Indian J Med Res 150, July 2019, pp 1-3
DOI: 10.4103/ijmr.IJMR_1243_19

Quick Response Code:

Editorial

Raise awareness of the global burden of viral hepatitis & to influence real change

Viral hepatitis continues to be a major public health problem in India and across the world with half the world's population exposed to different heterotrophic viruses. Hepatitis B and C contribute to a high grade of disease burden in the western world. The spectrum of viral hepatitis differs with respect to aetiological agents in different geographical regions of the world. Hepatitis E virus (HEV) infection is the major cause of acute sporadic and epidemic hepatitis in India[1-11]. The frequency of hepatitis C has been reported to be 1-2 per cent among voluntary blood donors[12-15]. About 15-30 per cent cases of acute hepatitis in India is due to HBV[16,17], HCV is an uncommon cause of acute icteric hepatitis[12] but causes most of the post-transfusion hepatitis[12]. Hepatitis B virus (HBV) is of intermediate endemicity with nearly four per cent of the population being chronic HBV carriers[16]. HBV is known to cause about 50 per cent cases of chronic liver disease in India and HCV for 20 per cent infection[16,17]. In India about 250,000 people die of viral hepatitis or its sequelae[18]. However, our efforts in this regard are constrained due to lack of viral hepatitis registry and good community-based epidemiological and seroepidemiological studies. It is quite astonishing that the hepatitis B surface antigen (HBsAg) prevalence has been reported to be highest in the natives of Andamans and Arunachal Pradesh[19]. Outbreaks of acute and fulminant hepatitis B still occur mainly due to improperly sterilized needles and syringes, as demonstrated by an outbreak of acute hepatitis B in Modasa town of Gujarat[20]. A total of 315 outbreaks of viral hepatitis have been reported from 2010 to 2013 and 99 outbreaks in 2013 alone in India by Integrated Disease Surveillance Programme of the National Centre for Disease Control[21]. Hepatitis A virus (HAV) infection is responsible for 10 to 30 per cent of acute viral hepatitis and 15 to 45 per cent of acute liver failure (ALF) in India. HEV infection is responsible for 10 to 40 per cent of acute hepatitis and 15 to 45 per cent of ALF cases in India[22]. It is worth mentioning that acute HEV infection has a high mortality rate of 15-25 per cent in pregnant women in the third trimester[23]. The unfinished challenging task would be to eliminate viral hepatitis from our country. This would need an integrated and holistic approach for educating public and healthcare personnel for identifying persons at risk for viral hepatitis and to ensure appropriate counselling, diagnosis, medical management and treatment. Administration of injection using sterilized needles and syringes should be ensured for health practices. All healthcare workers across the country should be vaccinated as many of them are unsure of their vaccination status and prone to blood-borne infections[24]. Public health measures to improve sanitation and provide safe drinking water are important for preventing HAV and HEV. Encouraging voluntary blood donation in the blood bank would provide safe blood for donation; but, as a screening tool, individual donors' nucleic acid testing (NAT) detects infection for HIV, HBV and HCV much earlier than serological tests[25]. HAV vaccination strategies need to be redefined because of changing epidemiology. HEV vaccine should be made available in our country. Scaling up of infant vaccination has already demonstrated an impact on global HBV prevalence[26].

A substantial scale-up in birth dose vaccination coverage is pivotal to reaching WHO 2030 elimination targets[27]. Improving the diagnosis for HCV screening in the high-risk population. HCV core antigen (HCVCAg) quantification can be used as a surrogate marker for HCV viraemia testing. HCVCAg is a low cost, and a commercially available assay that can be proved as an attractive test for resource-limited settings[28,29]. Employing HCVCAg testing while still dependent on

This editorial is published on the occasion of the World Hepatitis Day - July 28, 2019.

a controlled testing facility can uncouple the sample collection from the testing site through the use of dried blood spot sample[28-30].

