Managing Chronic Liver Disease: A Guide for the Internist

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Disclosures

• No current disclosures

• Prior Consultant: Gilead Pharmaceuticals
  Abbvie
RC is a 58yo man with a known history of chronic hepatitis C. He comes to your office to inquire about a referral for treatment. He also reports a 4 week history of leg swelling and weight gain. He has an umbilical hernia that has worsened recently and causes him discomfort. He wants to know if it can be repaired and what he can take for pain. He drinks alcohol socially.

Meds: Amlodipine, Simvastatin, Meloxicam

98.6, 112/70, 88, 16, 96% RA

No scleral icterus, lungs clear, CV RRR, Abdomen mildly distended with reducible umbilical hernia, 1+ pre-tibial edema

CBC normal except platelets 120, BMP normal, AST 78, ALT 84, AP 104, Bili 1.7, Alb 3.3, INR 1.3
How the Internist Can Help?

- Portal Hypertensive Complications
- Cancer Screening
- Medication Management
- Pre-Operative Evaluations
- Miscellaneous
Portal Hypertension
Ascites

• Most common complication of cirrhosis

• Majority of patients have cirrhosis
  – Non-cirrhotic portal hypertension
  – Cardiac

• Shifting dullness is the best test\textsuperscript{1}
  – 83% sensitive, 56% specific

• Often requires ultrasound if not obvious

\textsuperscript{1} Cattau et al. JAMA 1982
Ascites

• All patients with new ascites should be tapped
• All patients admitted with ascites should be tapped
  – Classic symptoms are uncommon
  – Always tap before antibiotics
• Cell count, Differential, Albumin, Total Protein, Culture
  – SBP if poly count >250 and/or culture positive
• In which patients is paracentesis contraindicated?
• Complications are VERY uncommon, even in the setting of abnormal coags and platelets
Ascites: Management

- Sodium restriction to 2 grams per day
- Paracentesis then:
  - Oral furosemide and spironolactone (40:100)
  - Daily dosing
  - Maximum doses 160:400
- Labs after 7-10 days, titrate to creatinine and electrolytes
- Fluid restriction seldom needed
  - Low sodium rarely morbid (<120)
Ascites: Management

- Periodic Paracentesis
  - May need to order IV albumin

- Transjugular Intrahepatic Portosystemic Shunt

- Transplant
SBP Prevention

• Secondary
  – After first episode, all patients get life long prophylaxis
    • Daily norfloxacin 400mg
    • Daily ciprofloxacin 500mg
  – SBP is a major cause of morbidity and mortality in these patients!

• Primary
  – Any cirrhotic with GI bleeding (IV Ceftriaxone or Fluoroquinolone)
  – Decreases the incidence of all infections in these patients and decreases mortality
Varices

- Present in 50% of cirrhotics
  - More likely as liver disease progresses

- Hemorrhage occurs at a rate of 5-15% per year
  - Larger size varices = higher risk for bleeding

- Bleeding *is not* subtle, truly a life threatening emergency

- Requires hospitalization, treated endoscopically
Encephalopathy

- Pathophysiology not well understood

- Believed that ammonia plays a role
  - Originates in intestine due to urea breakdown by bacteria
  - Goes to liver via portal vein, 85% converted back to urea and excreted by kidneys

- BBB very permeable to ammonia however, the direct role of ammonia, if any, is not clear

- DON’T TEST AMMONIA. Make the diagnosis clinically!
Encephalopathy: Management

• Major Cause of Morbidity and Mortality in Cirrhosis

• Lactulose
  – Inexpensive
  – Titrate to 3-4 soft bowel movements per day
  – Educate patients and families
  – Low risk of complications

• Rifaximin
  – VERY Expensive
  – 550mg tabs twice daily
  – Added when refractory to lactulose or if contraindication
Hepatocellular Carcinoma
Screening in all patients with Hepatitis B and/or cirrhosis is a safe bet!
How to Screen?

• AASLD/EASL guidelines:
  – Use ultrasonography. If lesion > 1cm then contrast imaging
  – 6 month intervals

• What about AFP?
  – Don’t send unless advanced fibrosis or Hep B
  – 40% of all HCC will have a normal AFP
  – Guidelines don’t recommend its use, but I still do

• Any lesion found in a cirrhotic liver is cancer until proven otherwise
Why Do We Care?

• Transplant offers the best 5 year survival for patients with HCC

• If you find it early, we can treat it early
  – TACE
  – Ablation

• MELD exception points
Medications in Liver Disease
Acetaminophen

- **IT IS OKAY FOR LIVER DISEASE PATIENTS**
  - Don’t take the whole bottle at once!
  - Avoid alcohol

- **NAPQI/Glutathione**

- Chronic appropriate daily use does not lead to liver disease

- Acute toxicity makes patients sick but rarely requires liver transplantation
Statins

- All associated with mild/moderate AST/ALT elevation
  - Typically resolves with time and without dose adjustment
- Significant hepatotoxicity and/or liver failure is RARE!
  - Atorvastatin: 1:5,000
  - Rosuvastatin: 1:10,000
  - Pravastatin: 1:100,000
  - Simvastatin: 1:100,000 patient years of exposure
- Dose dependent
- Can occur at any time
- Use them when needed (especially NASH patients!)
Others

• Benzos/Narcotics
  – Use sparingly (if at all) in patients with cirrhosis, especially decompensated disease
  – Will hang around for a long time
  – Precipitate hepatic encephalopathy
  – Recommend specialty care (psychiatry, pain management)

• http://livertox.nih.gov
  – Medications, herbals, supplements
Surgery in Cirrhosis

• In general, would not allow elective surgery, especially if decompensated
  – Highest risk with abdominal surgery, but any general anesthesia case is risky
  – There is often an alternative

• Hepatology as part of pre-op evaluation

• Mayo pre-operative risk assessment
  – What is the risk of our patient?
What is the age? 58

What is the ASA score? 3  Enter 3 for compensated cirrhosis
Enter 4 for decompensated cirrhosis

What is the bilirubin? 1.7  (mg/dl)

What is the creatinine? 0.8  (mg/dl)

What is the INR? 1.3

What is the etiology of cirrhosis?  
- Alcoholic or Cholestatic
- Viral/Other

Compute

Reset

Probability of Mortality

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<th>7 days</th>
<th>30 days</th>
<th>90 days</th>
<th>1 year</th>
<th>5 years</th>
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<tr>
<td>Probability of Mortality</td>
<td>2.208%</td>
<td>8.753%</td>
<td>13.752%</td>
<td>27.569%</td>
<td>59.062%</td>
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Vaccinations

• Influenza/Pneumovax per guidelines

• Hepatitis A and B
  – Recommended for all patients with liver disease
  – Screen for immunity (Hep A Total Ab, not IgM)
  – Screen for infection/immunity (Hep B surface Ag, Hep B surface Ab, Hep B core Ab)
  – Check to see if it worked!

• No live vaccines after transplant (Flu mist, MMR, Zoster)
MELD/Transplantation

- Transplant priority based on MELD score within blood group
- Score varies between 6 and 40
- Average MELD transplanted at UMMS: 30
- MELD score: Bilirubin, Creatinine, INR, Sodium
- MELD exception points
  - Tumor, Portopulmonary HTN, Hepatopulmonary Syndrome, etc.