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Autoimmune Hepatitis

Liver NORTH
LIVER PATIENT SUPPORT

information leaflet 3
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What is autoimmune hepatitis?

Autoimmune hepatitis is a condition in which the liver is progressively damaged by the bodies own defence system (the immune system). Over time, what starts as mild damage can become more extensive and result in permanent damage to the liver. Because this damage takes place over a long period of time the body tries to repair it (the liver actually as an impressive capacity to repair and heal itself). The presence, at the same time, of damage and repair can result in the development of cirrhosis.

Cirrhosis. Does that mean it is caused by drinking alcohol?

NO! It is a popular misconception that the term cirrhosis refers to liver damage caused by drinking too much alcohol. This is not the case. The term cirrhosis refers to the combination of liver scarring caused by chronic liver damage and the attempts made by the liver to regenerate itself. Any cause of chronic liver damage (and there are probably well over 100) can result in cirrhosis.

What does cause autoimmune hepatitis then?

The short answer is that we do not know. We have, over millions of years, evolved an immune system that is extremely effective at protecting us against infection (we all encounter thousands of potentially harmful bugs each year and yet most us, for most of the time, suffer no ill effects at all). The immune system, which works to protect us day in day out without us even being aware of it, is so effective because it is able to identify bacteria and viruses as being "foreign" and to eliminate them, whilst not causing damage to the bodies own tissues ("self"). In a number of situations this ability to discriminate between "self" and "foreign" fails, however, and the immune system starts to attack the bodies own tissues ("self"). These conditions where the immune system turns in on itself are known collectively as the autoimmune diseases. Autoimmune disease can potentially occur in any tissue in the body. Some tissues are more frequently involved than others. These include the thyroid (hypothyroidism) and the joints (rheumatoid arthritis). Where the immune system attacks the cells of the liver (the hepatocytes) the condition is called autoimmune hepatitis.

The reasons why the immune system should lose the ability to discriminate between "self" and "foreign" and cause autoimmune disease of the liver (and indeed any tissue) remain unclear. Current thinking is that two factors probably play a role. These factors are an individuals genetic make-up (the characteristics of each of our immune systems are determined by our genes) and some form of trigger (probably an otherwise harmless virus which manages to "irritate" the immune system.

What problems does autoimmune hepatitis cause?

Patients with autoimmune hepatitis develop two types of problems.

The first type of problem results from chronic damage to the liver resulting, eventually, in the development of cirrhosis. Whilst loss of hepatocytes initially causes little problem (the liver normally has a huge amount of spare capacity) eventually in-sufficient hepatocytes may remain to perform the normal functions of the liver. This can result in, amongst other things, the development of jaundice and problems with blood clotting (the clotting factors which are needed to make the blood clot are mostly made by the liver). Where cirrhosis develops as a result of chronic liver damage additional problems caused by an increase in the pressure of blood within the blood vessel connecting the bowel and the liver (the portal vein) can develop (portal hypertension). Problems caused by portal hypertension include development of blood vessels in the gullet with increased risk of bleeding (oesophageal varices) and accumulation of fluid in the abdominal cavity (ascites).

The second type of problem encountered by patients with autoimmune hepatitis is the symptom set associated with the inflammatory process going on within the liver. These symptoms include fatigue and lethargy, and muscle and joint pains. These symptoms are important both because they can impair quality of life (and respond well to treatment) and because they can alert doctors to the presence of autoimmune hepatitis at a time when liver damage can be prevented or reversed by treatment.

How is autoimmune hepatitis diagnosed?

Where the condition is suspected (because of the presence of suggestive symptoms) the first test to be carried will be the liver function tests (LFTs). This is a blood test which assesses for the presence of damage to the cells of the liver. If abnormal it suggests that damage is occurring, but does not identify what is causing the damage. The next test to be carried out will be a blood test looking for the presence of specific antibodies in the blood which are suggestive of the presence of autoimmune hepatitis. If these blood tests suggest that autoimmune hepatitis is present it is extremely important to confirm the diagnosis (to allow effective treatment and to assess how severe the existing liver damage is). One way of confirming the diagnosis is with a liver biopsy (a procedure where, under local anaesthetic, a needle is used to remove a tiny piece of liver tissue which is then examined under a microscope).

Once the disease has been diagnosed and, where appropriate, treatment started, the response to treatment will be monitored primarily through the use of further blood tests. Occasionally it will be necessary to repeat the liver biopsy to monitor response to treatment.

How is autoimmune hepatitis treated?

Because the principal problem in AIH is an over-activity and incorrect targeting of the immune response the main approach to treatment is to reduce the immune response. In the first instance the drug prednisolone will be used. Initially the doses used will be relatively high. They will, however, be reduced quite quickly (the rate of reduction depending on how well you respond). Patients are often concerned at having to take prednisolone because of the risk if side effects. The doctors treating you are very aware of the concerns that you are likely to have and will do their utmost to keep the doses as low as possible, and to leave you on the drug for as short a period of time as possible. You do need to be aware, however, that if not treated properly autoimmune hepatitis can damage the liver very quickly and, at present, prednisolone is the only drug able to bring that damage under control quickly.

In order to reduce the dose of prednisolone needed the doctor looking after you will often choose to start you, at some point, on an additional drug treatment. In most people the drug used is azathioprine (in some individuals other agents will be chosen). Azathioprine and related drugs are very effective at reducing the doses of prednisolone required to keep autoimmune hepatitis under control (sometimes to the point where no prednisolone is eventually needed). They are not, however, effective at bringing the disease under control in then first place.

The treatment of autoimmune hepatitis is extremely effective at both controlling the symptoms of the disease and reducing the risk of chronic liver disease and cirrhosis developing in the future.

What can I do to help myself?

The mainstay of treatment for autoimmune hepatitis is drug therapy. You can help yourself, however, by keeping, in general terms, healthy and in particular, avoiding excess alcohol consumption. As a number of drugs and medications are normally cleared by the liver, and can cause liver damage in their own right, you should discuss any medication you intend to take with your doctor.

Can I pass it on to anyone else?

No. This condition is not related in any way to Hepatitis B and Hepatitis C

Acknowledgement:

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