

## Perspective on Hepatitis B and C Viruses and Hepatocellular Carcinoma

Alan Shanman\*

Department of Medicine, University of Michigan, Michigan, USA

\*Corresponding author: Alan Shanman, Department of Medicine, University of Michigan, Michigan, USA, E-mail: Shanmanalan@gmail.com

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### About the Study

Basic and clinical research on the hepatitis B and C viruses has advanced in recent decades as a result of advancements in science and technology; both sectors have made significant contributions to public health. On one hand, advances have been achieved big props to more specific serological immunoassays and highly sensitive molecular diagnostic tests, as well as a better understanding of the viruses' genetic structure and life cycle, as well as the development of HBV vaccines, new anti-HBV antivirals capable of inhibiting viral replication very effectively, and new anti-HCV direct-acting agents. Epidemiological studies, on the other hand, have clearly demonstrated that hepatitis virus infections can result in a variety of clinical outcomes, ranging from acute hepatitis to cirrhosis and, in some circumstances, hepatocellular cancer.

The most significant frontline armamentaria available to avoid the long-term clinical implications of these infections have been vaccination coverage and antiviral therapies. However, the narrative is far from over because over 300 million individuals globally have chronic hepatitis B and 75 million have chronic hepatitis C. As a result, the World Health Organization has set a goal of eliminating viral hepatitis by 2030, which should have a significant impact on HCC prevention. However, countries with less socioeconomic development, such as Latin America or other continents, may not be able to achieve such a desirable goal.

Hepatitis B and C Viruses and Hepatocellular Carcinoma and the epidemiology of these viruses is leading etiological factors for the development of HCC, the role of regional environmental factors, the risk of HCC after antiviral treatments, the outcome after non-surgical resection of HCC, and the study of the molecular mechanisms that lead to this pathology. The previous research by scholars addresses the concept of genetic and environmental risk factors in liver cirrhosis in Mexico. The importance of viral genotypes, host gene polymorphisms, a hepatopathogenic diet, cholesterol-rich diets, and Aflatoxin in the development of HCC is discussed, with an emphasis on regional heterogeneity in these factors and their impact on the development of HCC.

Some other studies give an in-depth assessment of the ITA.LI.CA Consortium's 20-year systematic collection of clinical data. The research provides a good example of how national clinical databases are useful for getting trustworthy information from real-world experience and how this approach can accelerate the rate at which we gain knowledge, providing a unique viewpoint on the progress made in the study of HCC. Furthermore, understanding the in situ situation, i.e., what is going on in terms of hospital admissions within a specific region and the contributing risk factors, can aid in developing future viral hepatitis elimination strategies, in addition to the extensive national epidemiological study surveys [1].

Studies that also emphasizes the need of discovering viral hepatitis and liver damage in a large cohort of asymptomatic Italian patients with no history of liver injury who were admitted to Internal Medicine or Surgery Divisions because reasons unrelated to hepatological disorders. These studies are examples of what can be accomplished in other locations, such as Latin America, given the latest artificial intelligence tendencies. Overall, they are studies suggest that when HBsAg is applied as the solitary marker, HBV sub diagnosis is an issue.

In contrast to large-scale epidemiological surveys, when these studies are conducted in more particular regions, such as rural areas versus metropolitan areas, significant results can be found. They are some previous studies that examine the incidence of HCC and risk factors in rural Northeastern, finding a two-fold rise in HCC prevalence and an increase in intravenous drug misuse, indicating that viral hepatitis preventive methods should be regionalized.

They achieved a 20-times reduction in HCV prevalence following the initial outbreak in 1999 by treating with antivirals from two different periods, pegylated-interferon/ribavirin at first and then DDAs subsequently. In this 20-year follow-up analysis, they used genetic methods to identify the source of HCV infection, the natural history, risk factors, and the impact of antiviral treatment.

Three basic studies pertaining to the world of microRNAs (MiRs) and their potential use as prognostic indicators and therapeutic targets in HCC. The oncogenic role of miR-3682 in HCC tissues was investigated by X. Liu who discovered that it inhibits the AMPK signaling pathway by negatively regulating ADRA1A, encouraging a malignant phenotype [1].

### Conclusion

Finally, this demonstrates that HBV and HCV, the major drivers of HCC development, are still significantly common in various parts of the world. HCC is becoming more common over the world as a result of hepatitis virus infections and metabolic problems such as obesity, diabetes, and dyslipidemia. In this regard, various papers give scientific knowledge as well as methodological approaches that might be used to better address this public health problem. They also emphasize the need for more prospective and large-scale research to give up-to-date scientific evidence on the regional background factors that influence the progression of HCC. The take-home message is that real scientific research in hepatology serves as the foundation for developing clinical practice guidelines based on a medicine approach to the needs and characteristics of the affected populations in order to reduce the impact of liver diseases.

## References

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