08/13/21 Morning Report with @CPSolvers

***Case Presenter**: Laura Araujo (@AraujoLauraMed) **Case Discussants**: Rabih (@RabihMGeha) and Reza (@DxRxEdu)*

CC: jaundice.

HPI: A 33yF p/w jaundice for 9 days, that is progressively worsening. She also noticed pain in the L hypochondrium, choluria, constipation, acholia, hyporexia, nausea, and vomiting. She had fever (39 degree Celsius), in the previous 2 days.

She was told to have a liver disease since childhood, with recurrent episodes of "getting yellow", but she doesn't know which disease she has. She reports several previous episodes of hospitalization due to this disease.

PMH:
Epilepsy (since childhood)

Meds:
Phenobarbital daily
Dipyrone for abdominal pain

Fam Hx:
Grandmother with similar symptoms

Soc Hx: lives in a rural area

Health-Related Behaviors:
Denies tobacco, alcohol, illicit drug use

Allergies: none

Vitals: **T**: 39 C **HR**: 85 **BP**: 120x70 **RR**: 20 **SpO_2**: 95
Exam:
Gen: hydrated, jaundiced (intense, including eyes and all the skin), asthenia
HEENT: normal **CV**: normal **Pulm**: normal
Abd: soft, symmetric, nontender, without distension, pain to palpation in the left hypochondrium
Neuro: confused, lethargic
Extremities/Skin: no edema

Notable Labs & Imaging:
Hematology: WBC: 7400 Hgb: 9.9 Plt: 250,000

Chemistry:Na: 142 K: 3.3 BUN: 16.8 Cr: 0.51 AST: 27 ALT: 26 Alk-P: 133 T. Bili: 20.54 (indirect: 11.38 Direct 9.16) Albumin: 2.7 CRP 171

LDH 407 ESR 127 pT 13.4 PTT 25.6 Reticulocytes 0.5 Direct Coombs, VDRL, Pregnancy test negative

UA: bacterioscopy negative. Turbid, bile pigments and bile salts. Culture: negative.

Imaging:
CT: Kidneys heterogeneously impregnating w/contrast suggesting b/l pyelonephritis and L abscess. Liver with slightly enlarged dimensions, regular contours and attenuation coefficient within normal limits.
Cholangiography: normal intrahepatic and extrahepatic bile ducts.

Final diagnosis: Acute pyelonephritis and decompensation of benign recurrent intrahepatic cholestasis

Problem Representation: 33yF w/ PMHx of recurrent episodes of jaundice p/w an acute episode of fever, jaundice, and abdominal pain. CT showed kidney abscess.

Teaching Points (Maria):

- **Why do we start at the beginning?** Chief concerns tells you what is the symptom with the most gravitational pull. Similar stories focusing on different CCs will lead to different diagnosis.
- **Jaundice:** only 3 things: carrots, IB, DB (+/- mal de amores)
  - Carrots: Beta carotenemia doesn't affect eyes conjunctivae.
  - Indirect bili: Pre hepatic - hemolysis or Gilbert. If hemolytic disease CC will probably be fatigue/exercise intolerance >> jaundice.
  - Direct bili: Liver/Biliary Tract. CC will probably be jaundice.
  - More often there's an increase in IB and DB (+/-carrots) and you need to prioritize which increase is most significant.
    - Key findings to prioritize direct bilirubin: dark urine (caveats: indirect may cause hemoglobinuria; severe dehydration); pale stools.
    - Use all tools in toolbox: use images!
    - Law of proportionality? Does this anemia explain the bilirubin on its own?
  - Life threatening causes: cholangitis (specially if there's fever). Target gram - and anaerobes: ertapenem, 3gen ceph + flagyl.
  - Spleen might be involved w/ DB (through liver disease → portal HTN - *look for signs!*) and IB (through hemolysis). It can be painful if spleen infarcts.
- **UTI:** *give name and last name:* upper or lower tract. Complicated: upper tract - pyelo, fever. Pyelo: ascending infection >>> hematogenous spread
  - Should we Venn Diagram w/Liver? Yes if person is young and/or doesn't have extensive PMHx/meds.
- **Liver and Kidney Venn Diagram:** Intrahepatic cholestasis can be caused by drugs, autoimmune dz, infections - pyelo and sepsis can stun biliary excretion!!!
- **Recurrent intrahepatic cholestasis:** Can be asymptomatic or p/w jaundice and pruritus with spontaneous resolution. Does not lead to progressive liver disease, associated w/viral prodrome.