently Healthy Mongolian Population

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Introduction

Mongolia has the world's highest rate of liver cancer mortality—nearly eight times the global average. Prevalence of chronic viral hepatitis B (HBV), C (HCV), and D (HDV) in Mongolia is at an endemic level and constitutes the main cause for Mongolia's world-leading liver cancer mortality rate. The last population-based prevalence study was conducted in 2003, so study is needed to assess the current situation of HCV prevalence.

Methods

This population-based study included total of 1158 randomly selected, apparently healthy people. Screening for anti-HCV were performed by ELISA and HCV-RNAs were performed using quantitative RT-PCR methods (Abbott m2000sp/m2000rt) at the Liver Center.

Results

Total of 1,158 subjects were enrolled including 599 (43.1%) men and 659 (56.9%) female. The overall prevalence of anti-HCV among study subjects was 11.1% (128/1158). Higher percentage of female subjects (12.6%) were tested positive in comparison to the 9% of male subjects. Also 11.1% (128 individuals) were tested as anti-HCV positive and 84% (105 individuals) were HCV-RNA positive. Results of multivariate regression analysis for potential risk factors demonstrated that the following procedures associated with significantly higher risk of HCV transmission. In fact, the risk of HCV transmission correspondingly increased as follows:

- *Acupuncture 1.3 times (OR=1.303 95% CI 1.110-1.531 p=0.001),*
- *Blood transfusion 1.5 times (OR=1.563 95% CI 1.060-2.305 p=0.024),*
- *Blood-letting treatment 1.8 times (OR=1.878 95% CI 1.427-2.471 p=0.0001)*
- *Surgical procedures (OR=3.513 95% CI 2.163-5.704 p=0.0001)*

Conclusion

Based on this study, we estimate that there are approximately 140 thousand adults with chronic HCV infection in Mongolia. We observed a strong cohort effect, but further studies are needed to ensure that it is truly a cohort effect. The risk factor analysis show that the nosocomial infection is the leading risk factor of HCV infection in Mongolia.