

EDITORIAL

THE GLOBAL BURDEN OF HEPATITIS AND EFFORTS FOR ITS ERADICATION

For the last 7 years, 28th July is being observed as World Hepatitis Day (WHD) across the 194 member states of W.H.O. to raise international awareness and promote preventive, diagnostic and treatment measures of hepatitis, which is affecting millions of individuals globally and killing approximately 1.34 million each year. This particular date was selected by W.H.O. in recognition of contributions in the field of infectious disease by 1976 Nobel Prize winner; Baruch Samuel Blumberg (July 28, 1925 – April 5, 2011) who discovered Hepatitis B Virus (1967) and later devised diagnostic tests and vaccine for this deadly virus.

There is alarming contribution to global human morbidity and mortality by hepatitis. An approximately 3.5% of world's population (nearly 257 million individuals including 65 million females of childbearing age) are infected with HBV. About 0.884 million deaths in 2015 alone were reported by W.H.O. due to HBV infections. Unfortunately, the situation is miserable for HCV infections too. Globally, approximately 71 million individuals are suffering from HCV infections and annual deaths due to HCV related complications are about 0.4 million. The scenario becomes even more worsen for injecting drug abusers and according to Global Hepatitis Report 2017, 67% of global injecting drug abusers are having HCV infections. The annual deaths due to hepatitis are comparable with that of tuberculosis and higher than that of HIV. According to this report, death rates due to HIV, malaria and tuberculosis are declining but mortality due to hepatitis is showing up-surge. All these statistics hints towards an urgent robust response of global community against hepatitis as a prime public health hazard. After decades of interventional strategies, malaria, HIV and TB are documenting a downward trend, so global community needs high impact, cost effective interventions to control the rising trend of hepatitis.

During past 7 years, W.H.O. managed to develop awareness of the severity of this disease. Each year, W.H.O. focussed on a specific theme and themes for each WHD were: Hepatitis affects everyone, everywhere. Know it, confront it (2011); It's closer than you think (2012); More must be done to stop this silent killer (2013); Hepatitis: Think again (2014); Prevention of viral Hepatitis: Act now (2015); Know Hepatitis: Act now (2016); and Eliminate Hepatitis (2017). Elimination of Viral hepatitis is technically feasible by effective vaccination against HBV, improving safety of disposables and safe blood products, availability of cost effective diagnostic tests and medications. Many countries have already formulated and implemented their strategies to

achieve this noble objective. To unify and co-ordinate this noble goal, W.H.O. devised a five core interventional strategy to eliminate HBV and HCV infections by year 2030 keeping year 2015 as baseline. This road to elimination of hepatitis by year 2030 covers: HEPB3 Coverage (84% of 2015 to 90% of 2030 globally), HBV-MTCT coverage (39% of 2015 to 90% of 2030 globally), blood safety coverage (97% of 2015 to 100% of 2030 globally), Proportion of un-safe injections (5% of 2015 to 0% of 2030 globally), Harm reduction [syringes, needles distributed/PWID/year] (27 in 2015 to 300 in 2030 globally), Diagnostic services for HBV infection (9% of 2015 to 90% of 2030 globally), Diagnostic services for HCV infection (20% of 2015 to 90% of 2030 globally) and Treatment coverage of HBV infection (8% of 2015 to 80% of 2030 globally) and Treatment coverage of HCV infection (7% of 2015 to 80% of 2030 globally).

Apart from these interventions, innovations to accelerate elimination of hepatitis and effective management of complications of this deadly disease are of pivotal importance. Generic DAA's are manufactured in high endemic poor countries at a very low cost. A pan-genotype DAA "Mavyret" (Glecaprevir/Pibrentasvir) is an oral Ribavirin free therapy across all genotypes of HCV just for a period of 8 weeks and having success rate of more than 98%. Mavyret got FDA approval on August 3, 2017 and is approved to be used in all stages of kidney impairment including patients on haemodialysis. Mavyret is first drug to be approved for treatment of those patients in whom other oral DAA's have failed. More and more Pan-genotype oral DAA's are under experimental trial at the moment. A novel liver dialysis device, DiaLive has been invented by scientists and doctors from University College of London early this year and first of the total 24 patients in international trial of this liver dialysis has been recruited and treated successfully by Royal Free Hospital London. This device if found to be safe and effective in clinical trial, may be a revolutionary step and alternative to liver transplant in many conditions of liver failure. So the future is bright if we as responsible human being/community/country focus on all these strategies along with a strong political, unified and global commitment to eradicate this menace by 2030.

REFERENCES

1. Global Hepatitis report 2017. World Health Organization.
2. HBV vaccines: WHO position paper. *Wkly Epidemiol Rec.* 2009; 84: 405-20.

3. Perz JF, Armstrong GL, Farrington LA, Hutin YJ, Bell BP. The contribution of hepatitis B virus and hepatitis C virus infections to cirrhosis and primary liver cancer worldwide. *J Hepatol.* 2006; 45:529-38.
4. Hutin Y, Chen RT. Injection safety: a global challenge: *Bull World Health Organ.* 1999;77 (10):787-88.
5. Monitoring and evaluation for viral hepatitis B and C: recommended indicators and framework. Technical report. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204790/1/9789241510288_eng.pdf, accessed June 30, 2017).
6. Khan AJ, Luby SP, Fikree F, Karim A, Obaid S, Dellawala S et al. Unsafe injections and the transmission of hepatitis B and C in a peri-urban community in Pakistan. *Bull World Health Organ.* 2000;78:956-63.
7. Shepard CW, Finelli L, Alter MJ. Global epidemiology of hepatitis C virus infection. *Lancet Infect Dis.* 2005;5:558-67.
8. Guidelines on hepatitis B and C testing. Policy brief. Geneva: World Health Organization;2016[WHO/HIV/2016.23](<http://apps.who.int/iris/bitstream/10665/251330/1/WHO-HIV-2016.23-eng.pdf?ua=1>, accessed 30 June 2017).
9. Global report on access to hepatitis C treatment: focus on overcoming barriers. Geneva: World Health Organization; October 2016 (<http://apps.who.int/iris/bitstream/10665/250625/1/WHO-HIV-2016.20-eng.pdf?ua=1>, accessed 30 May 2017).
10. FDA approves Mavyret for Hepatitis C. FDA News release; August 3, 2017. <https://www.fda.gov/NewsEvents/Newsroom/.../ucm570038.htm>
11. A novel Liver Dialysis machine: DiaLive .https://www.eurekalert.org/pub_releases/2017/eaft-ftp072117.php

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