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A Systematic Review of Hepatitis; Chronic Liver Disease

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Review Article

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Abstract

When the liver is inflamed, it does not perform these functions well, which brings about many of the symptoms, signs, and problems associated with any type of hepatitis. Treatment of chronic infection with hepatitis B and hepatitis C usually involves medication or combinations of medications to eradicate the virus. Diagnosis of viral hepatitis is based on symptoms and physical findings as well as blood tests for ***liver enzymes****, viral antibodies, and viral genetic materials. Doctors believe that in properly selected patients, successful eradication of the viruses can stop progressive damage to the liver and prevent the development of cirrhosis, liver failure, and liver cancer. Alcohol aggravates liver damage in chronic hepatitis and can cause more rapid progression to cirrhosis. Therefore, patients with chronic hepatitis should stop drinking alcohol.* ***Smoking*** *cigarettes also can aggravate the* ***liver disease*** *and should be stopped.*

Introduction

Had virus have some common relationship with chronic and the known types of hepatitis?

Hepatitis, A, B, and C are the collective types of viral hepatitis, these prolonged levels of hepatic viruses contaminations had previously considered as "types" of viral hepatitis by some clinicians. HAV infections often triggered everlasting liver damage that led to liver improper functioning that's why it is thought to be acute virus causing hepatitis. Hepatitis B and C produced long-lasting viral hepatitis. **Prevention** practices and **vaccinations** have significantly reduced the current occurrence of viral hepatitis infections [1].

Hepatitis A (HAV)

Severe viral hepatitis, not more chronic and spreaded by HAV. **Hepatitis A** was stated to as "infectious hepatitis" at one time due to its contagious spread from person to person. The main causative pathway of this spread is by the consumption of food or water, unhygienic condition. Naturally, it spread within home members and close relatives by the passageway of oral secretions or **stool**.

Hepatitis B (HBV)

The "serum hepatitis," just because of the way of its spread through the liquid portion of blood having the virus. Now it had found that HBV can spread by sexual contact, blood or serum transfer with shared needles in drug abusers, accidental needle sticks with contaminated needles, **hemodialysis**, and by infected mothers to their newborns. About 5% to 10% of patients with HBV hepatitis develop infection lasting at least six months and often years to decades. Such patients are at risk of developing **cirrhosis**, liver failure, and liver **cancer**.

Hepatitis C (HCV)

Hepatitis, "not-A, nor-B," due to the disease causing virus that had not been recognized, but it was identified to be neither HAV nor HBV. It is typically is spread by contaminated needles, blood transfusion etc. approximately 75%-90% of transfusion-based hepatitis is due to HCV. Sexual transmission of the virus has been reported but is counted rare [2]. Almost 75% to 85% of patients with severe HCV infection by chronic infection and such patients continue to infect others. The ultimate risk for HCV patients is to develop cirrhosis, liver failure, and liver **cancer**.

Types D, E, and G Hepatitis

There are other viral hepatitis types D, E, and G. among these, the most important of these is the hepatitis D virus (HDV), that is also known as the delta virus. For survival of this virus, it requires concomitant infection with HBV to live because it require a protein for its survival to enable it to infect liver cells. It is spread by contaminated needles between drug abusers, blood transfer and through sexual contact as HBV.

Patients already suffered with chronic HBV contamination can attain HDV contamination at the same time as they acquire the HBV infection. Furthermore, the combination of both viruses is very problematic to treat.

HEV is alike to HAV in terms of infection and mostly happens in Asia where it is transferred by polluted water.

Hepatic complications of cirrhosis

Cirrhosis?

Many liver disease complications had been identified by irregular structure and function of the liver termed as Cirrhosis. The cirrhosis leads to injury and death of liver cells, after which the swelling and repair that is connected with the dying liver cells cause scar tissue to form. Those liver cells that do not die proliferate in an attempt to interchange the cells that have died. This leads to the groups of regenerative nodules within the scar tissue. The main reason of cirrhosis including chemicals, viruses, toxic metals and autoimmune liver disease in which the body's immune system attacks the liver.

Hepatocellular carcinoma

Hepatocellular **carcinoma** usually occurred due to any increase in Cirrhosis which refers the origination of tumor in the liver also called primary liver **cancer**. A secondary liver cancer, which originates to another place in the body and metastasizes to the liver.

Most common sign and symptoms of primary liver cancer are **abdominal pain** and inflammation, **weight loss**, and **fever**.

Hepatic encephalopathy

The protein in food that avoid digestion and absorption is consumed by bacteria present in the intestine. With the help of this protein, the bacteria form substances and release them into the intestine for body absorption. Several substances, like ammonia, that have poisonous effects on the brain [3]. Normally, they flow from intestine to portal vein to the liver for final removal from blood and detoxification [4]. Due to cirrhosis, normal liver function got disturbed as they have lost their normal link with the blood which passes to the portal vein bypasses the liver by other veins. Because of these irregularities, poisonous constituents cannot be removed by the liver cells, and accumulate in the blood [5].

