



HBV is major cause of liver cancer and liver cirrhosis in Asia. PHOTO: SEBASTIAN KAULITZKI/SHUTTERSTOCK.COM

Get tested and TREATED before it's too late

Early detection of Hepatitis B virus infection allows for timely intervention and treatment to prevent or delay serious complications

Up to 350 million people in the world are affected by Hepatitis B virus (HBV) infection. 75 per cent of people with HBV are from Asia, where it is a major cause of liver cancer and liver cirrhosis. Singapore is classified as an area of intermediate HBV endemicity by the World Health Organization and the country's total annual cost of the disease and its associated complications was about US\$279 million (S\$377 million) in 2003, according to a 2009 study by the National University of Singapore. This amounts to 12 per cent of the national healthcare expenditure for 2003.

Dr Kieron Lim, a senior consultant in Gastroenterology and Hepatology, answers some questions about the disease.

Q: How prevalent is HBV in Singapore and what are the measures to combat it?

A: In Singapore, HBV is more common in Chinese (4.4 per cent) as compared to Malays (1.7 per cent) and Indians (1 per cent).

The prevalence of HBV here has been declining over the past 30 years (4.1 per cent in 1998 to 3.6 per cent in 2010), largely due to the implementation of a national childhood HBV immunisation programme. HBV vaccination was extended to all newborn infants in 1987. Its successful implementation has led to more than 95 per cent of babies completing the full course of three doses of vaccine before two years of age.

Q: How is HBV spread?

A: HBV is transmitted via blood and body fluids. Individuals with the following risk factors should be screened:

- family history of HBV,
- sexual contact with HBV-positive individuals,
- intravenous drug use,
- infection with hepatitis C and/or HIV, or
- individuals with chronic liver disease (such as cirrhosis) and abnormal liver function tests.

HBV can also affect other organs (kidneys and blood vessels) in 10 to 20 per cent of patients.

Q: Should I get tested for HBV?

A: Getting tested for HBV is important if you have the above risk factors, or reside in a country with intermediate (more than 2 per cent) or high (more than 8 per cent) prevalence of HBV.

Early detection allows for timely intervention and treatment with antiviral agents, to prevent or delay complications such as liver cirrhosis and liver cancer.

Typical diagnostic tests include:

- Blood tests: Liver function tests, liver cancer marker, specific HBV serologies and HBV viral load.
- Scans: An ultrasound is useful to screen for liver cancer, while a Fibroscan can be used to assess liver fibrosis or scarring.

Q: How is HBV treated?

A: Patients with active viral replication and ongoing liver inflammation, liver fibrosis, or liver cirrhosis will benefit from treatment with antiviral

medications. Liver inflammation and fibrosis can be controlled and reversed with suppression of HBV virus. The risk of liver cancer decreases with lower HBV viral load.

There are effective and approved medications for patients with HBV who meet specified treatment criteria. Examples of such treatments include oral agents such as tenofovir dipovoxil fumarate, tenofovir alafenamide, entecavir, and injectibles such as pegylated interferon.

Q: What are the associated complications of HBV?

A: In countries with an ageing population such as Singapore, it is not uncommon for HBV patients to also have concomitant chronic illnesses such as hypertension, diabetes, osteoporosis and chronic kidney disease.

The choice of HBV treatment should be individualised for each patient, taking into account the individual's other medical conditions (such as kidney disease or bone disease) and unique clinical scenario. For example, some HBV treatments have been found to be safer for patients with kidney disease, and pregnant mothers.

In general, patients with HBV require long-term treatment [(from months to years) with antiviral agents. It is therefore important for individuals with HBV to be carefully assessed by their doctors and receive regular medical follow-up.

Q: What does the future hold for HBV?

A: There is ongoing research to find an effective and permanent cure for HBV. For now, effective medications are available to suppress HBV viral replication. This in turn improves liver inflammation and liver fibrosis, and reduces the risk of liver cancer.

It is imperative for at-risk individuals to be screened and diagnosed, and to receive appropriate and timely treatment to prevent potentially life-threatening complications from HBV.

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ABOUT
THE DOCTOR

Dr Kieron Lim is a senior consultant in Gastroenterology and Hepatology. Dr Lim graduated from St Bartholomew's and The Royal London School of Medicine (United Kingdom), and worked at the liver unit at The Royal Free Hospital before returning to Singapore. He undertook his fellowship training in transplant hepatology at the Recanati / Miller Transplantation Institute, Ichan School of Medicine at Mount Sinai New York, the United States.

Prior to setting up his practice at Mount Elizabeth Medical Centre, Dr Lim was head of the Division of Gastroenterology & Hepatology, National University Hospital (NUH), and Medical Director for liver transplantation at the National University Centre for Organ Transplantation (NUCOT). He was assistant professor at Yong Loo Lin School of Medicine, National University of Singapore, and honorary adjunct assistant professor at the Division of Liver Diseases, Ichan School of Medicine at Mount Sinai New York, US. Dr Lim is currently a visiting senior consultant at NUH where he continues to be involved in postgraduate education and training of future specialists.