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hepatitis b

Hepatitis B is a virus that can cause serious or even fatal damage to the liver. In developed countries, hepatitis B is usually transmitted through contact with blood, semen, vaginal fluids, saliva or from mother to baby before or during birth. It occurs predominantly among gay and bisexual men, people who share drug-injecting equipment and health care workers. The virus is many times more infectious than HIV.

There is an effective vaccine against hepatitis B which is recommended for anyone in these groups. The vaccine is perfectly safe for people with HIV to take, although compared with uninfected people, a higher proportion of HIV-positive people may not develop protective immunity against hepatitis B following vaccination (especially if they have low CD4 counts), and those who are successfully immunised may be more likely to lose their immunity over time.

Hepatitis B is one of a group of hepatitis viruses, other examples being hepatitis A and hepatitis C. It is quite common for people with HIV to be infected with hepatitis B and/or hepatitis C too. The medical word for this is co-infection. Studies of hepatitis B infection in gay men, injecting drug users and people with haemophilia have shown that hepatitis B infection does not hasten HIV disease progression or severity.

The word hepatitis means inflammation of the liver, and it can be caused by drugs and other diseases, as well as viruses. Regardless of its cause, hepatitis or liver disease can have significant impact on treatment choices for people with HIV, who may require additional monitoring, e.g. when using protease inhibitors.

Symptoms

When someone first becomes infected with hepatitis B, they may develop jaundice (yellowing of the eyes and skin), loss of appetite, pain in the abdomen, malaise, nausea, vomiting, muscle and joint aches or fever. These symptoms can be very serious or even fatal. However, most people do not notice any symptoms on infection.

At this point, most people will develop protective immunity. However in a significant minority, hepatitis B continues to reproduce in the body long after infection. *Around 5% of adults* may become chronic carriers of hepatitis B, meaning that they are infectious for life, although they may not experience any symptoms themselves. About a quarter of chronic hepatitis B carriers eventually develop chronic liver inflammation and are at increased risk of liver disease (cirrhosis) or cancer of the liver. HIV-positive people who develop hepatitis B are at higher risk of becoming chronic carriers of hepatitis B (*around one-third)*.

The liver damage experienced by some people with hepatitis B is caused not by the virus itself, but by the immune system's destruction of hepatitis B-infected cells in the liver. Because the immune responses of people with HIV are often impaired, HIV-positive people with chronic hepatitis B infection may actually be less likely to experience liver damage than people with fully functioning immune systems.

Conversely, levels of hepatitis B in the body fluids of HIV-positive people may be higher than those seen in uninfected people because less hepatitis B is cleared from the body by the immune system, so HIV-positive carriers of hepatitis B may be more infectious than their HIV-negative counterparts.

Diagnosis and treatment

Blood tests can detect the presence of hepatitis B antibodies, which show that you have been exposed to, and have cleared the virus. If you have been exposed and have not developed this protective immunity, then fragments of the virus itself, called hepatitis B surface antigen (HBsAg), will persist in your blood for at least six months. This means that you are a chronic carrier and are capable of infecting other people. A sub-group of carriers also test e-antigen positive and this means that their hepatitis infection is *highly* infectious to others.

Chronic hepatitis B infection is usually treated with alpha interferon in injections of 3-5 million units three times per week. The anti-HIV drugs 3TC, tenofovir and adefovir are both also active against hepatitis B, and 3TC has been shown to reduce levels of detectable hepatitis B in people infected with both HIV and hepatitis B. Evidence suggests that FTC may have an anti-hepatitis B effect. Clinical trials are underway to assess the use of combinations of these drugs and if you think you might benefit from joining one, you should enquire at your treatment centre. There have been case reports, however, of flare-ups of hepatitis B in people switching off 3TC when beginning a new anti-HIV combination. If you are co-infected, you should talk to your doctor about how this might affect your anti-HIV treatment options.

NAM publishes a wide range of publications on treatment for HIV

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