Be wary of Hepatitis B

The Hepatitis B Virus (HBV) is cloaked with some frightening statistics. More than 2 billion infections worldwide, about one million deaths annually, the leading cause of chronic hepatitis, hepatocellular carcinoma (HCC) and liver failure: it is truly a disease to be taken seriously. Currently between 350-400 million are living with the chronic form of the disease and for decades could be unaware that they are carriers. They can potentially spread it to non-immune individuals. The lifetime risk of acquiring the disease is 60% in sub-Saharan Africa, and 20% in countries with a 2% population prevalence rate. The disease progression depends on the age of the patient when first infected.

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More than 90% of infant acquired infections lead to chronicity and possibly HCC and cirrhosis later in life. The World Health Organisation (WHO) has indeed taken active steps to curb the disease and currently the majority of countries have incorporated vaccinating against HBV as part of their routine childhood immunisation programme. South Africa infants have been receiving it since 1995. That leaves the current young and mobile 'twenty something' and upward age groups potentially at risk. These age groups are associated with behaviours that increase their risk of acquiring the disease during travel. Vaccination with a very effective vaccine should therefore be a strong consideration prior to travel.

Perinatal (mother to child) transmission of HBV accounts for the largest number of chronic carriers. Transmission between children has also been documented. Other modes of transmission are through exposure of mucosal surfaces or breaches in the skin to HBV infected blood or bodily fluids. This includes semen and saliva. Contaminated blood products and medical equipment are also sources of infection. Sexual contact, exposure to contaminated instruments such as those used during tattooing and acupuncture, and sharing of needles and instruments, such as a diabetic 'helping out' a fellow traveller who ran short of insulin, are all risk behaviours associated with travel.

Not a lot of emphasis is placed on the acute presentation of HBV infection in adults but it has to be borne in mind that it can be serious. Though most cases are asymptomatic, 30% to 50% may experience symptoms that could be more severe than Hepatitis A infection, resulting in hospitalisation and severe incapacitation. There is no specific treatment for acute infection and general supportive measures are the norm, though liver transplantation may occasionally be required. The case fatality is about 1%, and 5% of adults acquired infection may result in the long-term complications of HCC and cirrhosis.

HBV infection is, with influenza and Hepatitis A, among the commonest vaccine-preventable infections in travellers. Factors that determine the possibility of HBV acquisition during travel include travel duration, the immune status of the traveller, and the prevalence of HBV in the destination country. Studies suggest that specific populations of travellers may be at greater risk. These include expatriates and those visiting friends and relatives (VFR). Other known risks such as travellers engaging in casual sex, or seeking dental surgery and medical procedures have also been identified. With the boom in medical tourism there has also been an association with an increase in HBV infection.

It is becoming increasingly evident that travellers seeking urgent, unforeseen medical care are at greater risk of HBV

Map of Hepatitis B prevalence

MAP 3-4. PREVALENCE OF CHRONIC HEPATITIS B VIRUS INFECTION AMONG ADULTS[1]

[1] Disease data source: Ott JJ, Stevens GA, Groeger J, Wiersma ST. Global epidemiology of hepatitis B virus infection: new estimates of age-specific HBsAg seroprevalence and endemicity. Vaccine. 2012; 30(12): 2212-2219.

TRAVEL MEDICINE

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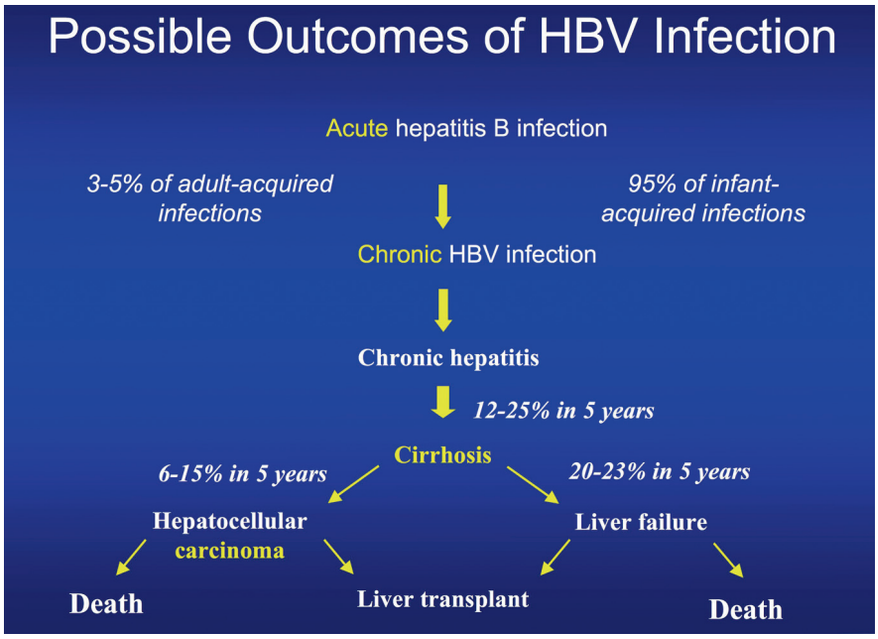

infection as they frequently have no say in the standard of care that they receive. This unpredictable aspect of travel has to be borne in mind and vaccination advice tailored accordingly. One of the rituals at the Hajj, the largest annual mass gatherings on earth where 3-5 million pilgrims congregate, is the shaving of all males' heads. It has always been a concern that shared contaminated blades could spread HBV.

