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An Overview: Hepatitis B

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Short Commentary

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Introduction

Hepatitis B is one of the most endemic diseases in most parts of the world. As estimated 240 million people suffer with HepatitisB every year. And to the chronic condition of Hepatitis B, over 78000 people die each year. And 65000 people die of cirrhosis and 13000 with acute sickness of Hepatitis B .This disease is most prevailed in Asia and parts of India. Almost the disease is treated only 25% on the whole. In Asia and India over 75% carriers are there and the prevalence rate is 2-8%. Hepatitis B is an occupational hazard in health workers and is treated now days by advanced safe medicine. Hepatitis B is caused by the Hepatitis B virus (HBV).

Symptoms

Infants and children are more affected with this hepatitis. The symptoms of this disease may not be easily identified in the early stages. The most common visible symptoms include nausea and vomiting, fatigue, loss of appetite, fever, joint pain, dark urine, muscle and joint pains, abdominal pain jaundice, itching, ascites, east bleeding and bruising. The infection may last within weeks in acute infection and if the body is not immune enough it may last to six months or lifelong causing the chronic stage of Hepatitis infection which leads severe damage of liver.

Acute illness of Hepatitis may last to 2or 3 weeks and liver may function normal within 4moths in most cases. In chronic sickness liver may be mostly or completely damaged and the chance of fatal condition may be 1 in hundred. The incubation period of the hepatitis B virus is 75 days on average, but can vary from 30 to 180 days. The virus may be detected within 30 to 60 days after infection and can persist and develop into chronic hepatitis B.

Transmission

This viral disease is transmitted from one another through the contact of the blood or other body fluids. The disease may widely spread having unprotected sex with infected patient, blood transfusions, From an infected mother to child, tattoo or acupuncture without sterilization, dialysis long term contact with blood at work (health workers).Hepatitis B can be an acute disease if not treated it may turn into chronic disease. This disease severely infects the liver. In the some cases it may lead to liver failure or cirrhosis of liver or cancer and permanent scarring of the liver.

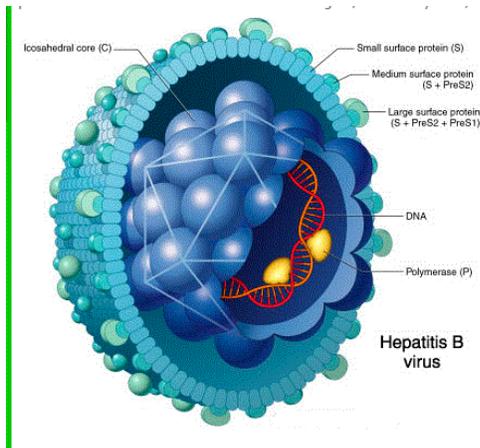


Figure 1: Hepatitis B virus structure

Prevention and treatment

Hepatitis B virus can be prevented by vaccination which consists of 2 to 3 doses over a six-month period. The vaccine is given in childhood or adulthood. It is recommended for newborns, people with end-stage kidney disease, people who use illicit drugs, tattoos, and health workers, people with chronic liver disease, and people who have unsafe sex, hemodialysis patients, and people living with HIV patients.

The virus can be prevented by proper awareness of this disease and its complications after infection.

Hepatitis B is treated with the Hepatitis B vaccine. This drug is administered in three doses over a six-month period. In severe cases of Hepatitis B, antiviral drugs like Telbivudine, lamivudine, adefovir, telbivudine, and entecavir can be used. Other synthetic drugs like Interferon alfa-2b (Intron A) are also used. In chronic stages, if the liver is completely damaged, a liver transplant can be performed.

Over all study

Hepatitis B disease is primarily treated with HBV vaccine as a preventive measure rather than being treated after infection. Compared to normal individuals, it is more complicated to treat patients with diabetes. In case studies, the persistence of Hepatitis B in individuals with ccr5 mutation was 2.85 times lower than in those without. The comparative study showed 1.3 times higher persistence in males than in females. This study suggests the possibility of administering ccr5 as a blocking agent along with antiviral drugs to improve vaccine efficacy in infected individuals.

Vaccination in preschools, schools, and workplaces, along with proper awareness of the disease, can help identify the HBV virus and increase the level of prevention in both children and adults.

In the case of hemodialysis patients, Hepatitis B can be prevented and controlled by giving special attention to cleaning control panels on dialysis machines and other surfaces that are frequently touched and potentially contaminated with patients' blood.

Wearing disposable gloves, items taken into the dialysis station should be disposed of, dedicated for use only on a single patient, or cleaned and disinfected. Clean and disinfect the dialysis station.

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