For the management of chronic HBV infection, the WHO guidelines suggest that treatment should be targeted at those with highest risk of disease progression, based on the detection of persistently raised alanine transaminase (ALT) levels and HBV DNA more than 20,000 IU/ml in those older than 30 years[31]. All cirrhotics should be treated regardless of ALT levels, HBeAg (hepatitis B e antigen) status or HBV DNA levels. There are many unfinished tasks left in prevention and elimination of viral hepatitis in India, but if there is a political will and the Government of India sets up a comprehensive action plan, the target could be reached to make our country free of viral hepatitis by 2030.

***Conflicts of Interest*:** None.

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Received July 18, 2019

References

1. Khuroo MS. Study of an epidemic of non-A, non-B hepatitis. Possibility of another human hepatitis virus distinct from post-transfusion non-A, non-B type. *Am J Med* 1980; *68* : 818-24.
2. Naik SR, Aggarwal R, Salunke PN, Mehrotra NN. A large waterborne viral hepatitis E epidemic in Kanpur, India. *Bull World Health Organ* 1992; *70* : 597-604.
3. Ray R, Aggarwal R, Salunke PN, Mehrotra NN, Talwar GP, Naik SR. Hepatitis E virus genome in stools of hepatitis patients during large epidemic in North India. *Lancet* 1991; *338* : 783-4.
4. Wong DC, Purcell RH, Sreenivasan MA, Prasad SR, Pavri KM. Epidemic and endemic hepatitis in India: Evidence for a non-A, non-B hepatitis virus aetiology. *Lancet* 1980; *2* : 876-9.
5. Khuroo MS, Duermeyer W, Zargar SA, Ahanger MA, Shah MA. Acute sporadic non-A, non-B hepatitis in India. *Am J Epidemiol* 1983; *118* : 360-4.
6. Tandon BN, Joshi YK, Jain SK, Gandhi BM, Mathiesen LR, Tandon HD. An epidemic of non-A, non-B hepatitis in North India. *Indian J Med Res* 1982; *75* : 739.
7. Sreenivasan MA, Arankalle VA, Sehgal A, Pavri KM. Non-A, non-B epidemic hepatitis: Visualization of virus-like particles in the stool by immune electron microscopy. *J Gen Virol* 1984; *65* (Pt 5) : 1005-7.
8. Arankalle VA, Ticehurst J, Sreenivasan MA, Kapikian AZ, Popper H, Pavri KM, *et al.* Aetiological association of a virus-like particle with enterically transmitted non-A, non-B hepatitis. *Lancet* 1988; *1* : 550-4.
9. Panda SK, Datta R, Kaur J, Zuckerman AJ, Nayak NC. Enterically transmitted non-A, non-B hepatitis: Recovery of virus-like particles from an epidemic in South Delhi and transmission studies in rhesus monkeys. *Hepatology* 1989; *10* : 466-72.
10. Datta R, Panda SK, Tandon BN, Madangopalan N, Bose SL, Acharya SK, *et al*. Acute sporadic non-A non-B viral hepatitis on India: Epidemiological and immunological studies. *J Gastroenterol Hepatol* 1987; *2* : 333-45.
11. Chauhan A, Dilawari JB, Jameel S, Kaur U, Chawla YK, Sharma ML, *et al.* Common aetiological agent for epidemic and sporadic non-A, non-B hepatitis. *Lancet* 1992; *339* : 1509-10.
12. Panigrahi AK, Panda SK, Dixit RK, Rao KV, Acharya SK, Dasarathy S, *et al.* Magnitude of hepatitis C virus infection in India: Prevalence in healthy blood donors, acute and chronic liver diseases. *J Med Virol* 1997; *51* : 167-74.
13. Kumar S, Agnihotri SK. Antibodies to hepatitis C virus in Chandigarh blood donors. *Vox Sang* 1997; *73* : 258-9.
14. Arankalle VA, Tungatkar SP, Banerjee K. Anti-HCV positivity among blood donor population from Pune, India (1981-1994). *Vox Sang* 1995; *69* : 75.
15. Gosavi MS, Shah SK, Shah SR, Pal RB, Saldanha JA, Banker DD. Prevalence of hepatitis C virus (HCV) infection in Mumbai. *Indian J Med Sci* 1997; *51* : 378-85.
16. Tandon BN, Gandhi BM, Joshi YK. Etiological spectrum of viral hepatitis and prevalence of markers of hepatitis A and B virus infection in North India. *Bull World Health Organ* 1984; *62* : 67-73.
17. Tandon BN, Acharya SK, Tandon A. Epidemiology of hepatitis B virus infection in India. *Gut* 1996; *38* (Suppl 2) : S56-9.
18. Acharya SK, Madan K, Dattagupta S, Panda SK. Viral hepatitis in India. *Natl Med J India* 2006; *19* : 203-17.
19. Chowdhury A. Epidemiology of hepatitis B virus infection in India. *Hep B Annu* 2004; *1* : 17-24.
20. Patel DA, Gupta PA, Kinariwala DM, Shah HS, Trivedi GR, Vegad MM. An investigation of an outbreak of viral hepatitis B in Modasa town, Gujarat, India. *J Glob Infect Dis* 2012; *4* : 55-9.
21. National Centre for Disease Control. *Viral hepatitis*: *The silent disease*: *Prevention, control and treatment guidelines*. Available from: *https://ncdc.gov.in/WriteReadData/l892s/File614.pdf*, accessed on October 27, 2017.
22. Jain P, Prakash S, Gupta S, Singh KP, Shrivastava S, Singh DD, *et al.* Prevalence of hepatitis A virus, hepatitis B virus, hepatitis C virus, hepatitis D virus and hepatitis E virus as causes of acute viral hepatitis in North India: A hospital based study. *Indian J Med Microbiol* 2013; *31* : 261-5.

