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Liver Cirrhosis: Common Clinical Problem

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Abstract- The liver is the multi-functional and vital organ of the body. It is found in the upper abdomen region of the vertebrates. Due to long-term damage, liver stops functioning properly which may lead to cirrhosis. This long-term damage occurred when scar tissue replaces the normal tissue of the liver. This disease develops slowly and has no early symptoms, but when it develops and become worse, then it leads to tiredness, itchiness, weakness, yellow skin, swelling in the lower legs, spider-like blood vessels and an easy bruise on the skin with fluid in the abdomen. The severe complications like bleeding dilated veins in esophagus or stomach, hepatic encephalopathy leading to confusion and unconsciousness and liver cancer may occur in the body. This review article is focusing on the effect of liver damage in the human body.

Keywords: *cirrhosis, splenomegaly, autoimmune hepatitis.*

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Liver Cirrhosis: Common Clinical Problem

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Abstract- The liver is the multi-functional and vital organ of the body. It is found in the upper abdomen region of the vertebrates. Due to long-term damage, liver stops functioning properly which may lead to cirrhosis. This long-term damage occurred when scar tissue replaces the normal tissue of the liver. This disease develops slowly and has no early symptoms, but when it develops and become worse, then it leads to tiredness, itchiness, weakness, yellow skin, swelling in the lower legs, spider-like blood vessels and an easy bruise on the skin with fluid in the abdomen. The severe complications like bleeding dilated veins in esophagus or stomach, hepatic encephalopathy leading to confusion and unconsciousness and liver cancer may occur in the body. This review article is focusing on the effect of liver damage in the human body.

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I. INTRODUCTION

Cirrhosis is the most common condition occurred due to hepatitis B & C, alcohol abuse and several other factors ^[1]. There are basically two types of liver cirrhosis, i.e. Alcoholic and nonalcoholic. Alcoholic cirrhosis may occur to those people who are having over a no. of years 2-3 alcoholic drinks per day ^[2]. Non-alcoholic fatty liver disease may occur due to following causes like-high blood pressure, high blood fats, diabetes, and overweight. Several medications, autoimmune hepatitis, hemochromatosis, gallstones, etc. are the less common causes of cirrhosis ^[2,3].

Liver biopsy, blood testing, and medical imaging are the basis for diagnosing liver cirrhosis. Hepatitis B may be prevented by vaccination ^[4]. Antiviral medications may treat Hepatitis B as well as C ^[5]. Steroid medications may treat Autoimmune hepatitis. If disease occurred due to a blocking of the bile ducts, then Ursodiol may be used for the treatment of this disease ^[4,5].

In hepatic encephalopathy, dilated esophageal or stomach veins, leg or abdominal swelling several medications may be used, and in severe cirrhosis only the option left is liver transplantation ^[5,6]. Many researchers have shown that mostly men die due to cirrhosis in comparison to women. Several studies have shown that in comparison to women mostly men die in the world ^[7]. Every year nearly 8000 people die because of liver damage and over 800 people have liver transplantation ^[8]. The last stage of chronic liver disease may cause intense scarring of the liver is known as cirrhosis. It may occur due to toxins like alcohol and viral

infections ^[9]. The liver is the large organ situated in the upper right side of the abdomen below the diaphragm. There are mainly two types of cirrhosis- compensated and decompensated ^[10]. The compensated cirrhosis has no signs or symptoms but have evidence of portal hypertension ^[11]. The decompensated cirrhosis has several complications like jaundice and also related to portal hypertension ^[10,11]. The function of the liver is to remove the waste product from the body but the damaged liver could not able to eliminate the waste product from the body, and thus the waste product may enter in the brain causing several problems like loss of consciousness, confusion, sleepy, tremors, etc. ^[12]

Functions of the vital organ liver ^[13]:

- It produces bile juice which helps in absorbing cholesterol, dietary fats, vitamins A, D, E, K.
- It preserves sugar and vitamins for later purposes.
- It also creates proteins for blood clotting.
- It purifies blood and removes toxins like alcohol and bacteria from the body ^[13,14].

Cirrhosis is a word derived from a Greek word: 'kirros' meaning 'yellowish' and 'osis' meaning 'condition'. It may affect approx 3 million people and due to this approx 1.5 million deaths have been occurred in the world ^[13,15].

II. CAUSES

There are various types of diseases and conditions which can cause cirrhosis. These may damage the entire liver. The most possible causes are ^[12,14,15]:

- Alcohol abuse.
- Chronic hepatitis B & C.
- Deposition of fat in the liver.
- Accumulation of copper in the liver.
- Galactosemia or glycogen storage disease.
- Deposition of iron in the body (hemochromatosis).
- Genetic digestive disorder.
- Autoimmune hepatitis.
- Poor formation and destruction of bile ducts.
- Syphilis.
- Medications.

III. SYMPTOMS

The signs and symptoms may not appear until a large area of the liver is damaged, and then the signs & symptoms may be:

- Loss of appetite.
- Nausea.

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- Fatigue.
- Weight loss.
- Swelling in legs.
- Itching.
- Bleeding.
- Bruising ^[16, 17].

IV. DIAGNOSIS

The detailed history, as well as physical examination can help in diagnosing liver cirrhosis ^[17]. The long exposure to alcohol abuse and hepatitis C, family background of autoimmune diseases and several other risk factors may be diagnosed by the patient's history ^[13, 18]. There are following signs which can be diagnosed by physical examination:

- Yellow eyes (jaundice).
- Hand tremors.
- Pale skin.
- Red palms.
- Reduced alertness.
- Increased breast tissue in men.
- Enlarged spleen and/or liver ^[17, 18].

V. PREVENTION

The increased risk of cirrhosis may be reduced by taking care of the liver ^[11, 16, 17].

Do's and don'ts if you have cirrhosis:

- Don't be alcohol abused.
- Eat healthy food.
- Don't be obese or have weight-loss, have a healthy weight.
- Decrease the risk of hepatitis B & C ^[15, 18].

VI. COMPLICATIONS

1. Portal hypertension (High blood pressure in the veins that transports blood to the liver).
2. Fluid accumulation in legs (edema) and the abdomen (ascites) may cause swelling in the abdomen and legs.
3. Bleeding due to fewer proteins for clotting.
4. Spleen enlargement (splenomegaly).
5. Medications sensitivity as liver functions for processing medications in the body.
6. Serious infections, weakness, weight loss, and malnutrition.
7. Bruising due to decreased clotting and low platelet count.
8. Toxins accumulating in the brain.
9. Jaundice and bone disease.
10. Liver cancer and liver failure.
11. Kidney failure ^[19, 20, 21].

VII. TREATMENT

- Nitrates or beta-blockers ^[22].
- Intravenous antibiotics for treating peritonitis.

- Hemodialysis.
- Low protein diet.
- Stop drinking alcohol.
- Stop medications, even over-the-counter ones without consulting the doctor.
- When all the treatments fail then the last option is liver transplantation ^[21, 23].

VIII. CONCLUSION

Cirrhosis is a dynamic process, and clinicians should treat all the complications related to cirrhosis. The disease progression and the requirement of liver transplantation should be avoided by early intervention. Now in the 21st century it is the biggest challenge to stop liver transplantation. Liver cirrhosis may be treated or prevented as it may lead to morbidity and it is the major cause of mortality.

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