JRMI
Journal of Rehman Medical Institute

Volume 7, No. 4
October - December 2021
www.jrmi.pk

EDITORIAL

Control of Hepatitis B & C: the superior role of preventive strategies

Eemaz Nathaniel

Submitted
December 10, 2021
Accepted
December 22, 2021

Author Information

Dr. Eemaz Nathaniel
House Officer
Rehman Medical Institute,
Peshawar, Khyber
Pakhtunkhwa, Pakistan
Email:
eemazoo64@gmail.com

Citation: Nathaniel E. Control of Hepatitis B & C: The Superior Role of Preventive Strategies. [Editorial]. J Rehman Med Inst. 2021 Oct-Dec;7(4):1-2.

ABSTRACT

The serious issue of how to manage rampant Hepatitis B & C in developing countries needs urgent attention. One of the successful strategies is preventive control that is cost effective, but poorly understood or implemented in developing countries.

The author declared no conflict of interest and agreed to be accountable for all aspects of the work.

INTRODUCTION

Viral Hepatitis is a health problem for developed countries, but it is much worse for developing countries like Pakistan. A few of those viral infections are Hepatitis B and C. WHO estimated that there are 350 million people with chronic HBV infection and 170 million people with chronic HCV infection worldwide of which annual deaths from Hepatitis B and C are 563,000 and 366,000 respectively.[1] In Pakistan, approximately 5 and 10 million people are affected with hepatitis B and C respectively.[2] Prevention of hepatitis B has been achieved in many countries globally following its incorporation in childhood immunization programs and as an individual vaccine in children and adults. For hepatitis C, there is no vaccine available therefore prevention following strict global adherence to infection control measures are the mainstay. Both diseases spread through blood and body secretions, therefore universal childhood vaccination, infection control, blood screening, and proper sterilization of invasive medical devices is recommended. Treatment of hepatitis B and C has evolved in recent years leading to viral clearance and disease control in the majority of cases.[3] Despite such a good treatment response rate, the cost statistics suggest that treatment may not be an ideal option for developing countries with limited resources where treatment options are often misused.[4]

The prevention strategies include universal hepatitis B vaccination to all neonates; catch-up vaccination for those children who have missed childhood immunization and vaccination of high-risk groups (health care professionals, families of hepatitis B positive cases, population requiring multiple transfusions and people with risky behaviors). For hepatitis C, there is no on-hand preventive vaccine. Protection to the public is supported through adopting universal infection measures and safe injection practices in all public and private sector hospitals, clinics, and mandatory screening of blood for transmissible viruses.

In Pakistan, the prevalence for Hepatitis C is 4.8% and for Hepatitis B it is 2.5% with districts having high (prevalence >8%), intermediate (prevalence 2-7%) and low endemicity (prevalence <2).[5] Overall 7.6% exposure rate to either of the two viruses suggests that about 12 million people have had exposure to them and about a quarter are likely to be suffering from the long complications of these fatal diseases i.e. cirrhosis and hepatocellular carcinoma. Hospital statistics show that about 30-40% of medical ward admissions are due to cirrhosis and its complications and over 50% of the hospital budget is spent on their management.[6]

In Pakistan, hepatitis B and C will take decades to contain because the coverage of hepatitis B through the Expanded Program for Immunization (EPI) is still about 54% even after almost a decade of introduction of this vaccine in the EPI. Catch up vaccination for children is demand-driven, mostly through NGOs, and vaccination of high-risk groups is not up to the mark (over 20% healthcare workers in most public sector settings are still not vaccinated).[7] Screening of blood for these viruses is still not done in 25% of blood banks.[8] Implementation of infection control practices and delivery of safe injections are yet other major hurdles to cross before we contain these deadly diseases.

In 2006 a program was launched in Pakistan for the control of hepatitis B and C. The goals of this program included containment of the viruses by preventive techniques and assessing the outcomes of some cases of Hepatitis B and C. Pakistan was one of the few countries in the world to initiate a program at a national level for the control of a disease without any help from international donors. It was a good opportunity to not only improve the vaccination of newborns but to also control the spread of disease by aggressively sticking to the preventive guidelines in addition to the assessment of the response of treatment of selected cases of hepatitis B and C. In 2019 the government announced Prime Minister's new ambitious plan to eliminate viral hepatitis B and C infections in the country by 2030. The program aims to provide leadership and coordination to provincial programs

in scaling up hepatitis prevention, testing and treatment services. With the initiation of the 2006 program, there was a huge demand from the public and politicians for free of cost treatment. This led to ignoring difficulties in the drug supply chain and tests on the management side. There were questions on the quality of drugs as well, as the drugs were produced on a very large scale with almost one-fourth of the regular market price.

