

LETTERS TO EDITOR

HEPATITIS B VIRUS GENOTYPES IN IRAN

Sir,

Hepatitis B virus (HBV) genotypes differ due to geographic parameters, and recently the clinical importance of HBV genotypes in their Pathogenesis has been discussed. HBV genotypes indicate their transmission route, geographical distribution, and the destination of immigrants infected with HBV.^[1] We conducted the present study to evaluate the genotypic disparity of HBV in Golestan province of Iran, an area with high prevalence of HBV infection.^[2]

During a population-based cross-sectional study in Golestan province of Iran (2004-2005), 164 HBsAg-positive cases had been detected from a total sample size of 1850 participants.

^[2] In 126 of 164 cases (available serum samples), DNA extraction was carried out using standard phenol-chloroform method. Genotypic determination of the samples has been done by polymerase chain reaction (PCR) method using specific primers for HBV genotypes. PCR was performed in a total volume of 50 µL containing 5 µL of DNA extracted, 5 µL 10x buffer PCR, [50 mM-KCl, 10 mM Tris-HCl pH 8.3, 1.5 mM MgCl₂], 200 µM of each dNTP, 2 U Taq polymerase, and 25 pmol of each primer. After PCR, the amplified products were electrophoresed on a 1% agar's gel, stained with ethidium bromide, and evaluated under UV light.

One hundred twenty-six HBsAg-positive serum samples were assessed. The results of PCR

by beta-globin primer, as well as other type-specific primers, in 9 samples were negative because the DNA of these samples was not extracted adequately. Therefore, these samples were excluded and PCR was continued for genotype determination only in 117 cases. In 93 (79.5%) out of 117 samples, genotype D was detected, and the remaining 24 samples were not positive with any HBV type-specific primers.

Results from this study have shown that the only genotype of HBV detected in Golestan province was D type. In previous studies from Iran, all HBV cases were detected as D genotype.^[3,4] In another study, HBV genotypes A and D were the commonest in northern India.^[5] Finally, Alexopoulou *et al.* suggested that D type of HBV is common in Mediterranean countries.^[1] Our results were in line with the results of all the above-mentioned studies.

Previous studies showed that D type of HBV usually does not change liver enzymes (e.g., transaminases) considerably, and also this type will not result in severe liver diseases.^[5] Some researchers reported that lamivudine is more efficient in the treatment of patients with D type as compared to those with other types of HBV.^[6]

Therefore, it should be considered that vaccination and educational programs can help us to control HBV infection efficiently. Also, health care workers should note that lamivudine may be useful in the treatment of a large number of HBV-infected patients in this area.

In conclusion, the most frequent type of HBV genotype in our study was D type, which usually causes a mild liver disease. Hence proper vaccination, educational programs, and treatment with lamivudine are efficient strategies in controlling HBV infection in our area.

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