



Brief clinical history:

A 53-year-old man with a history of hepatic cirrhosis of alcoholic origin (Child-Pugh stage C), portal hypertension with several episodes of esophageal variceal bleeding and secondary prophylaxis with combined pharmacological therapy with non-selective beta-blockers and endoscopic ligation.

The patient continued consuming alcohol and with prescribed therapeutic non-compliance, requiring evacuation paracentesis periodically. After carrying out one of them, he suffered a complication that consisted of hematoma in the sheath of the anterior rectus of the abdomen, requiring transfusions of 4 red blood cell concentrates due to important anemia, and which was finally resolved with conservative treatment. He consulted in the Emergency Department (ED) for progressive abdominal distension and dyspnea of four days of evolution.

Misleading elements:

We present the case of a patient attended in the ED for clinical suspicion of hydroponic decompensation in patients with alcoholic cirrhosis, with a history of hematoma in the sheath of the anterior rectus of the abdomen after the evacuation paracentesis. We emphasize the value of point of care ultrasound (POCUS) in the evaluation of possible ascites and the decisions that accompany them to perform an emergency paracentesis by emergency physicians (EP) against the traditional technique, to avoid possible complications. Paracentesis guided by ultrasound in bed potentially improves the safety and success of the procedure. We used a Sonosite M-Turbo, with convex probe C60e/5-2MHz.

Helpful details:

His physical examination revealed, good level of consciousness, hemodynamically stable, afebrile, eupneic in decubitus, subicteric scleras and spider veins, abdomen with tense ascites and diffuse tenderness and visible abdominal periumbilical collateral circulation. Laboratory results showed: Hemoglobin of 9 gr/dl, 10800 leukocytes/mm³, platelet count of about 80,000/mm³. He presented slight increase the international normalized ratio (INR) and hypertransaminasemia, total bilirubin: 2.6 mg/dl and natremia: 133 mEq/L, with urinalysis and chest X-ray without alterations. After the diagnosis of hydropic decompensation in patients with alcoholic cirrhosis, an ultrasound-guided paracentesis was performed by an EP (figure 1).

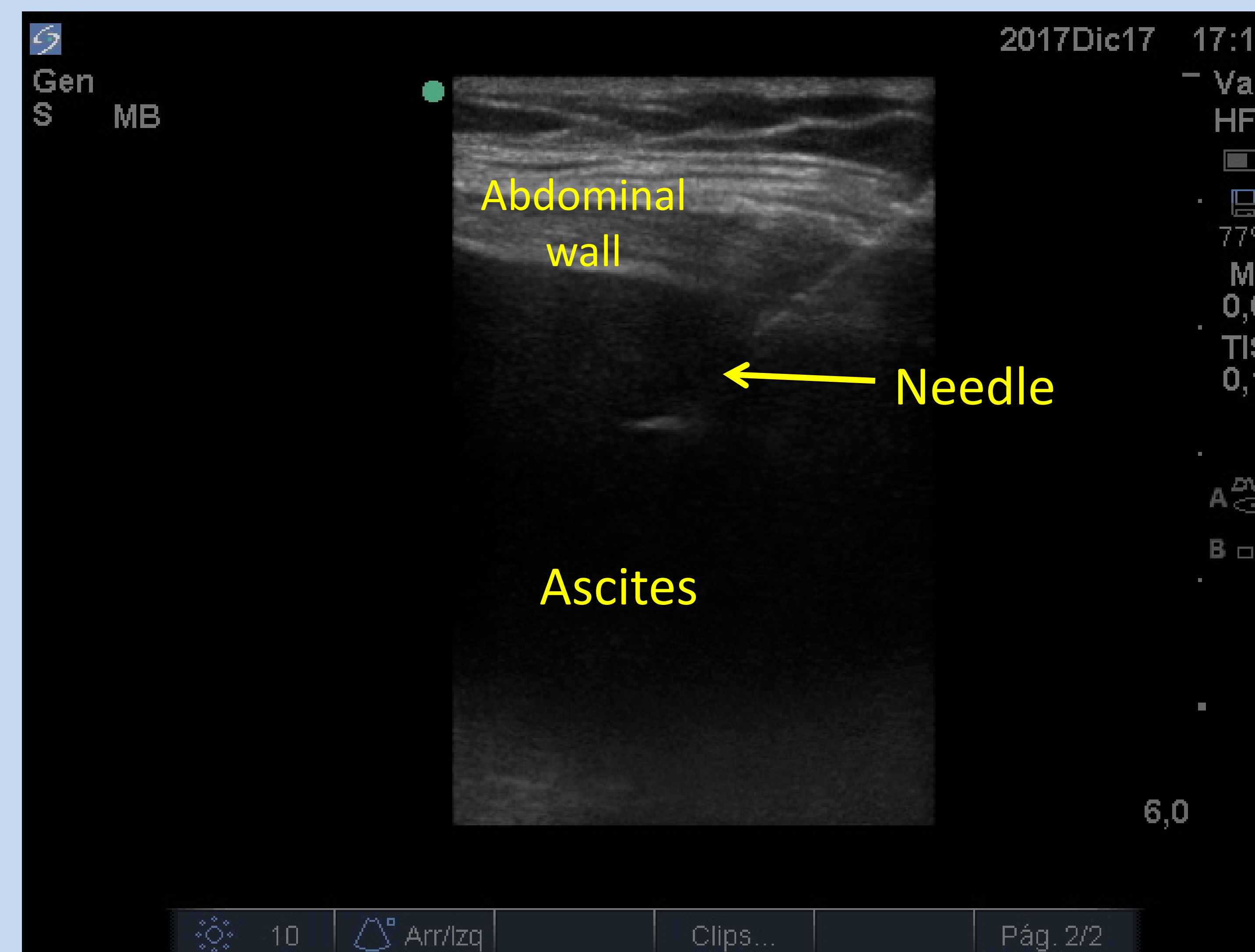


Figure 1: Ultrasound image of abdominal wall with the needle entering the peritoneal cavity.

Differential and actual diagnosis:

Several conditions may mimic ascites such as: abdominal obesity, giant ovarian or mesenteric cyst, and bowel obstruction (mechanical or functional). These entities can typically be differentiated from ascites based on physical examination findings and abdominal imaging. Here, we report a case of hydropic decompensation in patients with alcoholic cirrhosis.

Educational and/or clinical relevance:

Paracentesis is a safe technique, but not without risks. The possible complications of the procedure (<1%) are in the majority of post-infection infections, persistent leakage of ascitic fluid, hemorrhagic type associated with evacuating paracentesis (mainly abdominal wall hematoma by laceration of perforating branches of the inferior epigastric vessels that pass through the rectus abdominis muscle), intestinal perforation and hypotension. The ultrasound-guided paracentesis improves the safety of the procedure, since it allows real-time anatomical visualization, is highly sensitive, locates larger bags of peritoneal fluid and is easy to learn. The ultrasound-guided evacuation paracentesis causes minor adverse events of post-paracentesis infection and hematoma; compared to the traditional technique, as well as lower total hospitalization costs.