PROVIDENCE GASTROENTEROLOGY
Designated Patient-Centered Specialty Practice
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Chronic Hepatitis

Definition - Chronic Hepatitis (CAH) is ongoing injury to the cells of the liver with inflammation which lasts for longer than six months. The causes of chronic hepatitis are several: viruses, metabolic or immunologic abnormalities and medications.
Symptoms - Symptoms result from the liver cell injury, the inflammation or from the resulting scarring which is called cirrhosis. Chronic hepatitis may follow acute hepatitis B or C (formerly called non-A, non-B) or may develop quietly without an acute illness.

Liver biopsy is helpful in that it confirms the diagnosis, aids in establishing the cause (etiology) and can demonstrate the presence of cirrhosis. It is less helpful in judging the response to treatment.

Causes - Hepatitis B and C are the most common causes of chronic hepatitis. Together they account for more than 75 percent of the cases in the world. Hepatitis B is far more common in China and sub-Saharan Africa and among male homosexuals and IV drug users.

Chronic hepatitis C behaves differently from hepatitis B. The disease is generally mild, with fatigue being the main symptom. However, ten or more years later, the complications of cirrhosis appear in some patients, sometimes unexpectedly. By contrast with hepatitis B, the percentage of patients infected who develop cirrhosis is much greater. While primary liver cancer can also develop from hepatitis C, it appears to be much less common than after hepatitis B.

Autoimmune Chronic Hepatitis varies from mild to serious disease. The percentage of patients who develop cirrhosis is high and it may appear early. Most of the patients are young women but postmenopausal women and males may get the disease. Only a few cases of primary liver cancer have been reported with this disease. Twenty-five percent of the cases of chronic hepatitis result from damage to the liver by the immune system. The trigger for autoimmune chronic hepatitis is unknown, but the damage to the liver is caused by the individual's lymphocytes and by antibodies produced in the individual's own tissue. Autoimmune chronic hepatitis is usually a progressive disease ending in cirrhosis.

Hepatitis A and E (formerly called epidemic or enteric non-A, non-B) are rarely, if ever, responsible for causes of chronic hepatitis.

Hepatitis D infection needs the hepatitis B virus to multiply. Hepatitis D can cause acute hepatitis in someone who is a carrier of the hepatitis B virus and can cause acute hepatitis at the same time that the hepatitis B virus does. In any event, the combination of hepatitis B and D is worse then hepatitis B alone and is more likely to cause serious chronic hepatitis and cirrhosis. IV drug users have a high incidence of hepatitis D.

Other Causes - Viruses of the herpes family, which cause cold sores, genital herpes, chicken pox, shingles and infectious mononucleosis, can cause acute hepatitis, especially when the immune system is not functioning properly. It is unlikely that they will produce chronic hepatitis. Other viruses, as yet undiscovered, may be responsible for some cases of chronic hepatitis.

Drug-Induced Hepatitis - Few medications still in use and several that have been withdrawn from the market can also cause chronic hepatitis. These include: isoniazid, used for tuberculosis; methyldopa, used for hypertension; nitrofurantoin, used for urinary tract infections; phenytoin, used for seizure disorders and selected other prescription medications. These medications must be taken for long periods of time and the number cases of chronic hepatitis produced by these medications is small.

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Chronic hepatitis caused by drugs is usually recognized early. Stopping the medicine before cirrhosis has developed usually reverses the disease.

Inherited Disorders - Some inherited disorders of metabolism also can appear as chronic hepatitis. The most frequent of these conditions is Wilson's disease, a familial disorder of copper metabolism. Alpha-1-antitrypsin deficiency and tyrosinemia may appear as chronic hepatitis although other features help in distinguishing these rare conditions from those caused by viruses.

Signs and Symptoms - Fatigue, mild discomfort in the upper abdomen, loss of appetite and aching joints are the common symptoms of chronic hepatitis. Fatigue is by far the most common symptom and it might be quite disabling. Often it gets worse as the day wears on. Some patients, however, may have no symptoms. Others may have signs of liver failure, inducing jaundice, abdominal swelling (due to fluid retention called ascites), or coma, depending on the severity of the liver disease and whether or not cirrhosis has developed. Most complications are vague and may be mistaken for other diseases or simply a consequence of aging. Disorders of other organs like the thyroid, intestine, eyes, joints, blood, spleen, kidneys and skin may occur in about 20 percent of patients depending on the cause of the chronic hepatitis.

