INTRODUCTION

Hepatitis B virus (HBV) is an important health problem in India. The frequency of HBV infection in a subset of population is a function of several factors, which increase the risk of viral entry into the body. These extraneous largely environmental and lifestyle related factors contribute to the generation of a high-risk group.

House hold contacts of subjects with chronic HBV infection are at high risk of infection from sexual, horizontal, vertical and other unexplained modes. Since HBV is present in many body fluids, horizontal transmission to close contact has been attributed to even minor cuts and wounds coming in contact with blood or saliva of HBV infected patient. In a significant proportion the mechanism of transmission remain undetectable. The risk of transmission depends upon the (i) host (ii) the infectivity of the host (iii) the nature and duration of exposure of the family contact.

India is a moderately endemic area for HBV. The prevalence of carrier state ranges between 2-7% (Nayak et al 1987, Tandon et al 1984, Roychaudhary et al 1989, Verma et al 1989). Nearly 60% chronic liver disease in India is due to chronic HBV infection(Sarin et al. 1996 ). More over eighty percent of hepatocellular carcinoma cases in India is due to HBV (Sarin et al 1998). Besides the vast burden of infection and the consequent disease, a serious concern is being recognized due to emergence of mutant forms of HBV. These mutant forms often worsen the course of the disease and are poorly responsive to antiviral therapy. Nearly 25% of the HBV related cancer in India are due to mutant forms of HBV.

The frequency of involvement of the family members of HBV related patients has been found to be very high even in contacts of acute hepatitis patients in India (Dhorje et al 1985). The risk of exposure to HBV infection ranges between 12-74%, which is 5-25 times more common than in general population. The transmission of HBV mutant infection is also known in family contact. Due to prolonged and repeated
exposure of close family contact, the spread of the mutant forms are likely to be more common in this population. To study the prevalence and molecular characteristic of mutant HBV forms in this population is worth studying as they form a formidable reservoir of infection.