

Press Release

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EPIDEMIOLOGIC STUDY REVEALS WORLDWIDE DECREASES IN CHRONIC HBV INFECTION DESPITE OVERALL REDUCTIONS IN PREVALENCE OF CHRONIC HBV INFECTION, HIGHLY ENDEMIC AREAS PERSIST AND SOME COUNTRIES SHOW ALARMING INCREASES

Together with HIV, tuberculosis and malaria, viral hepatitis is among the most frequent infections worldwide. Hepatitis B is highly infective, 50 to 100 times more than HIV. Up to now, epidemiologic information on time trends and annual changes of chronic HBV prevalence by country was lacking. Scientists at the Helmholtz-Centre for Infection Research (HZI) in Germany investigated changes in chronic HBV infection prevalence over the last decades in 50 countries. Although there was evidence for a reduction in chronic HBV on a global level, some regions are still characterized by high HBV endemicity; obvious increases were seen in some countries. The results of the study were published in the *Journal of Hepatology*.

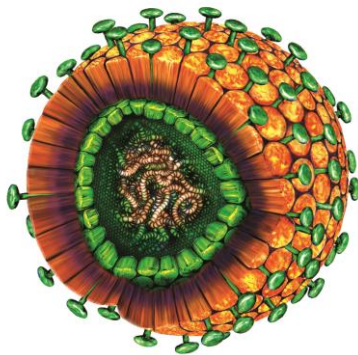


Illustration of a Hepatitis virus. Image: HZI/Britta Mießen.

Hepatitis B is transmitted by contact with blood or body fluids of an infected person, for example through unprotected sexual contact, tattooing or injecting drug use. The infection is often asymptomatic during its acute phase and therefore often not recognized. In case of a chronic course, the virus can cause chronic liver infection leading to cirrhosis and liver cancer.

The risk of developing chronic infection is closely related to age at infection with those being infected at infant age being most likely to develop chronic infection. Specifically, perinatal transmission from mother to child during birth impacts on the high prevalence in some world regions.

According to the findings of the study, prevalence of chronic HBV is decreasing in most countries analyzed. Strongest reductions were observed e.g. in Brazil, China and Malaysia. Severe increases affected countries like Nigeria and Uganda with a rise of up to 7 % annually. „It is possible that also other countries in Africa experience constantly high or increasing prevalence of chronic HBV. However, data are sparse for this region and only few countries provide relevant epidemiologic information that enables a statistical analysis on time trends,” says Jördis Ott, epidemiologist at the HZI Department of Epidemiology and principal investigator of the study.

European countries divide into four different patterns of changes in chronic HBV. „There are those countries indicating a constantly high or increasing prevalence like Russia, Poland and Romania. High income countries of Western Europe, on the other hand, have constantly low prevalence whereas countries of former high HBV endemicity like Turkey and Albania showed medium decreases in recent years. Furthermore, we found very strong declines in Mediterranean countries like Greece,” concludes Rafael Mikolajczyk, head of the group Epidemiologic and Statistical Methods at the HZI and co-author of the study.

Reductions in chronic HBV infection also appeared in countries in the Western Pacific region. “The extent to which decreases are attributable to preventive interventions, for example HBV vaccination, varies by country and depends on time of vaccine implementation

and coverage,” says Ott. Furthermore, successes of childhood and infant HBV vaccination arise with a timely delay and manifest in adult age-groups only after decades.

The Helmholtz Centre for Infection Research (HZI)

Scientists at the Helmholtz Centre for Infection Research in Braunschweig, Germany, are engaged in the study of different mechanisms of infection and of the body’s response to infection. Helping to improve the scientific community’s understanding of a given bacterium’s or virus’ pathogenicity is key to developing effective new treatments and vaccines.

<http://www.helmholtz-hzi.de/en>

Original publication

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