8/18/20 Morning Report with @CPSolvers

Case Presenter: *Robert Centor (@medrants)* ***Case Discussants***: *Rahel Hiwa (@Rahelhiwa97) and Kiara Camacho (@kiaracamacho96)*

CC: Malaise, jaundice

HPI:
63 M 6 week malaise and 3 week jaundice. 3-5 pale stools per day, itching for few weeks and 10 pound weight loss.
2nd admission: Works at a bar, drink 12 beer?, chronic acetaminophen use 10-16 daily
ROS: scleral icterus
Liver test: T.Bili:12.7 (all direct) Alk phos: 432 AST: 1,200 ALT 684 ALB 2.6 INR: 1.6 (Corrected: 1.16)
Treated for acetaminophen toxicity with minimal improvement after discharge
Readmited from clinic

PMH:
Trauma. Asbestos exposure

Meds: None discharged with lactulose santac?

Fam Hx: Rural Alabama
Brother: big liver secondary to ETOH

Soc Hx: No IV drugs, stopped drinking but same symptoms

Health-Related Behaviors:

Allergies:

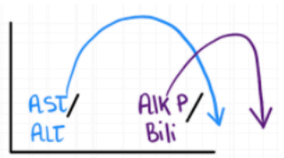
Vitals: **T**:98.1 **HR**:70 **BP**: 143/68 **RR**:18
Exam:
Gen: Slightly obese, no distress, siting in bed
HEENT: Scleral icterus
CV: Normal S1 S2 no murmur
Pulm: CTAB
Abd: Good Bowel sounds. Liver span 16 cm no hepatic stigmata
GU: bilateral descended testes, normal size
RECTAL: blood
Neuro: Normal
Extremities/Skin: Jaundice

Notable Labs & Imaging:
Hematology:
WBC: 10.8 Hgb: 12.9 Plt:227

Chemistry:
Na:140 K: 3.9 Cl: 104 CO2: 22 BUN: 9 Cr:0.8 glucose:106
Readmission
AST:558 ALT:490 Alk-P:386 T. Bili: 14.9 (almost all direct)
Creatinine kinase: 24
Hepatitis test: negative Ferritin: 1000 ANA: 1:320 (homogeneous)
Imaging:
Liver US: Homogeneous large liver, no obstruction, no biliary compromise
Liver biopsy: Autoimmune hepatitis

Problem Representation: 63 M presented with malaise and jaundice. He had liver span of 16 cm and scleral icterus

Teaching Points (Jack):
An approach to jaundice: Pre-hepatic causes (often indirect bilirubinemia), intra-hepatic causes, and post-hepatic causes (the latter two cause direct bilirubinemia).
How can we localize the jaundice: Dark urine suggests that we are making too much direct bilirubin. Pale stools suggests that bilirubin isn't getting out of the liver and into the stool.
Severe Acute Liver Injury:
Step 1: Acute disease or not?
- AST/ALT rarely very high in chronic liver disease
- Exam findings of cirrhosis often absent in acute liver disease
Step 2: Liver failure or not
-ALF = Elevated AST/ALT + INR > 1.5 + Hepatic encephalopathy present
Step 3: Most common causes (Ischemic hepatitis, gallstones, drugs, viral infection).
Step 4: Anatomic approach: https://bit.ly/SevereLiverInjury
Tempo of liver chemistries after an insult:



Elevated AST/ALT Ratio: Liver pathologies: Alcohol, amiodarone: Extrahepatic: rhabdomyolysis. Myocardial damage
Elevated Ferritin + Liver Injury: Alcohol can mimic the iron profile of hemochromatosis.
Protein Gap: Polyclonal: Autoimmune disease, infection (hepatitis C, HIV)
Antibody testing in autoimmune hepatitis: ANA, Anti-Smooth muscle, anti-Liver-Kidney, among others.