The paper by Qureshi et al[6] assessed the effectiveness of the 2006 National Hepatitis Program in terms of control of hepatitis B and C. The authors audited the data of the selected cases of hepatitis B and C that were treated in the program. The study showed that about 85 to 99% of hepatitis C cases met the eligibility criteria for treatment in the program but on the other hand only 7% to 10% of the cases of hepatitis B were selected following the eligibility criteria. This demonstrated cracks in the training and management side. The study also noted the careless reporting of serological and biochemical tests in the patients' data. Another drawback was increased default rates during and after the treatment leading to faulty evaluation of the patients' responses to the treatment. However, the response rate of 67% with interferon in Hepatitis C is following other studies within Pakistan, thus negating the question of drug quality. The paper demonstrated that a very huge number of financial resources were used on the treatment and investigations with very few advantages.

A research article documents that the cost of treatment of hepatitis B and C far outweighs the cost of implementing preventive strategies.[9] Therefore, it is recommended that the goal of controlling hepatitis B and C should be focused more on the proper implementation of preventive strategies and strictly adhering to harm reduction principles in clinical practice along with scaling up the already existing preventive infrastructure.[10]

Policy makers should utilize the lessons that are comprehended from this program, particularly in the circumstances when the task is assigned to the Provincial Ministries for managing all health-related impediments at the provincial level, where the quality standards, documentation, monitoring and evaluation are not very privileged. It is time when the provinces are required to re-assess their Hepatitis program in deliberation with the professionals and utilize the evidence from international guidelines as well as utilize their healthcare budget that is already low. Along with that, they should apply standard monitoring and assessment of every component of this program.

REFERENCES

1. Ali A, Donahue RM, Qureshi H, Vermund SH. Hepatitis B and hepatitis C in Pakistan: Prevalence and risk factors. Int J Infect Dis. 2009;13:9-19. doi: 10.1016/j.ijid.2008.06.019.
2. WHO. 15 million people affected with hepatitis B and C in Pakistan: Government announces ambitious plan to eliminate hepatitis. WHO. 2019; Available from: http://www.who.int/hepatitis/news-events/pakistan-hepatitis-elimination-plan/en/.
3. Sarpel D, Carter D, Wasserman I, Oxnard M, Dieterich DT. An update on the management of chronic hepatitis B and C infection. [Review article]. Pharmaceutical Journal. 2007. Available from: https://www.pharmaceutical-journal.com/research/an-update-on-the-management-of-chronic-hepatitis-b-and-c-infection/20203306.
4. Franco E, Bagnato B, Marino MG, Meleleo C, Serino L, Zaratti L. Hepatitis B: Epidemiology and prevention in developing countries. World J Hepatol. 2012;4:74-80.
5. Qureshi H, Bile KM, Jooma R, Alam SE, Afridi HUR. Prevalence of hepatitis B and C viral infections in Pakistan: findings of a national survey appealing for effective prevention and control measures. EMHJ 2010;16:S15-S23.
6. Shaikh N, Baloch A, Irfan M, Vaswani A, Moghal F, Ali SE. Clinical signs of chronic liver disease: Is there any difference in patients with Hepatitis B and C. Medical Channel. 2010;16(2):233-6.
7. Memon SM, Ansari S, Nizamani R, Khatri NK, Mirza MA, Jafri W. Hepatitis B vaccination status in Health care workers of two University hospitals. JLUMHS. 2007 May-Aug:48-51.
8. WHO EMRO. The growing threats of hepatitis B and C in the Eastern Mediterranean Region: a call for action. [Technical paper]. 2009 Aug;EM/RC56/3. Available from: https://applications.emro.who.int/docs/EM_RC56_3_en.pdf.
9. Lim AG, Walker JG, Mafirakureva N, Khalid GG, Qureshi H, Mahmood H, et al. Effects and cost of different strategies to eliminate hepatitis C virus transmission in Pakistan: a modelling analysis. Lancet Glob Health 2020; 8:e440–50. [Internet] [cited 2021 Nov 15]. Available from: https://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(20)30003-6.pdf.
10. Ahmed WA, Arif A, Qureshi H, Alam SE, Ather R, Fariha S, et al. Factors influencing the response of interferon therapy in chronic hepatitis C patients. J Coll Physicians Surg Pak. 2011;21:69-73.