The Continuum of Care for Advanced Liver Disease: Partnering with the Liver Specialist

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Objectives

- Review staging of liver disease
- Review consequences of end-stage liver disease
- Review treatment and testing
- Review when to refer for liver transplant and what to do while patient is waiting

Staging and defining the liver disease

- Is there potential for reversal?
  - Steatohepatitis
    - Diabetes control, weight control, meds
  - HBV and HCV can be treated
  - Autoimmune can be treated if no decompensation
- Assessing degree of portal hypertension
  - All will have some degree, the greater it is the more likely to decompensate

Staging and defining the liver disease

- Knowing the cause
  - Cholestatic liver disease (PBC, PSC)
    - Dyslipidemia
    - Fat soluble vitamin deficiency
    - Osteoporosis
    - Pruritus
    - If PSC: cholangitis
  - Steatohepatitis (DM, dyslipidemia, obesity, BP)
  - Alcohol (abstinence the key)

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Staging and defining the liver disease

- Decompensated or not
  - GI bleeding,
  - Ascites or hydrothorax,
  - Encephalopathy,
  - Hepatocellular carcinoma or Cholangiocarcinoma
  - MELD-Na and Child's-Pugh score can help but may not be accurate
  - Consider referral to a transplant center

Decompensation

- Hepatic encephalopathy
  - Confusion
  - Reversal of sleep cycle
  - Incoordination
- Ascites and edema
  - Bilateral lower extremity edema
  - Ascites
  - Pleural effusion
- GI bleeding
  - Esophageal, gastric, portal gastropathy
- Hepatocellular carcinoma

Treatment of Hepatic Encephalopathy

- Rifaximin (or metronidazole)
- Lactulose vs polyethylene glycol 3350
- High fiber diet, probiotic, stool softener
- May have to resort to protein restriction at some point

Treatment of Ascites

- Sodium restriction (1500 mg or less per day)
- Diuretics (avoid hyper- or hypokalemia)
- TED hose, ACE wraps
- Prophylactic antibiotics or not
- Attention to serum albumin and hematocrit

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Treatment of Ascites and Hydrothorax

- TIPPS (if fails medical treatment, encephalopathy not prominent and MELD not over 18)
  - ECHO
  - Liver volume >600 cc
  - Portal vein patency
  - No evidence of HCC in pathway
- Special cases: IV albumin + bumetanide
- Very special cases (anasarca): dialysis

Treatment of Bleeding

- From esophageal varices or gastric varices
    - EGD, may need banding
    - Nonselective beta-blocker
    - TIPPS
- From portal gastropathy
    - Argon plasma coagulation
    - Flog the bone marrow
    - Depo-octreotide

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Treatment of Hepatorenal Syndrome

- What is it?
  - Decreasing UOP, rising creatinine, very low urine sodium
- Treatment:
  - IV albumin, FFP or pRBCs (i.e., colloid)
  - IV octreotide
  - Midodrine

Preemptive Treatment

- Hyponatremia
  - Fluid restriction
- Hepatocellular carcinoma
  - Baseline contrasted imaging
  - Surveillance
    - Sono when radiologist knows what to look for
    - AFP
- Malnutrition
  - Megace, SSRIs, merinol
- Frailty, deconditioning

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Other Considerations

- Adherence to needed medications and diet
- Avoidance of drugs affecting the CNS (sedatives) or excess pain meds
- Avoid nephrotoxic or hepatotoxic drugs
  - NSAIDs
  - Amoxicillin/clavulanate (Augmentin)
  - Worry about drug-drug interactions and polypharmacy
- Vaccinations
- Continual attention to insurance coverage

Referral for Liver Transplantation

- Everyone is a candidate but not everyone is a good candidate
- Refer early if insurance allows
- Best case scenario is to have transplant as an option and never need it

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Absolute Contraindications for Liver Transplant

- Metastatic cancer (including very elevated AFP)
- Severe cardiac disease (CHF, CAD with low EF)
- Severe pulmonary disease (advanced COPD, untreatable pulmonary hypertension, HPS unresponsive to oxygen)
- Severe frailty and deconditioning
- Lack of social or economic support; MUST HAVE INSURANCE THE TXP CENTER ACCEPTS
- Systemic infection (TB, bacteremia, fungemia, AIDS)
- Need for life support (pressors, ventilator); if patient improves may become a candidate
- Active alcoholism or illegal drug use (6 months of abstinence required)
- Demonstrated noncompliance
- Non-healing wounds

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Using the MELD-Na score to determine referral

- The higher the MELD score, the more urgent the referral
- While the MELD score reflects short term mortality, it is not the complete story since it does not account for "decompensation".
  - Variceal bleeding
  - Ascites requiring paracentesis or hepatic hydrothorax
  - Significant hepatic encephalopathy
  - HCC
- Some insurance will not allow workup or listing if the MELD score is <15 unless decompensated
- We do have patients with MELD <15 and decompensation

Liver Transplantation

- Once worked up and if listable, can be put on the national UNOS list, it is by blood type and position is by MELD score
- The higher the MELD-Na score the more frequent lab has to be rechecked
- Organs allocated in UNOS area 4 for MELD-Na >34 first and then in our donor service area (DSA)

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Last Thoughts

- Some patients with cirrhosis will look clinically normal and have few problems
- Some patients will be difficult to care for no matter what you do
- Never hesitate to call!!

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