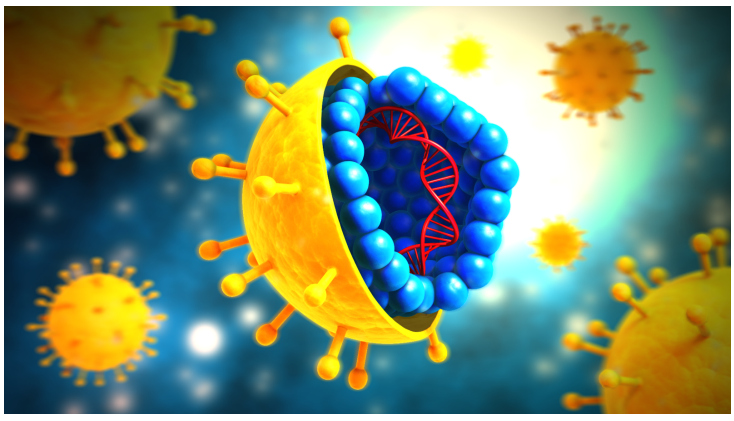
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Indian population found to be a carrier of Hepatitis B, says a study

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Viral hepatitis is inflammation and damage of the liver by viruses predominantly with an affinity for attacking the liver. The most common mode of involvement is damage to the liver causing death of liver cells and inflammation.

Hepatitis B virus infection is a very important cause of viral hepatitis, 3-5 percent of Indian population is carrier for hepatitis B infection with virus damaging liver (Occult hepatitis B) and picking up viral DNA in blood / liver tissue. According to the news reported by ANI, the most common route of transmission incriminated in India is from mother to child, other routes of transmission are unsafe blood products, immunological products, sexual route, unsafe needles and syringes.

Most of the times the virus can remain dormant in body without any liver damage and is incidentally diagnosed during health checkups or preoperative checkup before any surgery. In some people it can cause acute liver failure, chronic hepatitis, progression to chronic liver damage (cirrhosis) or liver cancer (HCC). The virus has a tendency of suddenly returning to active multiplication from dormancy and causing severe liver damage (reactivation of hepatitis B).

This is commonly seen post chemotherapy or immunosuppression following solid organ transplantation. Screening of high risk groups (HBsAg) such as pregnant women, health care professionals, sex workers or prior to proposed organ transplantation or chemotherapy administration is of paramount importance. Once a patient is diagnosed he should be ideally referred to specialized liver care team, further investigations involve testing the replication state of virus and extent of liver damage through specialized methods like liver stiffness testing or screening for liver cancer by appropriate imaging modalities and regular surveillance so that return of virus to active multiplication and worsening chronic liver damage, liver cancer development are not missed. Prevention involves universal immunization against the virus by vaccination of the high risk groups, screening pregnant ladies and managing their infection properly during pregnancy and breast feeding with appropriate oral medications, proper delivery of the baby with immediate dual vaccination (vaccine plus hepatitis B immunoglobulin) to the child, screening blood and immunological products, safe needle and syringe practices, active screening of family members of infected patients and vaccination of those who are negative.

Treatment involves early identification of subset of people with liver damage and treating with oral antiviral medications or interferon, regularly checking them for adequate suppression of viral replication, worsening of liver disease or liver cancer. Liver transplantation is only cure for people with decompensated liver disease.

Hepatitis C virus has same modes of transmission as hepatitis B. However, in comparison to hepatitis B asymptomatic carrier state is very less and predominantly chronic hepatitis is the mode of liver injury. No vaccine is available for hepatitis C so identifying infected patients and aggressively treating them to achieve complete viral response (SVR) is the only way to prevent progression to liver cancer and decompensation. With advent of highly potent directly acting anti-viral oral medications (DAA's) treating hepatitis C is very easy, cost effective and highly successful. This should be done as soon as hepatitis C patient is identified by referring him/her to a liver specialist.

Hepatitis A and E are the commonly transmitted viruses transmitted by poor hygiene, contaminated food and drinking water, poor sanitation that may lead to fecal-oral transmission. This mainly causes acute hepatitis causing epidemics. Pediatric age group is at risk for hepatitis A infection, in some cases liver damage may be very severe (acute liver failure) leading to loss of liver function warranting liver transplantation.

The other populations at high risk of hepatitis A infection include people with HIV infection, preexisting chronic liver disease due to any cause (where it can cause worsening of underlying liver disease), people undergone solid organ /bone marrow transplantation. Preventive measures include proper hygiene, sanitation and vaccination of high risk population groups. Hepatitis E virus infection also has similar way of transmission and pregnant ladies constitute the high risk group for this viral infection and are the most common cause of hepatitis / acute liver failure during pregnancy. This virus can also affect people with underlying chronic liver disease and cause sudden worsening and decompensation. In Western countries, it is increasingly recognized as a cause of chronic liver damage especially in post solid organ transplant recipients and as a result of consumption of contaminated pork, which is incriminated as an important source of transmission. Prevention is again by ensuring proper hygiene and sanitation and vaccination of higher risk groups is in the research stage.