

THE MENACE OF HEPATITIS B AND C ARE WE RESPONSIBLE FOR IT?

The whole world is facing the peril of Chronic Viral Hepatitis that has emerged as an immense public health problem over the past two or three decades. Amongst them, Hepatitis B and hepatitis C viruses (HBV & HCV) have a significant global impact. HBsAg was discovered by Blumberg and his colleagues in 1963¹ while in 1967 Dane and co-workers discovered viral like particles which carried HBsAg on their surface². Today there are more than 2 billion individuals with serological evidence of hepatitis B infection worldwide. Of these, 400 million are chronic carriers and 0.5 to 1.2 million will die annually from cirrhosis and hepatocellular carcinoma^{3,4}. In Pakistan also the situation is quite alarming where projected figures of prevalence are in the range of 8-10%. The gravity of the problem can be judged by a paper published by Khattak AK et al in this issue, in which they have found a distressingly high frequency of HBsAg positivity of 17.2% in a group of 4180 people from Jamrud, Khyber Agency. The sequelae of chronic HBV infection vary from an inactive carrier state to the development of cirrhosis, hepatic decompensation, hepatocellular carcinoma, extrahepatic manifestations, and death. The prognosis is worse in HBV-infected patients from endemic areas and in patients with chronic hepatitis B⁵. the idiom "Once hepatitis B, always hepatitis B", actually stems from the fact that complete viral eradication, even after clearance of HBsAg, rarely occurs after recovery from acute HBV infection and that the latent infection remains suppressed by a maintained T cell response for decades following clinical recovery. Immunosuppression in such patients, as occurs following immunosuppressive therapy or after organ transplantation, can lead to reactivation of the virus⁶. In spite of the advances made in antiviral therapy, only a minority of patients with chronic hepatitis B will have a sustained response. Under these circumstances when complete eradication of HBV is a remote possibility and the available treatment is less than ideal with unsatisfactory results it is of supreme importance to prevent this deadly viral infection from happening rather than endeavoring to open new vistas for its treatment. Whereas primary prevention by vaccination to increase herd immunity remains the main thrust in the control of HBV infection⁷, mass campaigns regarding its modes of transmission on electronic and print media and through public talks by health professionals remain a key factor for creating awareness both in the Health Care Workers (HCWs) and general public. HBV is mainly transmitted through contact with blood, blood products and body fluids contaminated with HBV and is present in saliva, semen and vaginal secretions. However in quite a substantial percentage (40-50 %)⁸ the route of transmission remains enigmatic. Amongst all the well known factors, exposure to unsafe iatrogenic injections (defined as the reuse of syringe or needle between patients without sterilization) is associated with substantial morbidity and mortality and is probably the most important of all in determining very high prevalence of HBV in our community and in the rest of developing world. It is estimated that up to 160000 human immunodeficiency virus (HIV), 4.7 million hepatitis C and 16 million hepatitis B infections each year are attributable to this practice. Of these injections, 95% are therapeutic and the rest are for vaccination. At least 50% of injections in 14 out of 19 countries have been found unsafe⁹. Such practices i.e. injudicious use of injectable therapy, which most of the times is unnecessary, is quite prevalent in our society because of quackery and lack of legislation regarding dispensing drugs on registered medical practitioners prescriptions only that has encouraged quackery accounting for a significant number of hepatitis B and C infections in an apparently "idiopathic"

mode of transmission. It has been estimated that annually more than 1.3 million deaths take place due to current unsafe iatrogenic injections practices¹⁰. With the global increase in the number of injections for vaccination and medical services, safer injecting technologies such as auto-disable syringes must be budgeted for. Investment in health education and safer disposal will also reduce infections associated with unsafe injecting practices.

Another facet of prevention is vaccination against HBV. The development of hepatitis B vaccine is considered to be one of the major achievements of modern medicine. Currently available hepatitis B vaccines are extremely safe and have an efficacy of >90 percent. Thus HBV infection can potentially be eradicated through global vaccination, however, 5 to 10 percent of the population will not respond to currently available vaccines. In a paper published by Hameed et al in this issue of the journal it has been reported that only 65.63% of HCWs are vaccinated in Lady Reading Hospital where as it should have been close to 100%. The situation in the community can very well be judged by this survey and I agree with their comments that combined and more aggressive efforts are needed to create awareness and to make it available to the general public in the fashion polio vaccination program is being conducted. Finally, a few words about the use of passive immunization following acute exposure to HBsAg containing fluids in the form of inoculation, ingestion or splashing of contaminated blood onto mucus membranes and the conjunctiva. Hepatitis B Immune globulin (HBIG) must be given to all unvaccinated individuals as soon as possible or at least within 48 hrs but not later than 7 days.

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