All travellers should be informed about the modes of HBV transmission and the chance of infection with certain high-risk activities. The chance of emergencies occurring should also be discussed. The World Health Organisation (WHO) as well as many national health authorities recommends that HBV vaccination should be considered in non-immune travellers to countries with a moderate to high HBV prevalence which equates to a prevalence level of more than 2%. The standard three dose regimen is safe and effective with protective levels of antibodies achieved in more than 90% of healthy adults and children. The duration of travel is considered to be a risk factor, but risky behaviour even on short trips has to be discussed. Travellers often undertake multiple trips, and as HBV vaccination is so effective and lasts so long, it should be offered to all non-immune travellers.

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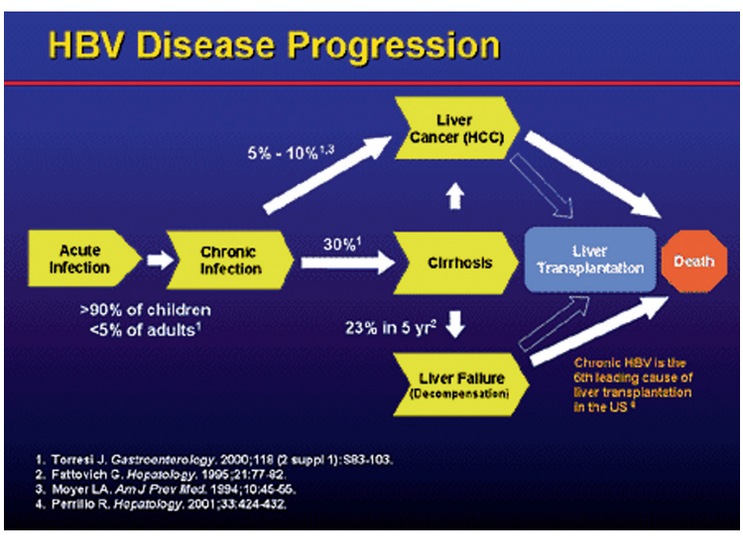
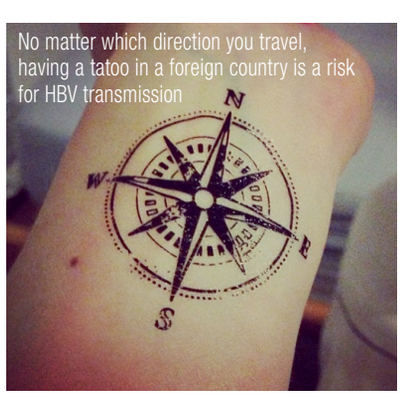
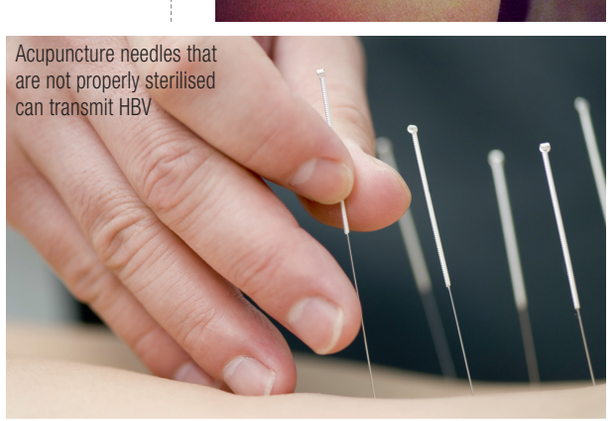
Allowing sufficient time for pre-travel vaccination is vital. The standard three-dose regimen is administered at 0, 1, and 6 months. A rapid schedule for those at high risk can be given at 0, 1 and 2 months and this has to be followed by a fourth dose at 12 months for long lasting immunity. An accelerated schedule administered on days 0, 7, and 21, with a booster at 12 months is recommended for rapid protection in travellers who present late. Two doses of the adult formulation at 0 and 4-6 months can safely and be used in adolescents (aged 11–15 years) and results in good efficacy. The vaccine has to be administered in the deltoid muscle of the arm and not the buttock. It has been shown that the needle length is also important, with slightly longer ones needed for heavier people for optimal protection to be achieved.

Combination Vaccines exists that protects against both HAV and HBV. They are convenient to use and the immunogenicity of the combination vaccine is at least as good as the monovalent separate vaccines. It is especially useful for travellers who need protection against both diseases and is given as a three dose series at 0, 1 and 6 months with adolescents receiving 2 doses at 0 and 4-6 months. Protection in the immune competent is considered lifelong. Boosters may be required in the immune impaired and those at high risk when measured antibody levels falls below a set level. Vaccination is still the best protection against HBV. d




No matter which direction you travel, having a tatoo in a foreign country is a risk for HBV transmission


Acupuncture needles that are not properly sterilised can transmit HBV


One of the rituals of the Hajj is the shaving of all males heads. Contaminated blades could spread HBV