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Deep sequencing analysis of HBV in chronic HBV patients from Saudi Arabia

Sherif A El-Kafrawy¹, Ghazi A Jamjoom¹, Hisham O Akbar¹, Hind B Fallatah¹, Mai M El-Daly¹, Yousif A Qari², Mohamed Abdel-Hamid³ and Esam I Azhar¹¹King Abdul Aziz University, Saudi Arabia²King Abdulaziz University Hospital, Saudi Arabia³National Hepatology and Tropical Medicine Research Institute, Egypt

Hepatitis B virus (HBV) is a member of the family Hepadnaviridae and is classified into ten genotypes (A-J) and 34 sub-genotypes. These genotypes differ in geographic distribution, HBeAg seroconversion rate, clinical outcome, prognosis, and response to antiviral treatment. HBV is transmitted through percutaneous or parenteral routes and is affecting human health all over the world. The prognosis of chronic HBV (CHB) infection includes hepatic failure, cirrhosis, and hepatocellular carcinoma (HCC). In the last two decades several studies have been published concerning the epidemiology and prevalence of HBV in Saudi Arabia. However, studies exploring the evolutionary aspect and molecular variations in HBV are very limited. The introduction of mandatory vaccination has reduced the prevalence in young Saudis, <25 years old, but the prevalence of individuals more than 25 years is about 4%. Expatriates working in Saudi Arabia, 33% of the population contributes to the burden of HBV infection in the country. Genotype D is the most prevalent HBV genotype in Saudi Arabia. The molecular characterization of HBV in Saudi Arabia is an urgent need to develop appropriate diagnosis and treatment strategies. The presence of drug resistant mutations in treatment of naïve patients have been documented and are shown to be one of the factors affecting the response to antiviral treatment. The best reported approach to investigate the prevalence of these mutations is deep sequencing using next generation sequencing techniques. To approach this point of research, we performed deep sequencing of the virus from chronically infected HBV patients from Saudi Arabia. The results of the next generation sequencing and the rare mutations found in the samples of the recruited subjects as well as their clinical data will be presented in the presentation.

Biography

Sherif A El-Kafrawy has completed his PhD in 1999 from Menoufiya University, Egypt. He was appointed as an Assistant Professor of Molecular Biology at the National Liver Institute, and is currently working as an Assistant Professor of Molecular Virology in King Abdul Aziz University. He has published more than 25 papers in reputed journals.

skafrawy@hotmail.com

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