CONTROLLED DOCUMENT

University Hospitals Birmingham NHS
NHS Foundation Trust

Tapping Ascites and Paracentesis Guideline

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PARACENTESIS PROFORMA (for the healthcare professional performing the procedure to enter in the patient notes)

Date:	Procedure: ❑ ascitic tap ❑ ascitic drain
Time:	INR:
Clinician: (name, grade, bleep)	Platelets:
Supervisor (if applicable):	Written consent form attached: ❑ yes (for drain)

PROCEDURE:

Aseptic technique: ❑ Chlorhexidine 2%

Local anaesthetic:
- ❑ Lignocaine 1% ….. mls
- ❑ Lignocaine 2% ….. mls

Puncture site:
- ❑ Right iliac fossa
- ❑ Left iliac fossa
- ❑ Other…………………………

Ultrasound used:
- ❑ Yes
- ❑ No

Number of attempts:
(times skin pierced by needle) …………

Immediate complications: ❑ none

……………………………………………………………………………

INVESTIGATION:

Colour and transparency of fluid aspirated: ………………………………………………………………

Investigations:
- ❑ Microscopy, culture, sensitivities (blood culture bottles and universal container to microbiology)*
- ❑ Cell count (EDTA tube to microbiology)*
- ❑ Protein (universal container to biochemistry)
- ❑ Cytology (universal container to pathology)- if suspected malignancy
- ❑ Other**
…………………………………………………

*critical for diagnosing SBP. If polymorph count is greater than 250/mm^3, start antibiotics (don't wait for the culture results). In cirrhotic patients without SBP with a total protein count less than 15g/L, consider SBP prophylaxis.
**remember that if you are sending samples for LDH and glucose, these also require paired blood samples. Consider amylase in patients with pancreatic disease.

❑ If urgent, microbiology informed? (16520)- for OOH microbiology technician, go through switchboard

POST-PROCEDURAL CARE (for paracentesis only):

- ❑ Prescribe 1 bag (100ml) of 20% Human Albumin Solution STAT and then for every 3L of ascites drained.
- ❑ Record observations every 15 minutes for the first hour and every 30 minutes after that during drainage.
- ❑ Remove the drain after 6 hours of free drainage.
- ❑ Pause diuretics on the day of insertion, for 48 hours. When re-starting diuretics, use the minimum dose needed to prevent re-accumulation of ascites.
- ❑ For persistent leak following drain removal, consider placing a suture.

Special situations: In patients with liver cirrhosis and concurrent renal impairment (a) limit drainage to 5-8L (b) Prescribe 1bag (100ml) of 20% Human Albumin Solution for every 2L of ascites drained. In malignant ascites, volume replacement is not routinely required but consider a 250ml colloid challenge if need be.

Name: ……………………….. Signature: ……………………………… Date: ………………………..

Indications:

- As a **diagnostic** procedure to determine the cause of ascites in patients with (a) new grade 2 or 3 ascites or (b) worsening of ascites or presentation with another form of decompensated liver disease.
- As a **therapeutic** procedure: in patients with large volume (grade 3) ascites to relieve associated abdominal discomfort or shortness of breath. This requires a written consent form.

Contraindications: (for paracentesis only)

- Disseminated intravascular coagulation
- Skin infection at the proposed puncture site
- Uncooperative patient
- Severe coagulopathy (disseminated intravascular coagulation or accelerated fibrinolysis)
- Severe bowel distension

  NB: There is a lack of data supporting the prophylactic use of FFP and platelets prior to paracentesis

Risks:

- Pain/discomfort at the needle insertion site
- Bleeding at the needle insertion site
- Injury to a blood vessel
- Damage to surrounding organs (especially bowel)
- Infection
- Allergic reaction to local anaesthetic
- Procedure failure
- Persistent leak following drain removal

Grading Ascites:
Grade 1- Ascites only detectable by ultrasound
Grade 2- Ascites causing moderate, symmetrical abdominal distension.
Grade 3- Ascites causing marked abdominal distension

Equipment:

- Dressing pack
- Local anaesthetic (1% or 2% lignocaine)
- Skin antiseptic (chloraprep)
- Needle to withdraw anaesthetic
- 1x Orange (25G) needle and 1x green (19G) needle for anaesthetic
- 1 x 10ml syringe (for local anaesthetic)
- 1 x 50ml syringe (for diagnostic aspirate)
- Specimen containers as required (see overleaf)

If performing paracentesis, you will also need:

- Peritoneal catheter pack (Bonano catheters are usually used here)
- Scalpel
- Drainage bag

Procedure:

- US guidance is usually not needed for diagnostic paracentesis but can be helpful in cases in which a blind tap is unsuccessful. Consider therapeutic paracentesis under US guidance (if you have been trained in using it).
- Consent the patient and ensure their bladder is empty.
- Lie the patient supine.

- Examine the abdomen to find a site where there is shifting dullness, but no solid organs. Choose a site which is not infected. Preferred sites are iliac fossae, away from the inferior epigastric blood vessels and scars, or suprapubic area.
- Wear sterile gloves
- Clean the area
- Infiltrate local anaesthetic- initially superficially (using an orange needle) and then deeper using a green needle (you should be able to aspirate some ascitic fluid).
- Once the skin is anaesthetised, if only a diagnostic sample is required, use a 50mL syringe and green needle to draw the sample.
- If performing a paracentesis, make a small incision in the skin to allow the peritoneal catheter to pass.
- Insert the peritoneal catheter. Once flashback is visualised, advance the catheter whilst withdrawing the needle.
- Connect the catheter tubing to a free drainage system.

If no fluid is aspirated on performing an ascitic tap, reposition the needle tip. It is reasonable to make up to two attempts. If unsuccessful, an ultrasound guided ascitic tap/drain should be performed/requested.

REFERENCES:

1. European Association for the Study of the Liver, *EASL clinical practice guidelines for the management of patients with decompensated cirrhosis. J Hepatol, 2018 [online]. Available at:* https://doi.org/10.1016/j.jhep.2018.03.024 [Accessed 04.05.18]

2. European Association for the Study of the Liver, *EASL clinical practice guidelines on the management of ascites, spontaneous bacterial peritonitis, and hepatorenal syndrome in cirrhosis.* J Hepatol, 2010. **53**(3): p. 397-417.

3. Moore, K.P. and G.P. Aithal, *Guidelines on the management of ascites in cirrhosis.* Gut, 2006. **55 Suppl 6**: p. 1-12.