Diagnosis and Management of Ascites

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Outline

- Diagnostic paracentesis
- Analysis of ascitic fluid
- Basic management of ascites
- Management of refractory ascites
Diagnostic Paracentesis
Diagnostic Paracentesis Candidates for Testing

- All patients with new ascites
- All patients with known ascites who have:
  - Alteration of mental status (hepatic encephalopathy)
  - Fever
  - Increasing abdominal girth
  - Abdominal pain
  - Hospital admission for any reason
Diagnostic Paracentesis: How to Tap Ascites

- **Diagnostic:**
  - Subumbilical with 1-inch needle on syringe
  - Patient sitting at a 30-degree angle
  - Do not need interventional radiology, platelets, or fresh frozen plasma (FFP)
  - Obtain
    - Cell count with differential
    - Culture directly into bottles at bedside

- **Therapeutic:**
  - Often performed in left lower quadrant
  - Caldwell needle
  - Replace albumin if creatinine is increased or above 5 L (12 g/L removed)
Analysis of Ascitic Fluid
Analysis of Ascitic Fluid

- **Must have**
  - Cell count
  - Culture at bedside

- **Might want**
  - Serum and ascitic fluid albumin
    - Serum-ascites albumin gradient (SAAG)
  - Amylase
  - Total protein
  - Cytology
Diagnosis of SBP:

- Positive ascitic fluid bacterial culture
- Absolute polymorphonuclear leukocyte (PMN) count at or above 250 cells/µL
- Total white blood cell count above 500/µL
- No evident intra-abdominal source of infection
Basic Management of Ascites
Basic Management of Ascites

- Low sodium diet: less than 2 grams per day
- Diuretics
  - Spironolactone 50 mg per day plus furosemide 20 mg per day
  - Increase every 1 to 2 weeks by 2, to a maximum of spironolactone 400 mg per day plus furosemide 80 mg per day, or until creatinine rises
- Large-volume paracentesis (LVP), as needed
- Evaluate portal system with Doppler ultrasound
Management of Refractory Ascites
Management of Refractory Ascites

- **Definition:**
  - Persistent requirement for LVP despite maximally tolerated or peak diuretic therapy

- **Modalities:**
  - Transjugular intrahepatic portosystemic shunt (TIPSS)
  - Liver transplantation
All patients with ascites should be tapped early and frequently
Diagnostic paracentesis is a safe bedside procedure
Cell count and culture are crucial to diagnose SBP
Low sodium diet, diuretics, and patience will lead to efficacious management in most patients
TIPSS and liver transplantation may be required in those with true refractory ascites
End

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