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Viral hepatitis in Pakistan: challenges and priorities

Sadia Ashraf, Aftab Ahmad*

National Academy of Young Scientists (NAYS), University of the Punjab, Quaid-i-Azam Campus, Lahore, Pakistan

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ABSTRACT

Hepatitis B and C are big health issues worldwide as more than 400 million people are suffering from chronic hepatitis B and C which result in more than 1.4 million deaths each year. According to a study done by Pakistan Medical Research Council in 2007-08, 7.6% Pakistani population suffered with hepatitis B and C, with around 4.8% with hepatitis C only. Government of Pakistan has taken different initiatives like vaccination, patient safety, blood screening, education and awareness about disease but still there is high prevalence of hepatitis in Pakistan. According to some studies injecting drug users have the highest prevalence of hepatitis B and C in the country. The follow-up studies and documentation of hepatitis patients was not very good which need to be improved. There is no recent large scale study on risk factors and prevalence of hepatitis B and C in Pakistan so it should be done on an urgent basis. If government set up regional laboratories for prevalence study and also a central institute for hepatitis research and treatment, the disease could be prevented in better and proper way. The treatment of hepatitis is very costly and a developing country like Pakistan cannot afford such high costs. Therefore more focus should be on preventive measures.

1. Introduction

Hepatitis is a big health problem worldwide and this problem is severe in some countries like Egypt, Pakistan *etc*[1]. Around 250 and 130-150 million people are infected with Hepatitis B and C, respectively[2,3]. Worldwide viral hepatitis results in 1.4 million deaths each year compared to malaria, HIV and tuberculosis which cause 1.2 million, 1.5 million and 1.2 million deaths each year, respectively. The major route of transmission of hepatitis B, C and D is through body fluids while A and E are transmitted through contaminated food and water[4].

A study was done by Pakistan Medical Research Council in which they checked the prevalence of hepatitis in all the provinces of Pakistan from 2007-08. In this study, almost 47000 individual were screened and the prevalences of HBsAg and anti hepatitis

C virus were found to be 2.5% and 4.8%, respectively, with a combined infection rate of hepatitis B and C of 7.6%. According to this study, around 13 million Pakistani were suffering from hepatitis B and C[5]. Despite other factors of infection, the reuse of syringes is the major cause of infection in Pakistan.

Several efforts are in progress to stop the growing infection rate in Pakistan such as vaccination of newborns and high risk groups, use of auto-disposable syringes, patient safety, blood screening for donation, public health education and free treatment of needy patients[6], but as high infection rate and prevalence, it is necessary to take more steps to stop the growing infection.

According to a recent study done by Qureshi *et al.*[7], the record of patients who were treated for hepatitis B and C in past 2 years through Prime Minister Program for the Prevention and Control of Hepatitis Viral Infection was checked from 12 sites. Among 7572 patients just 3440 (45.4%) completed 6 months interferon therapy and PCR reports of 1686 patients were available which showed a success rate of 67% and 33% were non-responders. Among 454 hepatitis B patients, 85 fulfilled the inclusion criteria and just 9 completed the treatment for 6 months. This indicates that there is very poor follow-up and documentation system resulting in wastage

*Corresponding author: Aftab Ahmad, National Academy of Young Scientists Office (NAYS), STC, University of the Punjab, New Campus, Lahore, Punjab, Pakistan.

Tel: +92-300 740 2202

E-mail: president@nays.com.pk

of financial resources[7]. In another small study done by Memon *et al.*[8], they investigated the prevalence of hepatitis B and C in high risk groups such as injecting drug users (IDUs), prisoners, security personals and health care workers. They screened 4202 subjects and 681 were positive for either hepatitis B or C and overall 3.17% were positive for hepatitis B and 13% were positive for hepatitis C. One striking observation was that IDUs were 46 times more likely to be hepatitis C positive compared with health care workers. According to this study IDUs have the highest prevalence of hepatitis B and C[8].

The standard treatments in Pakistan for hepatitis B and C are interferon, pegylated interferon and ribavirin[9–11], which is also used globally[12]. Many oral hepatitis treatment drugs are coming to market which are more tolerable, effective and require shorter duration of treatment[13], but these drugs are not in use in Pakistan yet[14].

Pakistan is the country which has one of the highest burdens of chronic hepatitis B and C and so high mortality due to liver failure and hepatocellular carcinoma. However, data about recent national level prevalence and risk factors is not available and different studies (hospital based and regional) present different prevalence rate in the country[15]. Pakistan's neighboring country India which has almost 6 times more population than Pakistan also has high prevalence of hepatitis B and C with an estimate of infection of 40 and 12 million people with hepatitis B and C, respectively but like Pakistan, the exact prevalence of Hepatitis B and C is not known[4].

There is high prevalence of hepatitis B and C in Pakistan with around 10 million population with hepatitis C virus infection alone. In addition, there is great variability in prevalence of hepatitis B and C in different region, groups and communities[16,17]. There is no data available on leading cause of admission to hospitals and also mortality due to hepatitis B and C[18].

Pakistan is a developing country with high population density and limited resources so it is hard to afford high cost of treating hepatitis and hepatitis associated with complications. Currently, the best way should be to know the exact prevalence of hepatitis in the country and also the major risk and infection factors so they could be targeted specifically. The study that was done by Pakistan Medical Research Council was almost 7 years ago so current scenario will be much different. In addition, that was a small study and more data should be incorporated in new countrywide study.

It is necessary to establish regional laboratories in each province to have exact estimate of hepatitis burden in Pakistan. There should be one central institute for hepatitis research, which should be linked with all the regional laboratories as well as treatment centers/hospitals and also make recommendation for government on prevention and treatment options. In addition, the institute will run and monitor the clinical trials with new and emerging treatment which could be provided to patients in the future.

Conflict of interest statement

The authors confirm that there are no conflicts of interest regarding the contents of this article.

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