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education+resourcecentre
www.hivhepsti.info

Fact Sheet

A free and confidential service for people seeking information about HIV/AIDS, hepatitis and sexually transmissable infections (STIs).

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Treatment for Hepatitis B

Introduction

This Fact Sheet is for people with chronic hepatitis B (CHB) who need treatment. Chronic hepatitis B is diagnosed by a positive hepatitis B surface antigen (HBsAg) which has been present for more than 6 months. It is important to understand that NOT all people with CHB need treatment. Please read on to find out why some people need to start treatment and what treatment for hepatitis B entails.

Hepatitis B disease progression

As hepatitis B replicates in liver cells (hepatocytes) it sets up a cycle of inflammation, injury and repair. Over time this inflammatory cycle can lead to scarring of the liver, known as fibrosis. If left untreated, chronic replication of hepatitis B can progress to cirrhosis, decompensated liver disease (liver failure) and liver cancer (known as hepatocellular carcinoma or HCC).

Disease progression is thought to be strongly linked to high levels of hepatitis B virus. Other factors associated with disease progression include:
- Presence of hepatitis B e antigen (detected on a blood test)
- Older age (possibly related to a longer period of infection)
- High alcohol consumption
- Co-infection with hepatitis C or HIV
- Cigarette smoking
- Male gender

Suppressing the amount of hepatitis B DNA and slowing down disease progression is the goal of hepatitis B treatment.

What do the blood tests mean?

Australian Guidelines recommend that all people with chronic hepatitis B have regular 6 monthly blood tests to measure liver function.
People with CHB have access to one funded hepatitis B viral load per year. Abnormal or elevated results indicate that liver damage is occurring and treatment may be required. If this is the case a referral will be made

to a liver specialist, such as a gastroenterologist or infectious diseases physician, to talk about what is involved with starting treatment.

To determine whether treatment for hepatitis B is needed a number of blood tests and in some cases a liver Fibroscan may be required. Some of the blood tests include:

Viral load or Hepatitis B DNA level

Hepatitis B DNA is the genetic material of the hepatitis B virus - also known as hepatitis B viral load. A DNA test measures the amount of virus found in the blood. If the result is low it generally indicates that the virus is being controlled by the immune system. A high result shows that the virus is active and multiplying in the liver. Successful treatment would show a fall in DNA levels corresponding with decreased viral activity in the liver.

Hepatitis B e-antigen

A hepatitis B e antigen (HBeAg) is a viral protein that is produced by hepatitis B infected cells. If the HBeAg test is positive it indicates a high level of viral activity and increased infectiousness. If the result is negative it indicates less viral replication and less infectiousness. Some people have a mutant strain of hepatitis B which means that they are HBeAg negative but have high levels of hepatitis B DNA. The aim of hepatitis B treatment is to suppress the virus and support the immune system to convert HBeAg to HBeAb.

Hepatitis B e-antibody

A hepatitis B e antibody (HBeAb) is produced by the immune system of some people in response to the HBeAg. People needing hepatitis B treatment will initially have a negative HBeAb. If treatment is successful, the HBeAb will become positive. The purpose of treating some people with CHB is to convert HBeAg positive to negative and HBeAb from negative to positive. However, some people who are HBeAb positive may require lifelong treatment because they are already in this state.

Liver function tests

Liver function tests (LFTs) – also known as liver enzymes - assess the general health of the liver. The most important enzyme in the LFT is the ALT (alanine aminotransferase). This ALT is found inside liver cells and

can leak into the bloodstream when the liver is injured. If the ALT is high this indicates liver inflammation.

Alphafeto-protein

Alphafeto-protein (AFP) is a protein normally found in blood. High levels of AFP are associated with cell growth and may indicate the presence of a liver cancer. This test is done routinely, every 6 months, for all people with chronic hepatitis B at risk of developing liver cancer.

Other investigations

Fibroscan

Fibroscan, which is similar to an ultrasound, allows for the non-invasive assessment of liver fibrosis or scarring by measuring liver stiffness.

Liver biopsy

Liver biopsy may be required as a diagnostic method to further assess the level of liver damage and progression.

What are current medical treatments and what do they do?

