CONDITION

Ascites

Learn why fluid can collect in the abdomen, how ascites is diagnosed, and how treatment helps control symptoms and prevent complications.

WHAT IT IS
Abnormal fluid buildup inside the abdomen

BODY SYSTEM
Digestive

MAIN SYMPTOMS
Abdominal swelling, rapid weight gain, abdominal discomfort, shortness of breath

WHAT CAUSES IT
Usually cirrhosis or other underlying disease

HOW IT IS DIAGNOSED
Ultrasound and diagnostic paracentesis

MAIN TREATMENT
Treating the cause and reducing fluid

CAN IT BE CURED?
Sometimes, depending on the underlying condition

IS IT AN EMERGENCY?
Sometimes, with severe trouble breathing

LONG-TERM OUTLOOK
Can recur and cause serious complications

Overview

Ascites is an abnormal buildup of fluid inside the abdomen. The fluid collects in the space between the abdominal organs and the lining of the abdominal wall, called the peritoneal cavity.

A small amount of fluid may cause no obvious change. As more fluid collects, the abdomen can become larger, tight, or uncomfortable. Ascites may also affect breathing, eating, movement, and sleep.

Ascites is not a disease by itself. It is a sign of an underlying medical condition. Cirrhosis, which means severe scarring of the liver, is the most common cause. Other possible causes include heart failure, certain cancers, kidney disorders, pancreatic disease, and infections.

Ascites matters because it can signal that liver disease or another condition has become more serious. The fluid can also become infected or contribute to kidney and breathing problems. Medical evaluation helps identify the cause, relieve symptoms, and lower the risk of complications.

Symptoms

The symptoms depend on how much fluid is present and how quickly it develops. Mild ascites may be found during an examination or imaging test before it causes noticeable symptoms.

Possible symptoms include:

Symptoms of the underlying condition may occur at the same time. People with advanced liver disease may have yellowing of the skin or eyes, easy bruising, muscle loss, itching, confusion, or visible enlarged veins on the abdomen. Heart failure may cause breathlessness and leg swelling. Cancer-related ascites may occur with pain, reduced appetite, or unplanned weight loss.

A new increase in abdominal size should be discussed with a healthcare professional. Ascites cannot be confirmed by symptoms alone, and several other conditions can cause abdominal swelling.

- An enlarging or swollen abdomen
- Rapid weight gain caused by fluid
- Abdominal pressure, fullness, or discomfort
- Feeling full after eating a small amount
- Reduced appetite, nausea, or indigestion
- Shortness of breath, especially when lying down or with activity
- Swelling in the legs or ankles
- Difficulty bending, walking, or finding a comfortable sleeping position
- A belly button that becomes flat or pushes outward

Causes and risk factors

Cirrhosis causes most cases of ascites related to liver disease. Scar tissue changes blood flow through the liver and raises pressure in the portal vein, which carries blood from the digestive organs to the liver. This is called portal hypertension. Changes in hormones and kidney

function then cause the body to retain sodium and water. Fluid eventually leaks into the abdomen.

Conditions that can lead to cirrhosis and ascites include alcohol-associated liver disease, chronic hepatitis B or C, and metabolic dysfunction-associated steatotic liver disease, formerly called fatty liver disease. Autoimmune, inherited, and bile duct disorders may also cause cirrhosis.

Other causes of ascites include:

Risk depends on the underlying condition. A person with cirrhosis is more likely to develop ascites as liver function worsens. Continued alcohol use in alcohol-related liver disease, untreated viral hepatitis, high dietary sodium intake, infections, and some medicines may contribute to fluid retention or kidney problems.

Nonsteroidal anti-inflammatory drugs like ibuprofen or naproxen , or NSAIDs, such as ibuprofen and naproxen can reduce blood flow to the kidneys in people with cirrhosis and ascites. A clinician or pharmacist can review which pain medicines are safer for a specific patient.

- Heart failure or disease affecting the heart's right side
- Cancers involving the liver, ovaries, digestive system, or abdominal lining
- Severe kidney disease or nephrotic syndrome, which causes protein loss in urine
- Pancreatitis or leakage of pancreatic fluid
- Tuberculosis or another infection affecting the abdominal lining
- Blood clots or blockage in veins that drain the liver
- Rare disorders of the lymphatic system

Diagnosis

A healthcare professional will ask when the swelling began, how quickly it changed, and whether there are symptoms of liver, heart, kidney, pancreatic, or cancer-related disease. The examination may look for abdominal fluid, leg swelling, liver or spleen enlargement, jaundice, muscle loss, or signs of heart disease.

Blood tests may assess liver and kidney function, sodium and potassium levels, blood counts, and the blood's ability to clot. Urine tests can help evaluate kidney function and sodium handling.

Ultrasound can detect relatively small amounts of fluid and examine the liver, portal blood

vessels, kidneys, and other abdominal structures. Computed tomography, or CT, may be useful when the cause is uncertain or when cancer, pancreatic disease, or another abdominal problem is suspected.

People with new ascites often need a diagnostic paracentesis. During this procedure, a clinician cleans and numbs an area of the abdomen, then uses a thin needle or catheter to remove a fluid sample. Ultrasound may be used to guide placement.

