

Ascites: A Common Problem in People with Cirrhosis

By Raj Vuppalanchi, M.D. & Naga Chalasani, M.D.
Indiana University School of Medicine, Indianapolis, IN

1. What is ascites and what causes it?

When fluid accumulates in the abdominal cavity, it is called ascites. Cirrhosis of the liver is the most common cause of ascites but other conditions such as heart failure, kidney failure, infection or cancer can also cause ascites.

2. How common is ascites in people with cirrhosis?

Ascites is common in people with cirrhosis and it usually develops when the liver is starting to fail. In general, the development of ascites indicates evidence of advanced liver disease and patients should be referred for consideration of liver transplantation.

3. What causes ascites in patients with cirrhosis?

Ascites is caused by a combination of elevated pressure in the veins running through the liver (portal hypertension) and a decrease in liver function caused by scarring of the liver.

4. What are the symptoms of ascites?

Most patients who develop ascites notice abdominal distension and rapid weight gain. Some people also develop swelling of ankles and shortness of breath.

5. How is ascites diagnosed?

Depending on how much fluid is present in the abdomen, ascites may be diagnosed by your doctor on physical examination but is usually confirmed by tests such as ultrasound or CT scan of the abdomen. In the majority of patients, your doctor will recommend that a small needle be inserted through the abdominal wall (after local anesthesia) to remove fluid to be examined in the laboratory. This test is called a paracentesis. The fluid removed will be examined for signs of infection or cancer and to determine the cause for the fluid accumulation.

6. Is ascites a dangerous sign?

Yes. The development of ascites generally suggests that the liver is not working well. The survival rate 5 years after ascites develops is only 30-40% and it is important that you and your doctor discuss a referral to a liver specialist and a liver transplant center.

7. What are the complications of ascites?

Abdominal pain, discomfort and difficulty breathing: These may occur when too much fluid accumulates in the abdominal cavity. This may limit your ability to eat, ambulate and perform activities of daily living.

Infection: This is called spontaneous bacterial peritonitis (SBP) and it usually causes abdominal pain, tenderness, fever or nausea. If this is not promptly diagnosed or



treated, a patient may develop kidney failure, severe infection in the blood stream or mental confusion. The diagnosis is generally made by taking a sample of the fluid from your abdominal cavity as described above. This infection can be treated with intravenous antibiotics, and after recovery, patients will require long term treatment with antibiotics to prevent SBP from recurring.

Ascites related hernias: Elevated intra-abdominal pressure can lead to the development of umbilical (around the bellybutton) and inguinal (groin) hernias that can cause abdominal discomfort. Surgical repair is generally avoided unless there is severe pain suggesting the intestines or tissue may be pinched or twisted along with a persistent bulge from the hernia. Surgeons who have experience in treating patients with cirrhosis should perform the operation.

Fluid may get into the chest: This is called hepatic hydrothorax and abdominal fluid fills your lung cavities (mostly on your right side).

8. How best to treat ascites?

The most important step to treat ascites is to strictly reduce your salt intake. Your doctor may advise you to limit your salt intake to 4-5 grams per day (2,000 mg of sodium) or less. As it can be difficult to determine the salt content of various foods, it is generally recommended that a patient with ascites see a nutritionist (dietician) for advice about various foods to avoid. Patients may use salt substitute but it is essential to choose one without potassium because the potassium levels can increase with certain medications to treat ascites. It is important to discuss with your doctor or the dietician which salt substitute you are planning to use.

Most often, patients will require water pills (diuretics) to treat ascites. Your doctor will choose appropriate doses of water pills such as spironolactone (Aldactone) and/or furosemide (Lasix). As these water pills can cause problems with your electrolytes (levels of sodium, potassium, chloride, and bicarbonate in the blood stream), your doctor will need to monitor your blood levels closely. It is important to realize that taking water pills is not a substitute for reducing your salt intake, as water pills will work only when they are taken together with restricted salt intake.

Checking your body weight daily on a scale and contacting your physician whenever there is a gain of more than 10 lbs (or greater than 2 lbs per day for 3 consecutive days) is a good strategy for better management of ascites.

When fluid accumulation cannot be treated optimally with water pills and salt restricted diet, patients may require a large amount of fluid be removed (paracentesis) for relief of symptoms. Your doctors may also discuss with you other procedures such as having a radiologist place a shunt within the liver (called TIPS) to prevent significant fluid accumulation from ascites. As mentioned, patients with ascites have a serious health risk and are often evaluated for liver transplantation.

