

EM Basic- Hepatic Emergencies from FOAMcast

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Spontaneous Bacterial Peritonitis

- **Diagnosis** – paracentesis results revealing >1000 WBCs or >250 polymorphonuclear neutrophils (PMNs). Many patients lack abdominal pain or clear symptoms. If a patient is sick and the benefit of identifying a source is likely to outweigh the benefit.

ACEP cites a relative contraindication of INR >2 [3]. Yet, the AASLD recommends that “coagulopathy should preclude paracentesis only when there is clinically evident hyperfibrinolysis (three-dimensional echymosis/hematoma) or clinically evident disseminated intravascular coagulation” [4].

Rosen's supports giving blood products to reverse “significant coagulopathy” prior to paracentesis but note that the AASLD also does NOT support giving blood products to reverse coagulopathy prior to paracentesis, stating that “these patients regularly have normal global coagulation because of a balanced deficiency of procoagulants and anticoagulants[4].

- **Treatment** – Third generation cephalosporin
- **Prevention** – some patients are on prophylaxis for SBP (often norfloxacin or TMP-SMX). In cirrhotic patients with upper gastrointestinal bleeds, some have found a **number needed to treat (NNT) of 22** for mortality although only one study was placebo controlled.

Hepatic Encephalopathy – graded I-IV. Remember, Grade II = asterixis, Grade IV is coma.

- **Diagnosis of exclusion** – a high ammonia does not mean the patient has hepatic encephalopathy as the cause of their symptoms.
- **Check for precipitants** – **WikEM** has a good list but it includes things like gastrointestinal bleed, electrolyte abnormalities (hyponatremia, hypokalemia), infection, drugs, etc.
- **Ammonia level does not correlate with degree or grade of encephalopathy!**

Hepatotoxic Drugs – check out the tables in Rosen's/Tintinalli. The NIH website **Liver Tox**, is also quite helpful. A few highlights

- **Acetaminophen** – we don't cover this but it's something that everyone needs to know (**WikEM, Life in the Fast Lane**).
 - **Amoxicillin-clavulanate** (mixed cholestatic and hepatocellular toxicity theorized to be mostly from the clavulanate) – per the NIH “currently the most common cause of drug induced liver disease in most large case series from the United States and Europe.”
 - **Amiodarone, Bupropion**
- Cholestatic examples include haloperidol, verapamil, carbamazepine**

Contact: Lauren Westafer- @lwestafer and Jeremy Faust @jeremyfaust
FOAMpodcast@gmail.com, steve@embasic.org