



00251 Prevalence of hepatitis E in Russia

01. Viral infection & disease (excl. COVID-19)

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Background

Hepatitis E virus (HEV) is the most common cause of acute viral hepatitis in developing countries. Accumulated evidence of transfusion transmission of this virus has shown the importance of infection to ensure safety donors blood.

Methods

To assess the prevalence of HEV infection in Russia, a large-scale serological study of 5935 serum samples from first time and regular donors collected by random sampling in 10 regions of Russia for the period 2018 - 2019 were carried out. Serum of donors were tested on antibodies of HEV (anti-HEV) using commercial kits «DS-EIA-ANTI-HEV-M» and «DS-EIA-ANTI-HEV-G» as recommended by manufacturer. The average age of the examined was 33,6 years and 2292 (38,6 %) of them were women.

Results

The average HEV seroprevalence level in Russia was 5,3%. Anti-HEV IgG-positive samples in the donor population were detected 2 times more often than anti-HEV IgM-positive ($\chi^2 = 20,6$, $p<0,001$), and - 3 times than anti HEV Ig M + G-positive ($\chi^2 = 63,4$, $p<0,001$). The conducted cluster analysis has allowed us to identify two clusters of territories with medium and high HEV circulation intensity. The highest seroprevalence rate was found in the Stavropol Territory (8,0%) and the Ivanovo Region (8,7%), the least in the Khabarovsk Territory (2,8%). The territorial variability is established, which may be due to the peculiarities of the epidemic process of the hepatitis E, taking into account the geographical location and possible demographic forces. The level of seroprevalence did not depend on the gender of the examined. Over 60% of infected individuals were primary donors over the age of 35.

Conclusions

The results of the study indicate the activity of the epidemic process of HEV and the presence of the risk of parenteral transmission of the virus. In some European countries with a similar level of seroprevalence of HEV, mandatory selective or

universal screening for markers of this infection has been introduced. Taking into account foreign experience, the need for screening of donated blood for anti-HEV in the regions where this infection is widespread may be discussed as a necessity but requires further investigations.