Perioperative Management of the Patient with Liver Disease

Patient 1

A 72-year-old male with a history of alcoholic cirrhosis and hypertension is planned for cataract surgery in 3 weeks. The patient has abstained from alcohol for the past 9 months. He is on lactulose chronically for a history of encephalopathy. He has had mild ascites, which worsened recently when he ran out of his oral furosemide. He has gained 10 lbs in the 2 weeks since stopping his furosemide. He remains on spironolactone 50 mg daily, metoprolol 50 mg twice a day, lactulose, and ciprofloxacin. His blood pressure is 138/86 and his heart rate is 64. His cardiac and pulmonary examinations are normal. His abdominal exam shows moderate ascites, clearly worse compared to when you last saw him 6 weeks ago. His labs show international normalized ratio (INR) of 1.4. Albumin is 3.1 gm/dl and total bilirubin is 1.8 mg/dl. His basic chemistry panel is normal. A complete blood count is remarkable for a platelet count of 98,000 per ul.

How would you estimate this patient's risk for surgery? Does he need any treatment prior to surgery?

Patient 2

A 36-year-old female was admitted for acute hepatitis A yesterday. Her exam is remarkable for mild icterus, but she no confusion and she has no asterixis. Laboratory studies show AST (SGOT) of 856 u/L, ALT (SGPT) of 943 u/L, total bilirubin of 4.3 mg/dl, INR of 1.3, and albumin of 3.3 gm/dl. She was scheduled for repair of her anterior cruciate ligament tomorrow and is insistent that she proceed with surgery while she is in the hospital.

Should she undergo surgery tomorrow?

Patient 3

A 46-year-old female with a history of obesity, type II diabetes mellitus, hypertension, and osteoarthritis of the knees presents for a follow up appointment. She has gone to an outside orthopaedic surgeon and wants you to send the surgeon a letter stating she is medically "cleared" for bilateral total knee arthroplasty. The patient does not drink alcohol. She has never received a blood transfusion. She works as a nurse and has documented immunity to hepatitis B. Her medications include glyburide 5 mg every morning, atenolol 25 mg daily, aspirin 325 mg daily, and lisinopril 10 mg daily. Medications for her osteoarthritis never helped her, so she does not take any medications for the osteoarthritis. Her blood pressure is 120/82 and her heart rate is 60. Aside from obesity, the patient's exam is otherwise normal. Recent fasting lipids showed total cholesterol of 243 mg/dl, triglycerides of 440 mg/dl, HDL cholesterol of 35 mg/dl, and LDL cholesterol of 120 mg/dl. Her hemoglobin A1C is 7.1%. Liver chemistries showed

ALT of 62 u/L, AST of 58 u/L, total bilirubin of 1.1 mg/dl, and albumin of 3.8 gm/dl. Her INR is 1.0.

What is the likely cause of her liver chemistry abnormalities? What further testing, if any, is warranted?

What is her risk for surgery from a hepatic standpoint?

Patient 4

A 46-year-old female with history of chronic hepatitis C, past history of heroin abuse, and obesity, is planned for elective cholecystectomy for biliary colic. A liver biopsy in the past showed no evidence of cirrhosis. She has failed treatment with interferon and ribavirin as well as a course of pegylated interferon and ribavirin. She is on a stable dose of methadone 80 mg daily and has not used heroin for over 5 years. Other than intermittent right upper quadrant pain, she is asymptomatic. Her blood pressure is 120/80 and her heart rate is 72. Her exam is unremarkable. Her labs show ALT of 64 u/L, AST of 51 u/L, albumin of 3.7 gm/dl and total bilirubin of 1.0 mg/dl. Her INR is 1.1.

Is she at risk for perioperative complications?

How would you handle her pain management perioperatively?