Acta Scientific Gastrointestinal Disorders (ISSN: 2582-1091)

Volume 5 Issue 8 August 2022

Short Communication

An Update on Hepatitis D Virus in Pakistan

Zain Majid[1]*, Nishat Akbar[1] and Nasir Hassan Luck[2]

[1]*Consultant, Department of Hepatogastroenterology, Sindh Institute of Urology and Transplantation, SIUT, Karachi, Pakistan*

[2]*Professor, Department of Hepatogastroenterology, Sindh Institute of Urology and Transplantation, SIUT, Karachi, Pakistan*

***Corresponding Author:** Zain Majid, Consultant, Department of Hepatogastroenterology, Sindh Institute of Urology and Transplantation, SIUT, Karachi, Pakistan.

DOI: 10.31080/ASGIS.2022.05.0456

Received: June 24, 2022

Published: July 04, 2022

Hepatitis B and C are deadly diseases that have plagued our world for over 50 years. Hepatitis D, though discovered later on, infects around 15 million people globally. Every year the world hepatitis day is observed globally on the 28th of July. We through this letter wish to educate the masses about hepatitis D virus and its impact not only worldwide but to the Pakistani population as well.

Letter

Hepatitis D virus is a defective virus that needs the presence of Hepatitis B virus to complete its life cycle in the human hepatocytes [1]. Being a hybrid virus, which infects individuals already harbouring HBV infection it uses the HbsAg as its envelope protein to propagate [2].

It was discovered in 1977 in those patients having chronic HBV infection [2]. HDV infection is most prevalent in the Middle East, Central Asia, East Africa, the Mediterranean region and the Amazon basin region [2]. HDV has three main genotypes 1,2,3, with Genotype 1 mainly seen in the Western countries while Genotype 2 seen in the Far east [2].

HDV's transmission is via the parenteral route through blood or blood products with infrequent transmission reported sexually and an even uncommon vertical transmission route [2]. Around 5% of HBV carriers have concomitant HDV infection [2]. Risk factors include a history of multiple blood transfusions, IV drug abusers and migrants from high-risk countries [2].

Structural the HDV is a RNA that consistent of HDAg and a lipoprotein envelope derived from HBV [2]. HDAg is of two main types, the long and the short. The short HDAg is needed for viral replication while the long HDAg is responsible for the viral assembly but also inhibits the viral replication process [2].

Those infected with HBV, HCV along HDV infection, the hepatitis HDV or HCV infection mainly predominates [2]. Diagnosis requires the presence of anti HDV total antibodies as the first screening test with confirmation requiring the presence of HDV RNA PCR [2]. On Liver histology inflammation and necrosis of the hepatocytes is noted [2].

Currently no known therapeutic option exist for acute HDV infection. Peg IFN alpha once weekly for one year maintains a post treatment virological response in only 25% of the patients [3].

Newer therapeutic options include Myrcludex B, which blocks the entry of HDV into the hepatocytes, Lonafarnib which inhibits host farnesyl transferase and REP2139, which is a nucleic acid polymer that prevents the export of mature HDV [3]. However, their large-scale use and efficacy is yet to be established.

As for the situation of HDV infection in Pakistan, recent studies suggest a high disease burden. The prevalence of HDV in HbsAg positive individuals in Pakistan is around 16.6% [4].

Experience amongst the pediatric HDV infected patients revealed a more aggressive disease process compared to mono infection with HBV infection [3].

As treatment options for this virus continue to emerge, liver transplant appears to be a favourable option for those with fulminant liver failure, end stage liver failure, HCC due to co or superinfection of HBV and HDV and those not treatable by interferon-based regimens [5]. The government and other health care related organisations must address the risk factors leading up to HDV infection and must stress upon enhancing the vaccination against hepatitis B [3] to further decrease the spread of this deadly disease.

Bibliography

1. Mentha N., *et al*. "A review on hepatitis D: From virology to new therapies". *Journal of Advanced Research* 17 (2019): 3-15.

2. Masood U., *et al*. "In: StatPearls. Treasure Island (FL): StatPearls Publishing (2021).

3. Emerging Issues in Hepatitis D. World Gastroenterology Organisation (2021).

4. Mumtaz K., *et al*. "Epidemiology and clinical pattern of hepatitis delta virus infection in Pakistan". *Journal of Gastroenterology and Hepatology* 20 (2005): 1503-1507.

5. Muhammad H., *et al*. "Hepatitis D virus and liver transplantation: Indications and outcomes". *World Journal of Hepatology* 13.3 (2021): 291-299.