

Abdominal Paracentesis

Ascites is an abnormal increase in fluid within the **peritoneal** (abdominal) cavity. The normal abdominal cavity has a small amount of fluid (usually less than 150 mL). **Cirrhosis** (chronic liver disease) with associated **portal hypertension** (blood pressure within the liver above the normal range of 5 to 8 mm Hg) is the most common cause of ascites. Other causes of ascites include cancer, heart failure, kidney failure, tuberculosis, and pancreatic disease. An **abdominal paracentesis** involves the surgical puncture of the abdominal cavity with a needle and placement of a catheter line for the removal of excess fluid. The procedure can be diagnostic in helping identify the cause of ascites or may be used as a therapeutic measure if a large volume of fluid can be removed to lessen discomfort and improve breathing. The March 12, 2008, issue of *JAMA* includes an article about paracentesis techniques. It identifies ways to decrease the risk of complications and to improve diagnostic accuracy.

PATIENTS WHO SHOULD UNDERGO DIAGNOSTIC PARACENTESIS

- Patients with new-onset ascites
- Patients with chronic ascites and at least one of the following symptoms:
 - Fever
 - Abdominal pain
 - Increasing ascites volume—increasing abdominal girth
 - Unexplained **encephalopathy** (confusion or disorientation)
 - Declining liver function
 - Kidney failure

RISKS AND COMPLICATIONS OF ABDOMINAL PARACENTESIS

With current techniques, diagnostic paracentesis is considered a safe procedure. Some **coagulopathies** (bleeding disorders) may make the procedure too risky to perform. Pregnancy, **organomegaly** (abnormally enlarged organs), severe bowel or bladder distention, and previous abdominal-pelvic surgery may increase the risk of the procedure. In those situations, an ultrasound-guided paracentesis should be considered. Procedural complications are rare but can include

- Persistent leakage of ascitic fluid
- Circulatory problems, such as lowered blood pressure
- Localized infection at the puncture site
- Abdominal wall blood clots or bruises
- Bleeding
- Injury to organs in the abdomen

ANALYSIS OF ASCITIC FLUID

Tests of the removed fluid help to establish the cause of the ascites and to rule out infection. These tests include counts of the numbers and types of cells in the fluid. Testing for **albumin** (a simple protein) should be done in cases of new ascites. Additional tests may be done depending on the patient's history and physical examination.

Sources: American Association for the Study of Liver Disease, American Gastroenterological Association, American Academy of Family Physicians

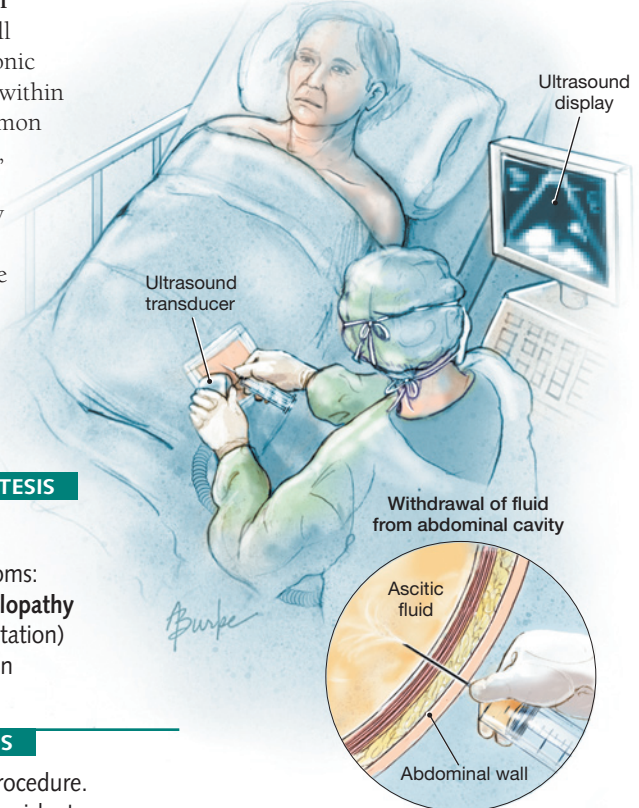
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Ultrasound-guided abdominal paracentesis



FOR MORE INFORMATION

- American Association for the Study of Liver Disease
www.aasld.org
- American Gastroenterological Association
www.gastro.org

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