

## **Management of Cirrhosis** (reviewed 8/10/07)

Complications of cirrhosis include ascites, spontaneous bacterial peritonitis, hepatorenal syndrome, variceal hemorrhage, hepatopulmonary syndrome, encephalopathy, and hepatocellular carcinoma

### **a) Management of ascites secondary to portal hypertension**

- Salt restriction
- Diuresis -- start 40 mg lasix + 100mg spironolactone (max dose lasix=160mg, spironolactone=400mg)
- Paracentesis -- typically midline or RLQ approach; not contraindicated w/ thrombocytopenia or coagulopathy; may safely remove 5-6 liters; some advocate 5% albumin IV for volume expansion
- Transjugular intrahepatic portosystemic shunt (TIPS)

### **b) SBP Prophylaxis**

- Fewer episodes of SBP but no mortality benefit with prophylaxis
- Recommended for
  - 1) h/o SBP
  - 2) ascites protein < 1 gm/dL
  - 3) during variceal hemorrhage
- Prophylaxis for SBP can be accomplished with ciprofloxacin 750mg qweek, bactrim DS 5x/wk, norfloxacin 400mg qd

### **c) Prevention of Variceal Hemorrhage**

- All patients with cirrhosis should be screened for varices with an EGD annually. Screening can be discontinued once pt is placed on beta-blocker prophylaxis or undergoes TIPS.
- For primary prophylaxis for patients with varices detected on EGD, patients should be initiated on a non-selective beta blocker (propranolol 10mg tid with dose titrated to reduce resting HR to 55-60; nadolol 20 mg qd and titrated to reduce resting HR to 55-60)
- Combination therapy with isosorbide mononitrate (10mg bid titrated to 20mg bid if tolerated) has been shown to further reduce episodes of variceal bleeding in some studies but can be difficult to tolerate. Nitrate monotherapy is not recommended for prophylaxis
- For prevention of recurrent bleeding, variceal banding is recommended in addition to medical management

- TIPS is indicated for refractory variceal bleeding but is complicated by encephalopathy. Once placed, patency of TIPS needs to be confirmed with Doppler q4 months, as virtually all patients undergoing TIPS will develop stenosis within the first 2 years. This risk diminishes after 3-4 years. Beta-blockade can be discontinued in a patient with patent TIPS.

#### **d) Screening for Hepatocellular Carcinoma**

- There is no prospective evidence that screening for HCC saves lives in patients with cirrhosis
- Many experts recommend q6 months alpha-fetoprotein (AFP) and right upper quadrant ultrasound

#### **e) Liver Transplantation**

Patients with cirrhosis should be considered for transplantation when they develop evidence of hepatic dysfunction (MELD score  $\geq 10$  or Child-Turcotte-Pugh score  $\geq 7$ ), ascites, variceal bleeding or hepatic encephalopathy. At this stage, patients should probably be referred to the HMC Hepatitis/Liver Clinic for management.

The nearest transplant center that accepts HIV-infected patients is University of California San Francisco. The patient will need to have a stable support system in place and insurance coverage to be considered for referral to UCSF.

#### **MELD calculator:**

<http://www.unos.org/resources/MeldPeldCalculator.asp?index=98>