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Individuals previously infected with the **hepatitis B virus** (HBV) who receive **chemotherapy or immunosuppressive treatment** may be at risk of **reactivating the disease** according to a summary of report from the Emerging Trends Conference, "Reactivation of Hepatitis B," and published in *Hepatology*, a journal of the American Association for the Study of Liver Diseases. Reactivation of HBV can be fatal and the study authors suggest routine screening of HBV in all patients prior to the start of treatment with immunosuppressives or anti-cancer drugs.

HBV is transmitted by contact with body fluids, such as blood, from an infected individual, causing acute or chronic disease that attacks the liver. While vaccination helps to control the spread of HBV, medical evidence estimates that up to 10% of the global population is infected with chronic HBV. In the U.S. nearly 3,000 acute cases of HBV were reported to the Centers for Disease Control and Prevention (CDC) in 2012.

The Food and Drug Administration (FDA) issued a Drug Safety Communication in September 2013 that read, “Boxed warning and new recommendations to decrease risk of hepatitis B reactivation with the immune-suppressing and anti-cancer drugs Arzerra (ofatumumab) and Rituxan (rituximab).” Ofatumumab and rituximab are monoclonal antibody therapy medications that target the protein CD20, which is found on immune system B cells. These anti-CD20 drugs are used to treat autoimmune diseases, leukemia, lymphoma and transplant rejection.

“While the FDA urged clinicians to screen patients for HBV prior to starting treatments with ofatumumab and rituximab to prevent the

reoccurrence of the virus, this may be just the tip of the iceberg," said lead author Dr. Adrian Di Bisceglie with Saint Louis University School of Medicine in Missouri.

To detect HBV infection, doctors are looking for the hepatitis B surface antigen (HBsAg) circulating in patients' blood. Antibodies to the hepatitis B core antigen develop in all patients and remains after the HBsAg clearance, indicating a potential for reactivation of the disease. HBV reactivation can be severe causing acute liver failure and even death, with one prior study reporting a 25% mortal rate.

After a systematic literature review, researchers identified 504 studies pertaining to reactivation of HBV. While it remains

unclear how HBV reactivation occurs, experts believe a loss of immune control over viral replication may trigger the process.

Reactivation of HBV may occur with chemotherapy, organ and tissue transplantation, High dose corticosteroids, and biologicals targeting tumor necrosis factor-alpha (TNF-α), Anti-TNF medications are used in treating rheumatic diseases, such as rheumatoid arthritis, digestive conditions that include Crohn's and colitis, and dermatologic conditions, such as psoriasis.

"Our research suggests that the issue of HBV reactivation may be an under-appreciated clinical challenge that extends well beyond the use of just two

anti-CD20 medications," concludes Dr. Di Bisceglie. "Further study and cooperation between various medical disciplines will help broaden understanding of HBV reactivation."