Lenox Hill Hospital
Northwell Health℠

Academic Half Day – Liver & Biliary Disease

Agenda:
1:00-1:05 Rapid Review
1:05-2:25 Cases
2:25-2:30 Questions for the Expert

Objectives:

- Describe Clinical Presentation of those with Cirrhosis
- Categorize Etiologies of Cirrhosis
- Review Complications and their management of Cirrhosis
- Interpret LFTs and use them to compare and contrast liver/biliary diseases
- Review Biliary Diseases and management decisions related

Case 1
Jack Daniels is a 56-year-old male with essential hypertension, Diabetes type 2, chronic alcohol use with recently diagnosed cirrhosis. He presented to the Emergency Department with three days of generalized abdominal pain.

1. **What additional specific HPI/ROS questions will you ask about?**

2. **What specific Physical Exam findings will you elicit?**

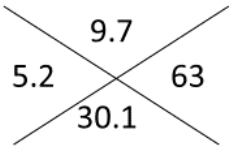
Mr. Daniel's states that his abdomen has been getting more swollen over the past 2 months. Lately he has had no appetite. In addition he has been lethargic over the past few days. He denies any hematemesis, melena, hematochezia. He was admitted once previously for hepatic encephalopathy over a year ago. He has never had a GI bleed or history of SBP. His last EGD performed 6 months ago showed no evidence of variceal disease. Last HCC screening was done last year. Patient takes lactulose, amlodipine, and glyburide.

His vital signs are T 99.2, HR 94, BP 96/64 96% on Room air. He is lethargic, arousable to voice, AAOx3. Cardiac, pulmonary, and neurologic exams are within normal variants. Patient does not have asterixis. Abdominal exam reveals distension, with tense abdomen, +fluid wave. Rectal Exam is without signs of bleeding. Skin exam reveals jaundice. Hair pattern is normal without signs of gynecomastia.

3. **What is the problem representation for this patient? *read update to history**

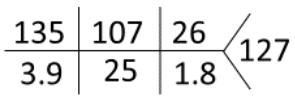
4. **What are the next steps in Management for this patient?**

5. **What are your interpretation of the Labs?**



MCV: 108

Neutrophil: 68%
Lymphocytes: 25%
Basophils 0.3%
Eosinophils: 2%
Monocytes: 3.7%



Alk Phos: 152 IU (normal 46-139)
AST: 28 IU (normal 7-46)
ALT: 32 IU (normal 11-35)
Total Protein 6.8
Albumin 2.9 gm% (normal 3.5-5)
Total Bilirubin 2.2 mg/dl (normal 0.2-1.0)
Indirect Bilirubin 0.7 mg/dl

INR 1.8 (normal 0.9-1.1)
PT 19 (normal 11.6-14)
PTT 28 (normal 25-35)

6. **Should FFP/Vitamin K/Kcentra be administered prior to paracentesis?**

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7. **Interpret Ascites fluid, what would be your next steps?**

8. **How would your diagnosis and management change if the Ascites Protein was 3.0 g/dl?**

9. **How do you assess the severity of illness?**

10. **In preparation of his discharge what medications will you expect to see him discharged on? What lifestyle modifications would you include on the paperwork?**

11. **What if patient was admitted with hematemesis, what would you do?**

12. **EGD showed esophageal varices with stigmata of recent bleeding. What additional medication would you prescribe at time of discharge?**

13. **After discharge Mr. Daniels continues to have episodes of GI bleeding, what additional procedures can be performed.**

14. **Following TIPS Mr. Daniels comes to the ED with acute AMS and asterixis on exam. How do you evaluate HE? How to you treat?**

Case 2:
Mr. Sir Ross Is is a 24 yo male with a history of anxiety and depression. He takes no medications but he admits to IVDU and etoh use. He works at a Popeye's restaurant in Kentucky and mainly keeps to himself aside from his family, though they note he used to be more social when he was younger. They attribute this change to his substance abuse. Mr. I presents with a 3 day history of fatigue, nausea, vague abdominal pain and jaundice.

1. What further history do you want to obtain?

His exam is notable for: T 101 BP 100/78 HR 90 RR 14 99% on RA.
Appears fatigued, notable jaundice, alert and oriented. HR regular, no murmurs, Lungs clear, Abdomen moderately tender in the RUQ, notable hepatomegaly, no signs of chronic liver disease, no fluid wave. No asterixis.

LABS:
Renal panel: WNL
CBC: wbc 7 hb 14 hct 42 plt 370
Hepatic Panel: AST 4000 ALT 3297 AlK phos 60 Bili 8 (direct 5.8) INR 1.3 albumin 2.5

Does Mr. I have acute liver failure?

What is your differential diagnosis? How do you approach abnormal LFTs.

What additional labs do you want?

What's your diagnosis?

What if the patient admitted to ingesting of ≥8gm Tylenol this morning? What would you do & how would you treat the condition?

What if he had moderate ascites on exam and labs were as follows:
Laboratory tests:
CBC: 14.8 > 11.9 / 37.4 < 118
BMP: 132 / 4.2 / 98 / 24 / 18 / 1.2 < 144
Total bilirubin: 13.3 mg/dL (normal 0.2 - 1.0)
Direct bilirubin: 10.0
ALT: 90 IU (normal 7 - 46)
AST: 280 IU (normal 11 - 35)
Alk phos: 210 IU (normal 46 – 139)
Albumin: 3.1 gm% (3.5 - 5.0)
PT: 24.2 (lab normal is 11.6-14.4)
INR: 2.2 (0.9 - 1.1).

What is your DDx:

What additional labs/tests do you want to order?

Case continued: He undergoes paracentesis and Lab results as follows

Ascites fluid: 50cc, hazy, yellow fluid
- Cell count:
  - RBC 2
  - WBC 108 with 45% neutrophils, 15% lymphocytes, and 5% monocytes
- Albumin: 1.7 g/dL
- Protein: <2 g/dL
- Gram stain & culture: processing

UA: Negative LE, negative nitrite, 2 WBC, 2 RBCs.
Chest X-ray: no acute abnormalities

Ammonia: 98	Tylenol: negative	
HCV Ab: negative	HCV PCR: negative	
HBsAg: negative	Anti-HBs IgG: negative	Anti-HBc IgM: negative
Anti-Hep A IgM: negative		

Blood cultures pending

Interpret the above labs. What clinical diagnoses can be made at this time?

What disease severity tools are available to guide therapy?

What medications/therapies would you start? Detail dosing and duration of therapy.

You started treatment for alcoholic hepatitis. After 1 week repeat labs show an unchanged BMP, total bilirubin of 8, INR 1.5. What clinical tool do you use to adjust duration of therapy?