Detection of HBV resistance to Lamivudine in patients with chronic hepatitis B using zip nucleic Acid probes in kerman, southeast of iran.

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Abstract
HBV infection is contagious and may be transmitted vertically or horizontally by blood products and body secretions. Over 50% of Iranian carriers have contracted the infection prenatally, making this the most likely route of transmission of HBV in Iran. This study assesses the resistance to Lamivudine in patients with chronic hepatitis B infection using a new ZNA probe Real Time PCR method. To evaluate the effectiveness of Lamivudine therapy for chronic hepatitis B infection, a study was conducted on 70 patients (36 men and 34 women), who had received the drug first line. All patients were tested for the presence of HBsAg and HBeAg, the serum ALT level and the HBV DNA load before and after treatment. In all samples resistance to Lamivudine was tested with the ZNA Probe. Our results showed that ZNA Probe Real Time PCR method could detect wild type, YMDD, and its mutants, tyrosine-isoleucine-aspartate-aspartate and tyrosine-valine-aspartate-Aspartate. Among an estimated seventy patients with chronic hepatitis B infection, 7.52% were resistant to lamivudine. Only one patient was negative for presence of HBS-Ag (6.5%) and two patients were negative for HBe-Ag (1.1%). Real-time PCR with Zip nucleic acid probes is a sensitive, specific and rapid detection method for mutations in the YMDD motif, which will be essential for monitoring patients undergoing Lamivudine antiviral therapy.

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