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Australasian Society for HIV Medicine Inc

Chronic Hepatitis B – is there such a thing as a “healthy carrier”?

There have been significant advances in our understanding of what happens to persons who have chronic hepatitis B virus infection. A number of studies have led to the realisation that anyone with detectable hepatitis B surface antigen is at potential risk for complications of liver disease. It is now recognised that the clinical outcome is determined by the interplay between the virus and a person's immune response. This relationship between virus and the immune system changes over the life of a person.

The majority of infected persons in the world, currently estimated at approximately 400 million, are thought to have acquired infection at the time of birth or in early infancy. From the time of infection, chronic hepatitis B passes through phases of relative inactivity and phases of activity with progressive liver damage. It is currently thought that there are 4 phases of chronic hepatitis B. These include (1) an **immune tolerance phase** in childhood and adolescence, in which there are very high levels of virus, but no accompanying active liver disease; (2) an **immune clearance phase** in which the immune system attempts to clear the virus, resulting in liver damage; (3) an **immune control phase** characterised by low levels of virus and no obvious liver damage and (4) an **immune escape phase**, during which the virus mutates, evades the immune system and causes more liver damage.

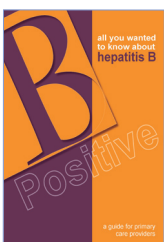
During the first and third phases, patients have no obvious ongoing liver damage and in the past have been called “healthy carriers” or “inactive carriers”. However, patients do not always stay in these states, as they move from one phase to another, and are always at risk for hepatitis flares or progressive liver damage and the development of cirrhosis.

Patients in the first (immune tolerance) or the third (immune control) phases are generally not offered antiviral therapy, as therapy has never been shown to result in benefit. Rather, patients in the second and fourth phases should be actively monitored for antiviral therapy by assessment of liver enzymes, hepatitis B levels, and liver biopsy. In these patients, therapy has been shown to result in normalisation of liver enzymes, improvement in liver damage, and reduced rates of liver failure and primary liver cancer. Thus, all patients who are hepatitis B surface antigen positive need to remain in long-term follow-up to ensure they are assessed properly and on a regular basis. This will allow the identification of patients as they are moving from one phase to another and provide the opportunity for further re-assessment of the need for antiviral therapy.

No patient with chronic hepatitis B should be considered to be a “healthy carrier” and these patients should never be dismissed from regular follow-up. There is no such thing as a “healthy carrier” of hepatitis B.

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New Electronic Resource

B Positive – all you wanted to know about hepatitis B: a guide for primary care providers

The Australasian Society for HIV Medicine (ASHM) and The Cancer Council of NSW have joined forces to develop this practical resource to support primary care providers in combating hepatitis B.

Available online at : www.ashm.org.au/resources