

# Evidence of Hepatitis D Virus Infection in HBsAg Positive Subjects of Mashhad, North-East of Iran

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Dear Editor,

Anti-Hepatitis D Virus (HDV) among hepatitis B virus surface antigen (HBsAg) positive subjects has been reported from various countries such as Romania (1), Russia (2), Bangladesh (3), Pakistan (4), Saudi Arabia (5), Italy (6), and Mexico (7) with a prevalence of 83.3%, 12.5%, 24.4%, 16.6%, 8.6%, 8.3%, and 4%, respectively. According to studies carried out in Iran, HDV does not have a similar prevalence in different parts of the country. While the overall prevalence seems to have declined in Iran, studies demonstrated an upward trend of HDV infection prevalence among HBsAg-positive patients (8). As described previously, of 3198 individuals enrolled in this study, 34 were HBsAg positive (9). None of HBsAg-positive subjects were positive for anti-HDV.

Similar studies have been carried out in different parts of Iran and different prevalence rates have been reported. A study in Tehran, reported that HDV prevalence rate among Hepatitis B Virus (HBV) infected patients was 12.6% (10). Yaghob et al. observed HDV positivity in 2.2% of HBsAg blood donors in Shahrekord, West of Iran (11). In Golestan province, the prevalence was reported to be 5.8% (12). One study even noted a prevalence of 10.7% in Kerman (13), which is among one of the highest prevalence rates in Iran. In Tehran, capital of Iran, Rezvan et al. (14) noted anti-HDV Ab in 2.4% of HBsAg positive blood donors. According to previous studies in Iran, risk factors for becoming infected with HDV includes surgery, dentistry interventions, endoscopy, tattooing, war injury, traditional phlebotomy (Hejamat), and family history (15).

In our study, none of the HBsAg-positive subjects had positive results for anti-HDV. Since vaccination against HBV can also protect against HDV infection, the data of this study confirms the notion that expanded HBV vaccination coverage in our region might limit the spread

of HDV in the normal population. Since HDV infection among HBV carriers could not be prevented unless by educating individuals to prevent further exposures, preventive measures such as vaccination against HBV is necessary but not sufficient for decreasing the prevalence (16). Further investigations with larger sample sizes seem essential to clarify risk factors and prevalence rates in our region.

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