The fluid is usually tested for its cell count and protein-related measurements. The results help determine whether portal hypertension is present and whether infection is likely. Other tests, such as cultures, cytology for cancer cells, or pancreatic enzyme testing, may be ordered based on the clinical situation.

Paracentesis is especially important when a person with cirrhosis and ascites is admitted to the hospital or develops fever, abdominal pain, confusion, low blood pressure, worsening kidney function, or another unexplained decline. Infection may sometimes be present without strong abdominal symptoms.

Treatment and management

Treatment is based on the cause, the amount of fluid, symptoms, kidney function, and whether complications are present. The goals are to reduce uncomfortable fluid buildup, protect kidney function, and treat the underlying condition.

For ascites caused by cirrhosis, management often includes reducing sodium intake. Sodium causes the body to hold onto water. A clinician or dietitian can help identify practical changes, such as limiting heavily salted foods, processed meats, canned soups, packaged meals, and salty snacks. Cutting sodium too aggressively can make food unappealing and worsen poor nutrition, so individualized guidance is useful.

Fluid restriction is not routinely needed for every person with ascites. It may be recommended in selected situations, such as a very low blood sodium level. Patients should follow their care team's advice rather than restricting fluids on their own.

Diuretics like furosemide or hydrochlorothiazide , sometimes called water pills, help the kidneys remove sodium and water. Spironolactone and furosemide are commonly used for cirrhosis-related ascites. The dose and combination must be selected and adjusted by a clinician. Blood tests and weight checks are needed because these medicines can cause dehydration, kidney injury, or changes in potassium and sodium.

Daily weight measurements may help track fluid changes. Weighing at the same time each day, using the same scale and similar clothing, gives the most useful comparison. Rapid weight loss

or gain should be reported according to the care plan rather than managed by changing medicine doses without instructions.

Therapeutic paracentesis can remove a larger volume of fluid when ascites is tense, painful, affects breathing or eating, or does not respond adequately to medicine. Albumin, a protein solution given through a vein, may be used after a large-volume procedure to support circulation and reduce the risk of kidney problems.

Ascites that repeatedly returns despite appropriate treatment is called refractory ascites. Options may include repeated paracentesis, evaluation for a transjugular intrahepatic portosystemic shunt, known as TIPS, or liver transplantation assessment. TIPS creates a channel inside the liver to lower portal pressure. It can improve ascites in selected patients but may worsen confusion related to liver disease and is not suitable for everyone.

Treatment for non-cirrhotic ascites focuses on its cause. This may include heart failure treatment, cancer therapy, treatment of tuberculosis, or care for pancreatic or kidney disease. Repeated drainage may be used for symptom relief in some cases.

Alcohol should be avoided when it is causing or worsening liver disease. People with cirrhosis should review all prescription medicines, nonprescription medicines, herbal products, and supplements with their care team.

Complications

Spontaneous bacterial peritonitis, or SBP, is an infection of ascitic fluid that can occur without a hole or injury in the bowel. It is mainly associated with cirrhosis. Treatment requires prompt antibiotics like amoxicillin or doxycycline , usually in a hospital. Some people at increased risk may be offered preventive antibiotics, but this decision requires an individual assessment.

Large amounts of fluid can press on the diaphragm and make breathing difficult. Ascites may also contribute to abdominal or groin hernias. Fluid can sometimes move through the diaphragm and collect around a lung, a condition called hepatic hydrothorax.

Kidney function may worsen because of infection, dehydration, over-diuresis, or advanced changes in circulation caused by liver failure. Hepatorenal syndrome is a serious form of kidney dysfunction linked to advanced liver disease. Low blood sodium, poor nutrition, muscle loss, and reduced mobility may also develop.

Seek emergency medical care for:

Contact a healthcare professional urgently for fever, chills, new abdominal pain, a sudden decline in urine output, worsening weakness, or a rapid increase in swelling. These changes can indicate infection, kidney problems, or another complication even if symptoms initially seem

mild.

- Severe trouble breathing, fainting, or chest pain
- New confusion, extreme sleepiness, or inability to stay awake
- Vomiting blood or passing black, tar-like stool
- Severe abdominal pain with a rigid or very tender abdomen

Follow up

Follow-up is important because ascites can return and treatment can affect the kidneys and blood salt levels. Routine visits may include weight and symptom review, abdominal examination, and blood tests for kidney function, sodium, and potassium.

The care team may adjust diuretics based on symptoms, examination findings, weight trends, and laboratory results. Patients should not double, skip, or change diuretic doses unless they have been given a specific plan.

People with cirrhosis may also need ongoing monitoring for liver cancer, enlarged veins in the esophagus or stomach, nutrition problems, and changes in thinking or alertness. Vaccination, alcohol treatment when relevant, and management of the cause of liver disease are important parts of care.

Development of ascites in cirrhosis may lead to a discussion about liver transplant evaluation. Evaluation does not mean that a transplant will happen immediately. It allows a specialist team to assess liver function, overall health, support needs, and possible treatment options.

Routine follow-up is appropriate for stable swelling and planned monitoring. Fever, new pain, confusion, reduced urination, bleeding, or breathing difficulty should not wait for a routine appointment.

Sources

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