Adult Paracentesis

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant women.

**PRESENTATION AND PRE-PROCEDURE ASSESSMENT**

Patient assessed and identified as needing paracentesis

Place procedure order using appropriate ordering tool

Procedure indicated?

Yes

Pre-paracentesis requirements:
- Review of available imaging and/or ultrasound evaluation by proceduralist
- Lab parameters:
  - INR < 3 and
  - Platelets > 20 K/microliter
- Proceduralist to calculate serum ascites albumin gradient (SAAG) to determine etiology of ascites and anticipated need for albumin if draining ≥ 5 liter
- Patient does not require NPO status
- Procedure considered low bleeding risk. Holding of anticoagulants not required.

No

APP Proceduralist to document evaluation in patient’s EHR

**INTRA- AND POST-PROCEDURE**

Paracentesis requirements met?

Yes

- Perform paracentesis
- Monitor blood pressure before, during, and after removal of each liter of fluid
- Procedure to be aborted if SBP < 90 mmHg
- Notify primary team and proceduralist team for findings of site leak and/or bleeding

No

Coagulopathy

(INR ≥ 3 and platelets ≤ 20 K/microliter)

SAAG ≥ 1.1

Consider 6-8 grams of albumin 25% IV per liter of ascites removed for volumes ≥ 5 liters

**Coagulopathy**

- Platelet count < 10 K/microliter: Platelet transfusion and post-count until platelet count ≥ 10 K/microliter
- Platelet count ≥ 10 K/microliter and ≤ 20 K/microliter: Additional platelets to infuse prior to procedure for ambulatory patients or during the procedure for inpatients
- INR ≥ 3: Consider administering fresh frozen plasma (FFP) and/or vitamin K if clinically indicated
- If patient has tense ascites with warning signs of respiratory distress, proceduralist to discuss with on-call surgical fellow. If benefit outweighs risk, do not delay procedure to correct coagulopathy.

**SAAG ≥ 1.1**

- Patients with End Stage Renal Disease (ESRD) do not require calculation of SAAG

1 For patients requiring additional Interventional Radiology (IR) procedure(s), order paracentesis using IR Procedure Request. For all other patients, order paracentesis using the IP Mobile Procedure Team Paracentesis
2 Lumbar Puncture Procedure Order Set for inpatients and the Ambulatory INS Mobile Procedure Team smart set for ambulatory patients.
3 Patients with End Stage Renal Disease (ESRD) do not require calculation of SAAG
4 For patients on warfarin: higher doses of vitamin K result in extended duration of subtherapeutic INR. Consider limiting dose of vitamin K for patients with a thrombotic risk who will need to be restarted on warfarin.

APP = Advanced Practice Provider

NPO = nothing by mouth

SBP = systolic blood pressure
SUGGESTED READINGS


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