

PARACENTESIS (Abdominal Ascitic Drainage)

1. Indication:

Drainage of tense ascites causing significant discomfort or respiratory compromise

2. Equipment required:

- General procedure pack and sterile gown
- Bonanno catheter
- Lignocaine
- Chlorhexidine
- Syringes, needles, scalpel
- Drainable catheter bag
- Venflon dressings x2
- Universal (white-topped) specimen tubes and blood culture bottles

3. Procedure:

Ensure iv access available and bladder is empty

Position patient flat on back with head of bed slightly elevated

Percuss to identify a suitable site for drainage (avoid scars, visible veins, cellulitis)

-Preferred site is in the midline, 2-3cm below the umbilicus

-Alternative sites are left (or right) lower abdominal quadrants, usually 3cm above and 3cm medial to the anterior superior iliac spine

-**Avoid the inferior and superior epigastric vessels which run just lateral to the umbilicus towards the mid-inguinal point** (see picture)

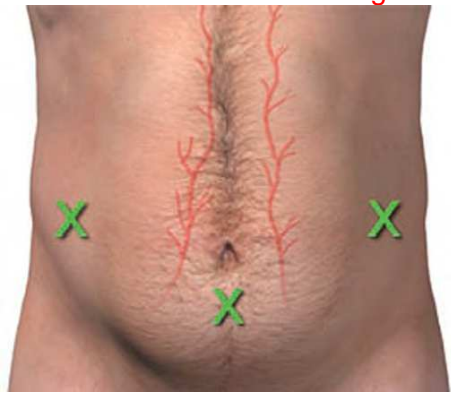


Diagram showing the 3 common sites for paracentesis (AASLD guidelines, 2012)

Clean the skin with chlorhexidine and infiltrate with lignocaine

Using a scalpel make a small nick in the skin

Insert Bonanno catheter perpendicular to the skin, advancing slowly whilst aspirating
Once ascites is aspirating freely, keep the needle still (do not pull back) and advance the catheter to the hilt

Remove the needle and aspirate 20-30ml for diagnostic samples (see below)

Attach the connector tubing and catheter bag

Secure the drain to the abdominal wall using two overlapping venflon dressings

Leave on free drainage and usually remove within 6 hours

It is safe to drain >10 litres over 2-4 hours, provided albumin replacement is given

Prescribe albumin (see below)

4. Albumin replacement:

Prescribe **100ml of 20% albumin per 3 litres** of albumin drained

This does not have to be given simultaneously but should be within a few hours of the fluid being drained

The drain should not be clamped waiting for this to be given

**Critical Care Guidelines
FOR CRITICAL CARE USE ONLY**

5. Cautions:

Even significantly **deranged clotting tests do not require** routine correction **unless** the patient is on **warfarin/heparin or in DIC**

A platelet transfusion may be considered if **platelets <40 x10⁶/L** (BSG guidelines)

Caution if **bowel obstruction / ileus**

6. Complications:

-Abdominal wall haematoma <1/100

-Haemoperitoneum / bowel perforation < 1/1000

-Bacterial peritonitis (risk increases with duration of drain)

-Hypovolaemia / hyponatraemia (risk reduced by albumin replacement)

-Risk of splash-back on drain removal due to pigtail

7. Diagnostic samples:

Initial tap for new-onset ascites: Albumin, protein, cell count +/- culture

If infection suspected: Cell count +/- culture

- *Cell count*

>250 polymorphs/mm³ is diagnostic of SBP

If infection suspected, inoculate ascitic fluid into blood culture bottles to improve sensitivity of cultures

- *Albumin*

Calculate SAAG (**serum-ascites albumin gradient**) = serum ascites – ascitic albumin

SAAG <11 g/L suggests **exudate** (malignancy, tuberculosis, pancreatitis)

SAAG ≥11 g/L suggests **transudate** (cirrhosis, cardiac failure, nephrotic syndrome)

- *Protein*

Low-protein ascites is associated with increased risk of SBP

If <15 g/L, give prophylactic cotrimoxazole 960mg od

- *Amylase*

Only required if clinical suspicion of pancreatitis; normal ascitic amylase <130 IU/L

- *Cytology*

Only required if clinical suspicion of malignancy

Title: Abdominal Ascitic Drainage	
ID:	Authors: Dr M Williams (GI/Liver), E Wilson, K Kefala
Category: 1	Document Version: 1
Status Draft/Final: Final	Review Date: Sept 2018
Authoriser: Lothian Critical Care Directorate Editorial Board	Date Authorisation: Sept 2015
Date added to intranet	
Key Words: Ascitic drainage	
Comments;	