ASTS 8th Annual Fellows Symposium
Liver Case Studies
Sunday, October 19, 2014

Case # 1
60 y/o male, history of long standing hepatitis C infection who has never been treated was diagnosed to have a new liver tumor. He has no history of hepatic decompensation. CT triple phase showed 4.9 cm well defined tumor in segments 2 and 3 with arterial enhancement and washout on delayed images.

Labs: Serum albumin=4.7 g/dl; Total bilirubin= 0.9 mg/dL; AST= 40 U/L; ALT =28 U/L; INR=1; Hgb= 16 g/dl; Hct= 44.7 %; Platelets= 148,000; AFP= 10 ng/ml

- Choice of treatment i.e. resection vs. OLT. Reason for your choice of surgical treatment?
- The decision was made to proceed with resection.
    - Are there any test/study you want to obtain intraoperatively?
    - What are the intraoperative findings that would preclude proceeding with resection? What type of hepatic resection would you perform?
    - You proceeded with resection. The pathology report demonstrated moderately differentiated, 4.9 cm tumor, with lymphovascular invasion, margins free of cancer. One 2.5 cm tumor recurrence seen segment 8 was seen on surveillance CT scan 8 months post-resection.
        - What treatment options would you offer the patient?
        - What is the prognosis for this patient?
    - You proceeded with resection. The pathology report demonstrated moderately differentiated, 4.9 cm tumor, no lymphovascular invasion, margins free of cancer. One 2.5 cm tumor recurrence seen segment 8 was seen on surveillance CT scan 8 months post-resection.
        - What treatment options would you offer the patient?
        - What is the prognosis for this patient?
- The decision was made to proceed with OLT.
    - Which locoregional therapy (LRT) would you recommend? Reason for your choice of LRT?
    - What are the intraoperative findings that would preclude proceeding with OLT?
- What If the patient is 74 years old with triple vessel cardiac disease?
    - What treatment options would you recommend for this patient?
    - What do you tell the patient about the risk of death and risk of recurrence?

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Case #2
52 y/o male, height 5'9'', weight 75 Kg, s/p OLT 1 year ago for HCV cirrhosis. Patient was treated for 1 episode of acute cellular rejection (ACR) 2 months post-OLT with steroids and good response. Since then multiple biopsies have shown HCV recurrence without overt evidence of ACR. HCV treatment was attempted but not tolerated. At present, AST/ALT 256/278, total bilirubin= 4, serum albumin = 2.8, INR =1.4, and serum creatinine =2, MELD score of 22. Biopsy showed viral hepatitis with bridging fibrosis. Clinically, the patient has worsening fatigue, and ascites. Ultrasound demonstrated patent portal vein, hepatic veins, and hepatic artery.

- What is your next step in treating this patient?
- Do you evaluate for redo-OLT? State the reason for your answer.
- How would you counsel the patient regarding redo-OLT?
- The patient's son, 25 y/o healthy male, height 5' 9", weight 85 Kg, would like to be a living donor for his father. Graft weight /recipient weight (GWRW) ratio = 1.2. Would you offer living donor liver transplantation? Please provide reason(s) for your response?

Questions # 3-5 (Donor-Recipient Pairing): For each donor, consider the questions that follow and then determine whether you would take the liver for the recipients (in bold)

Case #3 CDC increased risk DBD donor
33 y/o WM s/p MVA CHI with h/o IVDA in that past 5 years and a h/o incarceration for DUI 11 month ago. There is no abdominal trauma. Donor workup and course reveal normal renal and liver tests. Standard serologies are negative.

- Other tests?
- What would you tell the recipient?
- How do you follow the patient post-op?

Case #4 ECD DBD donor
57 y/o AAF with borderline DM, and normal liver tests. COD was anoxic brain injury from AMI and cardiac arrest. She has a balloon pump in place. She had 15 minutes down time, 10 with CPR. Serologies are negative.

- What other information would you ask for?
- Donor from 2 states away #230 on list, change anything?
- Take it for…? Why or why not?

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Case #5 DCD donor
51 y/o healthy WM with CVA who had 10 minutse of downtime with CPR. Family "doesn't want to wait for brain death." On minimal pressors and moderate vent support. Liver numbers are slightly elevated-AST 90 ALT 105 bili 1.2, INR 1.3

- Do you ask for any other information?
- If you want to use this liver, do you send your donor team or have local team procure?
- c. You are waiting, scrubbed. Care has been withdrawn for 30 min and the MAP<55 for 20 min; no arrest in sight. What do you do?
    - Anesthesiologist comes out of OR after withdrawal of care and asks you sincerely if you think giving more morphine is appropriate to ensure no pain and to treat agonal movements. What do you say?

Recipients for Question 3-5:

o 52 y/o Caucasian male with multiple neuroendocrine mets to liver and no extrahepatic disease, s/p ablative therapy and currently asymptomatic with Calculated MELD 8 and Exception MELD 22.

o 65 y/o Hispanic female with NASH complicated by ascites, hx SBP, banded varices with remote hx bleeding, and hepatorenal syndrome, MELD 28.

o 49 y/o Asian male with well compensated cirrhosis from HBV and 6cm HCC (downstaged to Milan by TACE) and new arterial enhancement on MRI at edge of TACE and AFP increased from 10 to 100. Scheduled for redo TACE next week. Calculated MELD 10 and Exception MELD 25.

o 27 y/o Caucasian female with PNF 2 days after OLT for post-partum acute liver failure, on CVVH, intubated for airway protection, Status 1