The aim of hepatitis B treatment is to reduce the amount of hepatitis B virus in the liver which helps to prevent liver damage and reduce the risk of developing cirrhosis, liver failure and liver cancer. It is rare that hepatitis B treatment will result in a cure and this only occurs in approximately 3-8% of patients.

There are 3 drugs used in Australia as first line therapy for treatment of hepatitis B including 1 injectable medication (pegylated interferon) and 2 oral medications (Entecavir and Tenofovir). The type of treatment prescribed will depend on the results of blood tests.

Oral medications

The 2 first line oral medications for hepatitis B treatment (entacevir, tenofovir,) are highly effective against hepatitis B. These are oral tablets taken once a day, long term. There a few side effects associated with their use.

Pegylated interferon

Pegylated interferon (peginterferon) is given as an injection under the skin once a week for 48 weeks. Patients are taught to give the injection to themselves at home.

Interferon is a protein naturally produced in the body to fight viruses by boosting the immune system. The medication is a synthetic reproduction of the naturally produced Interferon. Interferon boosts the body's own immune response and reduces hepatitis B replication.

Pegylated interferon is used to treat CHB in specific circumstances, such as women of childbearing age, where a defined period of 48 weeks of treatment is required. Women with a high ALT and low HBV DNA do the best on pegylated interferon.

About 35% of people with CHB who have Pegylated interferon achieve long term benefit with their HBeAg going from positive to negative and their HBeAb becoming positive.

Side effects of pegylated interferon

The most common side effects are "flu-like symptoms" including fever, sweats, muscle/ joint pain and headaches. These symptoms are usually worse at the beginning, and may go away during treatment. Usually simple pain relief like paracetamol (Panadol) will help.

Depression and mood changes are another common side effect. These can occur in people who have not had any previous history of depression. Support from a counsellor, or antidepressant medication may be recommended.

Other side effects include changes in blood cell counts, thinning of hair or hair loss, thyroid problems and weight loss. Most of these will go away after the treatment is stopped.

Due to the side effects, it is very important that people who are having Pegylated interferon treatment attend clinic appointments and have regular blood tests. Sometimes the dose of Peg-interferon has to be lowered, or treatment stopped for a short time, until the blood tests return to normal or the side effects are reduced.

Hepatitis B

For more information on individual treatment see below:

Contacts
Hepatitis Victoria
Hepatitis Info line 1800 703 003
https://www.hepvic.org.au/

Hepatitis Australia
Hepatitis B health promotion
02 6232 4257
http://www.hepatitisaustralia.com/

HIV and Hepatitis.com
International site with detailed information
http://www.hivandhepatitis.com/hepatitis-b

Liver/hepatitis clinics in Victoria

These are the specialist liver or hepatitis clinics in Victoria. Contact the clinics for information on making an appointment. Ask for the Liver or Hepatitis Clinic. You will need a referral from your GP.

METROPOLITAN MELBOURNE

Public
Alfred Hospital, Prahran (03) 9076 2223

Austin/Repatriation Medical Centre, Heidelberg (03) 9496 2444

Bayside Gastroenterology, Moorabbin (03) 9781 5959

Monash Medical Centre, Clayton 1300 342 273

Northern Hospital, Epping (03) 8405 8335

Royal Children's Hospital, Parkville, Liver Diseases Clinic (03) 9345 6180

Royal Melbourne Hospital, Parkville Fax referrals to (03) 9342 4234

Hepatitis B

Monash Health Liver Clinic Clayton, Cranbourne, Casey 1300 342 273
Springvale Community Health - (Monash Medical Centre) (Appointments via Monash clinic) (03) 9594 5545

St. Vincent's Hospital, Fitzroy (03) 9288 3475

Western Hospital, Footscray (03) 8345 6490

Private
Box Hill Hospital (03) 9895 3353

Cabrini Private Hospital, East Malvern (03) 9508 1862 (Melbourne Gastrointestinal Investigations Unit)

Ringwood East, Maroondah Hospital Liver Clinic (03) 9871 3370

REGIONAL

Public
Ballarat Community Health Liver Clinic 5338 4500

Geelong Liver Clinic (03) 4215 1396

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