By the accumulation of these toxic constituents in the blood, the normal brain function is impaired, leads to hepatic encephalopathy. Reversal of the normal sleep form is an initial signs of hepatic encephalopathy [6]. Other signs include irritability, memory loss, confusion, or depressed levels of consciousness. Eventually, it causes **coma** and death.

Hepatorenal disorder

The syndrome, in which kidney's functions disturbed, also a functional problem in the kidneys, indicating definitely not apparent damage to the kidneys. Change in the passage of blood flows through the kidneys may lead to reduction in kidney's function themselves. If **function** of **liver** mends or a vigorous liver transplantation may leads to the normal kidney function which indicated that the improper functioning of kidney is the result of either the accumulation of poisonous constituents in the blood [2]. There are two types of hepatorenal syndrome. One type occurs gradually over months. The other occurs rapidly over a week or two.

Who is at risk for viral hepatitis?

Travelers with high contamination rates and the residents of those countries are at higher risk for developing hepatitis A. Sewage and water treatment workers, **HIV** patients and **hemophilic peoples** who receive blood clotting factors are at a great risk. Viral hepatitis is mostly supposed to be as much as 10 times more common between lower socioeconomic and poorly educated person's blood transfusion.

Acute fulminant hepatitis

Persons with acute contaminations by HAV and HBV grow severe swelling, and the liver fails called acute fulminant hepatitis. As a result, patients got illness with the signs and symptoms of acute hepatitis that had already been described with the additional problems of **coma** due to the liver's failure to detoxify chemicals, as well as **bruising** or bleeding due to a lack of blood clotting factors.

What is chronic viral hepatitis?

Hepatitis that lasts longer than 6 months is termed as chronic hepatitis by medical terminology. In which, the multiplication of viruses persists in the liver for years or decades. The immune system of patients are unable to eliminate the viruses that leads to the chronic swelling of the liver for unknown reasons [3]. Chronic hepatitis can lead to the growth over time of wide liver scarring, liver failure, and liver **cancer**. The most common cause for liver transplantation is liver improper functioning from chronic hepatitis C infection [5]. Infected individuals with chronic virus can transfer the contamination to others by blood or body fluids as well as irregularly by spread from mother to **newborn**.

Diagnosis of hepatitis

If doubted, hepatitis of all forms can be identified simply by blood testing. Treatment of hepatitis is centered on signs and symptoms as well as blood tests for **liver enzymes**, viral antibodies, and viral genetic constituents.

Main signs and Symptoms

Identification and treatment of acute hepatitis is mostly easy as compared to the chronic hepatitis. The leading signs and symptoms of this disease are **fatigue**, **nausea, abdominal pain**, urine darkening, and ultimately leads to jaundice, the identification of acute hepatitis is probable and can be confirmed by blood testing. Instead, patients having chronic type hepatitis caused by HBV and HCV mostly have no indications or only slight nonspecific signs as **chronic fatigue**. Usually, these patients not suffer from jaundice till the liver damage is far progressive. So, these patients can persist undiagnosed for years to decades.

Is there any mitigation to prevent viral hepatitis?

Adoption of procedures to reduce the interaction to the viruses, by immunoglobulin in the incident of contact, and **vaccines** are chief preventive procedures for hepatitis. Management of immunoglobulin is known as passive protection as antibodies from patients who have had hepatitis are given to the patient. Vaccination is called active protection as it killed viruses or

non-infectious constituents of viruses are given to stimulate the body to produce its own antibodies [4].

Prevention by escaping to contact of viruses

Avoidance of viral hepatitis, as any other disease, is desirable to dependence upon treatment. Adoption of protection to stop contact to another individual's blood and other bodily secretions and waste will help prevent the spread of all of these viruses.

Hepatitis Vaccinations

Hepatitis A

More than two hepatitis A vaccines are presented in the US, **hepatitis A vaccine (Havrix, Vaqta)**. Both contain killed hepatitis A virus. For adults, two dosages of the **vaccine** are suggested [1]. Protective antibodies develop in 70% of vaccine recipients within 2 weeks after first dose, and almost 100% of recipients by 4 weeks. After two doses of the hepatitis A vaccine, immunity against hepatitis A infection is believed to last for many years.

Conclusion

Virus-related hepatitis, comprising hepatitis A, B, and C, belongs to a group of distinctive diseases that upset the liver. The symptoms and treatment of each is different. Some causes of hepatitis include recreational drugs and prescription medications. Laboratory tests can determine hepatitis types. Hepatitis can be an acute (short-term) infection or a chronic (long-term) infection. Some types of hepatitis cause only acute infections. Other types can cause both acute and chronic infections. Treatment for this disease depends on the type and severity whether it is acute or chronic. Acute hepatitis mostly goes away on its own. With excess use of liquids and proper rest may let you feel better. But in certain circumstances, it may be more severe and chances to get treatment in a hospital increases. There are different medications to cure the different chronic hepatitis types. Surgery and other medical measures may also be used for treatments. People who have alcoholic hepatitis need to stop drinking. If chronic type of hepatitis got severity of liver failure or liver cancer, you might need a liver transplant.

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