When the hepatitis is mild and limited in extent, it is called chronic persistent hepatitis (CPH). When it is more extensive and seems to be destroying the cells of the liver, it is called chronic active hepatitis (CAH).

Treatment - Interferon has been approved for the treatment of hepatitis B and C. The treatment has been shown to reduce the inflammation and liver damage caused by the virus in 25-30% of cases by eliminating the virus, thus reducing the development of scar tissue and avoiding the development of cirrhosis.
In people treated with interferon studies show that 50% will respond to treatment and 50% of those patients will relapse when interferon is stopped. Research is going on to address the relapse rate.

Additional clinical trials are being conducted to identify the most effective dose and duration of therapy with interferon. Studies are continuing in an attempt to reduce the side effects of the medication that exists. These include "flu-like" symptoms, and less often, fever, depression, hair loss, nausea and vomiting. Currently, the treatment consists of an injection three times a week over a period of six months.

Blood tests are needed to monitor progress during treatment and a liver biopsy (retrieving a small specimen of the liver through a needle inserted into the liver) is an accepted procedure prior to and following treatment.

Fifty percent of the patients treated will experience remission of the disease. When the treatment is stopped 50 percent will relapse. However, only about 20 percent of untreated patients will go on to develop cirrhosis over a period of years. Research into the management of those who relapse is ongoing.
Interferon does not seem to work well in patients:

- with substance abuse (alcohol or illegal drugs),
- who are not very sick,
- whose test results are not very abnormal,

- whose immune system is not functioning well because of AIDS,
- with hepatitis B who were infected from their mothers at birth,
- carriers who are no longer contagious or infectious,
- with significant heart, lung or kidney diseases, or couples who are trying to conceive.

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Knowing the cause of the disease is helpful in estimating the prognosis. Only a small percentage of patients with chronic hepatitis B develop cirrhosis. In those patients, cirrhosis develops early in the course of the disease with complications appearing in the first few years. Chronic hepatitis often causes acute hepatitis or flare-ups and periods with no signs. Scarring becomes more extensive with each flare-up. Patients in the Orient have about a 15 percent chance of developing primary liver cancer, usually after the age of 50 with men more likely candidates than women. This complication is much less common in the Western World.

The disease becomes life-threatening only after cirrhosis has developed. More than half of all patients live at least 15 years from the time of the first diagnosis and this number is continuously improving. Previously, prognosis was thought to depend on what was found on liver biopsy. This is now only partly true. Prognosis is worse and complications more numerous and severe if cirrhosis has already developed. Much attention has been paid to the location and extent of the inflammation of the liver.
Steroid therapy remains the only useful treatment for autoimmune disease, but it may have to be given for a lifetime and may also not prevent the ultimate development of cirrhosis.

Liver transplantation has become an accepted form of therapy when chronic hepatitis becomes life-threatening, usually as a result of complications of cirrhosis. Recurrence of hepatitis C or autoimmune hepatitis does not seem to occur, but hepatitis B, if virus is still present and the patient is contagious, will recur in the new liver and often be acute. Attempts are being made to prevent this recurrence.

The most important treatment for hepatitis B is prevention. Hepatitis B vaccines should be given to all who are exposed to this disease on a regular basis. All pregnant women should be tested for hepatitis B. Carriers of hepatitis B, many of them unaware that they are infected, can pass it on to their babies as well as their sexual contacts. All newborns should be vaccinated against hepatitis B. Three injections are needed to provide adequate immunity.

An important aspect of treatment is supportive care. Diet should be well balanced. The use of high carbohydrate, high protein or low fat diets have no scientific basis, and in some instances, such diets may be harmful. Vitamin and mineral supplementation also has no place in the management of chronic hepatitis unless some deficiency is present. No substance is known that will help the main symptom, fatigue. However, a good physical fitness program may lessen this distressing symptom. Patients should be advised to limit the amount of salt that they use in an attempt to forestall the accumulation of fluids as ascites or ankle swelling. Since almost all drugs must be detoxified by the liver, and since the injured liver does not perform this task well, limiting the amount of drugs that a patient uses to only essential ones is important. This includes discouraging the use of sedatives and tranquilizers.

Looking to the Future - Learning more about the viruses responsible for chronic hepatitis and how to control them will occur in the next decade. Similarly, learning about the body's immune system and how to control it has already begun. Preventive efforts will be enhanced so that fewer cases of chronic hepatitis will develop. The goal of eliminating this group of diseases seems to be just over the horizon, and while our skills at transplantation are rapidly increasing, the form of therapy for chronic hepatitis, like the disease itself, will disappear.

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