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A snapshot on the molecular epidemiology of hepatitis B and C in Morocco

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Viral hepatitis is a serious public health problem affecting billions of people globally. Together, hepatitis B virus (HBV) and hepatitis C (HCV) are the leading cause of liver cancer in the world. The objective of this exhaustive study was to draw an epidemiological and molecular portrait of HBV and HCV infections in Morocco. A seroprevalence survey was conducted in the general population and blood donors. We confirmed the intermediate endemicity for HCV infection and noted a downward trend in the incidence of HBV, which might reclassify Morocco in low HBV endemicity area. The HCV infection was primarily associated with nosocomial exposures. Additionally, sexual risk behaviors were associated with higher prevalence of HBV among adults. The study of the HBV genetic diversity showed a predominance of genotype D and apparition for the first time of genotype E and mixed infections A/D and D/F. We also reported that precore variants could be found in more than three quarters of Moroccan patients with HBV infection. Their prevalence was related to HBV genotypes. In addition, we have characterized the first cases of antiviral resistance in patients under treatment and no mutation was detected in naive subjects. Concerning hepatitis C, its diversity was analyzed over a period of fifteen years. Five genotypes and eight subtypes have been identified. We have shown a predominance of genotype 1 and a global codominance of subtypes 1b and 2a/2c. Drug addiction was the primary mode of spread of 3a subtype. Subtype 1b was prevalent in patients with cirrhosis confirming thus, its association with severe liver disease. Pilgrims follow comparably the national trend with an increased prevalence in older people and the presence of genotypes 1, 2 and 4. Among multi-transfused patients, despite the unique presence of genotype 1, the contribution of transfusion in HCV transmission has not been demonstrated.

Biography

Warda Baha has received her Bachelor's degree in Biochemistry at the University Hassan II of Mohammedia in 2006, followed by a Master's degree with honors in Microbiology and Bioengineering from the same university in 2008. Afterwards, she had the diploma of Systematic Virology in 2010 from Pasteur Institute of Paris and Pierre Diderot University in France. In 2013, she has completed her PhD studies in the field of Virology and Molecular Biology in the laboratory of Dr. Abdelouaheb Benani at Pasteur Institute of Morocco. Her thesis aimed to draw an epidemiological and molecular portrait of hepatitis B and C infections in Moroccan general population and high-risk patients within the framework of the national program for viral hepatitis prevention. After completing her studies, she has decided to broaden her knowledge and expertise by working in a vaccine industry as Head of labs of Molecular Biology and Serology. Her main activities are quality and potency control of vaccines as well as, assay and vaccine development and validation.

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