

Common Complications of Cirrhosis

Kathryn Thompson, MD

What is cirrhosis?

- Cirrhosis is end-stage liver disease caused by hepatic fibrosis or scarring of the liver tissue.
- In cirrhosis, liver damage is irreversible, and the only definitive cure is a liver transplant.

What are symptoms of cirrhosis?

Sometimes, there are no symptoms of cirrhosis, but patients may experience the following symptoms:

- Weight loss
- Fatigue
- Loss of appetite
- Generalized weakness
- Yellowing of the eyes and skin
- Abdominal bloating or distention
- Leg swelling
- Confusion

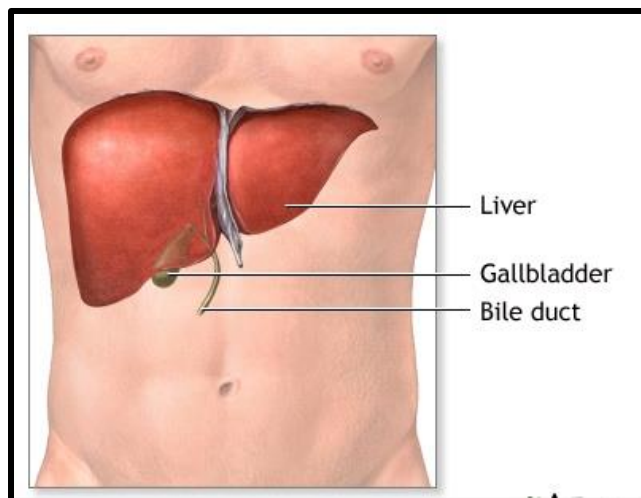


Figure 1. Image of the abdomen showing the location of the liver

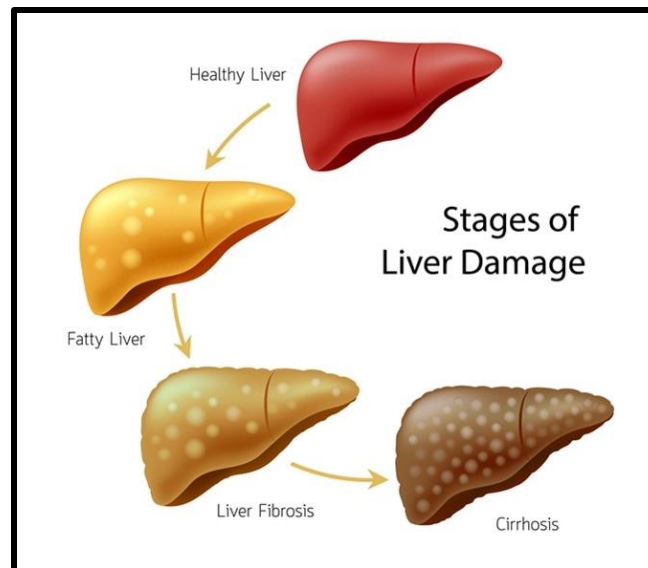


Figure 2. Stages of liver fibrosis leading to cirrhosis

What causes cirrhosis?

Common causes:

- Alcohol use
- Chronic viral hepatitis, including Hepatitis B and Hepatitis C infections
- Metabolic syndrome/obesity

Less common causes:

- Autoimmune causes, such as autoimmune hepatitis, primary biliary cirrhosis, and primary sclerosing cholangitis
- Wilson disease
- Alpha-1 antitrypsin deficiency
- Hemochromatosis
- Infections that cause chronic liver inflammation
- Medications that cause chronic liver inflammation

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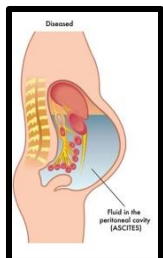


Figure 3. Ascites in the abdomen

Ascites: fluid in the abdomen

How does it occur?

Increased pressure in the blood vessels going to the liver causes fluid accumulation in the abdomen.

Treatment:

1. Large volume paracentesis (LVP), which is an outpatient procedure that involves sticking a needle in the abdomen and leaving a catheter to drain the fluid. The catheter is removed at the end of the procedure.
2. A TIPS procedure can reroute the blood flow if frequent LVPs are needed.
3. Sodium-restricted diet
4. Diuretics (water pills), such as furosemide and spironolactone

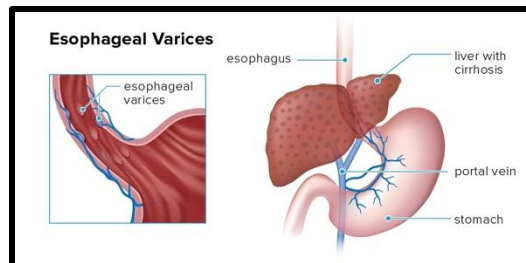


Figure 4. Esophageal varices

Esophageal varices: GI bleeding

How does it occur?

Increased pressure in the blood vessels going to the liver raises pressure in the esophageal vessels, potentially causing them to rupture and lead to life-threatening GI bleeds.

Treatment:

1. Non-selective beta blockers, such as carvedilol, to prevent bleeding
2. If actively bleeding or unable to tolerate a beta blocker, an upper endoscopy can be used to put rubber bands on the varices to stop or prevent bleeding.
3. A TIPS procedure can reroute the blood flow if endoscopy is unable to stop the bleeding.

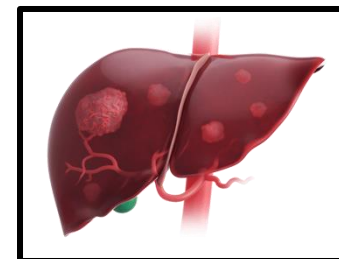


Figure 5. Cancerous tumors throughout the liver

Hepatocellular carcinoma: liver cancer

How does it occur?

Chronic inflammation of the liver can cause liver cancer.

Screening:

Patients with cirrhosis should undergo abdominal imaging every 6 months to screen for cancer.

Treatment:

1. Surgical resection or liver transplant in certain patients
2. Targeted chemoembolization (DEB-TACE) or radioembolization (Y90)
3. Chemotherapy or immunotherapy if it has spread outside the liver

To help prevent these complications, it is important to see a hepatologist, a type of doctor that specializes in care of the liver.

Image references:



Hepatic encephalopathy: confusion

How does it occur?

When the liver doesn't appropriately clear toxins from the blood, they can build up and affect your brain, causing confusion.

Treatment:

1. Lactulose*
 2. Rifaximin
- *This medication promotes regular bowel movements, which may result in frequent, watery stools.