

Advances in some common chronic liver diseases

Ke-Qin Hu

Division of Gastroenterology and Hepatology, University of California, Irvine, School of Medicine, Orange, CA 92868, USA

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Chronic liver diseases (CLDs) are a diversified group of primary hepatic pathophysiological injury caused by various infectious, genetic and metabolic, hepatotoxic, autoimmune, and other underlying etiologies. If diagnosis and treatment are delayed, most CLDs could progress to cirrhosis that can be further associated with development of hepatocellular carcinoma (HCC). Significant medical advances have been made in diagnosing and treating CLDs. We are very pleased to present this special issue of *Frontiers of Medicine* that covers some important topics in clinical hepatology.

It is estimated approximately 450 million people are infected by hepatitis B virus (HBV) worldwide. Chronic HBV infection can result in chronic hepatitis B (CHB), cirrhosis and HCC. CHB is one of the most common CLDs in China. Implementation of hepatitis B vaccination and availability of effective treatment for CHB have significantly reduced the prevalence of HBV infection, and effective treatment has also resulted in significantly improved outcomes of this disease. In this issue of the Journal, Drs. Zhang, Hu and Duan's paper entitled "New perspective on the natural course of chronic HBV infection" has re-reviewed current research updates on HBV pathogenesis and proposed their opinion on pathogenesis of the persistence of chronic HBV infection, that shed light on further improving our current HBV treatment. In Dr. Hou and his colleagues' paper, they have provided a thorough update on "Chronic hepatitis B virus infection: epidemiology, prevention, and treatment in China." The paper by Drs. Skupsky and Hu entitled "Current hepatitis B treatment guidelines and future research directions" systemically reviewed current main guidelines and recommendations on HBV treatment, and future research direction. It is known that, even the application of both hepatitis B vaccination and hepatitis B immunoglobulin (HBIG) may not entirely prevent perinatal HBV transmission. Drs. Park and Pan's paper entitled "Current recommendations of managing HBV infection in preconception or pregnancy" provides a very detailed update and recommendations on this important issue.

Hepatitis C is a global public health problem. It is estimated that approximately 170–180 million people are infected with the hepatitis C virus (HCV) globally. Morbidity and mortality from hepatitis C is primarily due to cirrhosis related complications such as variceal bleeding, ascites, hepatic encephalopathy and HCC. Clearly, HCV and its associated complications result in significant medical and economic burdens. The therapy for hepatitis C has made significant progress in the past 2 decades. In the mid-1990s, pegylated interferon and ribavirin combination therapy reached the 50% rate of sustained virological response (SVR). With the advance in our understanding of the hepatitis C replicative cycle and molecular biology, numerous oral direct-acting antiviral drugs (DAAs) targeting specific hepatitis C viral proteins were developed. In 2011, the first generation HCV protease inhibitors, telaprevir and boceprevir, were approved by the FDA in the United States. In December 2013, two other DAAs, namely sofosbuvir and simeprevir, became available. They have excellent antiviral potency and improved side-effect profiles. Extensive studies keep going on for even better and safer HCV treatment options. Dr. Pockros's paper entitled "Advances in newly developing therapy for chronic hepatitis C virus infection" provides a very timely and systemic review in this field that will prepare us to move on to a new era of HCV treatment. It should be noted that American Association for the Study of Liver Diseases (AASLD), together with Infectious Diseases Society of America (IDSA) and International Antiviral Society-USA (IAS-USA), recently released a joint-society comprehensive updated recommendations on management of chronic hepatitis C.

HCC can be developed from many CLDs, especially cirrhosis. Significant advances have been made in managing

HCC. In this issue of the Journal, the paper entitled “Advances in managing hepatocellular carcinoma” by Drs. Reataza and Imagawa systemically reviewed current options on HCC management, including various ablation therapies.

I sincerely hope that you find this issue of *Frontiers of Medicine* an invaluable resource to your clinical practice in managing these common CLDs. I am indebted to all the authors for their outstanding contributions to this issue. Also, I would like to thank Ms. Jiesheng Mo for her outstanding editorial support.

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Ke-Qin Hu, MD
Division of Gastroenterology and Hepatology
University of California, Irvine
School of Medicine
Orange, CA 92868, USA
kqhu@uci.edu