23. Patra S, Kumar A, Trivedi SS, Puri M, Sarin SK. Maternal and fetal outcomes in pregnant women with acute hepatitis E virus infection. *Ann Intern Med* 2007; *147* : 28-33.

24. Sukriti, Pati NT, Sethi A, Agrawal K, Agrawal K, Kumar GT, *et al.* Low levels of awareness, vaccine coverage, and the need for boosters among health care workers in tertiary care hospitals in India. *J Gastroenterol Hepatol* 2008; *23* : 1710-5.

25. Comanor L, Holland P. Hepatitis B virus blood screening: Unfinished agendas. *Vox Sang* 2006; *91* : 1-2.

26. Ni YH, Chang MH, Huang LM, Chen HL, Hsu HY, Chiu TY, *et al.* Hepatitis B virus infection in children and adolescents in a hyperendemic area: 15 years after mass hepatitis B vaccination. *Ann Intern Med* 2001; *135* : 796-800.

27. World Health Organization. *Global health sector strategy on viral hepatitis 2016-2021*: *Towards ending viral hepatitis*. Geneva: WHO; 2016.

28. Freiman JM, Tran TM, Schumacher SG, White LF, Ongarello S, Cohn J, *et al.* Hepatitis C core antigen testing for diagnosis of hepatitis C virus infection: A systematic review and meta-analysis. *Ann Intern Med* 2016; *165* : 345-55.

29. Roberts T. Simplified HCV Diagnostics. Geneva: MSF Access Campaign; 2016. Available from: *https://www.eiseverywhere.com/file_uploads/5f481231a53e90f6169771d5346c53d1_INHSU16_TeriRoberts_Abstract.pdf*, accessed on October 27, 2017.

30. Soulier A, Poiteau L, Rosa I, Hézode C, Roudot-Thoraval F, Pawlotsky JM, *et al.* Dried blood spots: A tool to ensure broad access to hepatitis C screening, diagnosis, and treatment monitoring. *J Infect Dis* 2016; *213* : 1087-95.

31. World Health Organization. *Guidelines for the prevention, care and treatment of persons with chronic hepatitis B infection*. Geneva: WHO; 2015.