10/9/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter****: Eyron (@)* ***Case Discussants****: Rabih (@) & Ravi (@)*

https://clinicalproblemsolving.com/present-a-case/

Scribing (Lukas):
CC: 40 yo male at the PCP for annual follow up

Na: 128 **K**: 5 **Cl**: 92 **CO2**: 21 **Ca**: 8,1 **BUN**: 16 **Cr**: 0,6 **eGFR:** 119 **AST**: 45 **ALT**: 66 **ALP**: 397 **TB**: 1.6 **TP**: 6,3 Albumin 3,3 **Glob**: 30 **A1c**: 13,7 (baseline 1 year ago at 12) N79 Bands 12.6 L5

WBC: 13,85 Neutrophils 79%, Lymphocytes: 5 **Hgb**: 15,2 **Plt**: 95 **TSH:** 0,97 **UACR:** 624,1
Glucose: 300s, PT: 11,9; INR: 1,1
Hepatitis Panel: negative, pos HepA virus antibody

ROS (+): bilateral leg swelling.
ROS (-): no easy bruising, or bleeding, no weakness, nausea, headache, abdominal pain, nausea vomiting

PMH:
T2DM
DLD

Meds:
Metformin
Atorvastatin

Health-Related Behaviors:
-Active smoker 3 sticks per day
-Social EtOH, non in the last few months
-No illicit drug use

Vitals: T: 37,7°C **HR**: 104 **BP**: 143/88 **RR**: 22 **Sat**: 96% on room air **BMI**: 26,8
HEENT: sclerical icterus **Abd**: non distended soft abdomen, no masses, generalized abdominal tenderness

POCUS: no pericardial effusion, IVC dilated, signs of ascites, normal LVEF
Hb: 12,4, **MCV**: 82, **PLT**: 203
Glucose: 337, Cr: 0,3 **Na**: 123 **K**: 4,5 **Cl**: 91 **CO2**: 24 **Ca**: 7,7 **AST**: 59 **ALT**: 54 **ALP**: 820 **TB**: 5,3 **TP**: 5,3 **Albumin**: 2 **PTT** 12,8 **INR** 1,2
Lipase: 62 **NTproBNP**: 102 **TropT**: wnl
CT A/P: nodular hepatic morphology with numerous peripheral calcifications. Area with heterogeneous enhancement in the left hepatic lobe measuring 2.8x3,9x 4,2; small volume ascites, small bilateral pleural effusions, cirrhotic hepatic morphology with stigmata portal hypertension, including varices, mild splenomegaly
MRI: 5x4,2 lesion in hepatic segments adjacent to IVC, splenorenal varices, small bl effusions → cirrhosis, splenomegaly DDx: Hepatoma, CCC
Course: Discharged from ED; spironolactone and Furosemide

Next Day presented to the ED for fever Tmax 101F
BP: 140/80 **Pulse**: 132 **RR**: 20 **Temp**: 39,1°C SpO2: 91%
CTPE: negative for embolism, compressive atelectasis with pleural effusions
Thoracocentesis: LDH: 93, pleural fluid protein 2.0, LYTES → transudative effusion **BC**: pending
WBC: 15,3 **Diff**: neutrophils 90, lymphocytes 3 **Hb**: 11,6 **MCV**: 81 **PLT**: 192 **Glucose:** 373 **BUN**: 14, **Cr**: 0,6 **Na**: 122 **K**: 4,9 **Cl**: 89 **CO2**: 21 **Ca**: 8,2 **AST**: 58 **ALT:** 53 **ALP**: 812 **TB**: 11,7 **direct:** 8,7 **TP**: 5,4 **Albumin**: 2,1 **Lactate**: 1,6 **Procalcitonin**: 1,37 **LDH**: 356

Next Day: BC: klebsiella pneumoniae; **Ca19-9**: 325 **UA**: positive nitrites, **WBC**: > 100 **RBC**: 21-50
Urine drug screen: negative
Iron studies: Iron: 33, **TSAT:** 22%, **Ferritin**: 2000s **AFP** and **CEA**: wnl, **Ceruloplasmin**: 38, **alpha1 antitrypsin deficiency**: negative
US: patent portal and hepatic veins
Repeat CT A/P: IDEM to before + atrophic left hepatic lobe; heterogeneous area subtle masslike density at the anterior right hepatic lobe; heterogeneous hypoattenuation on bilateral kidneys. Prostate mildly enlarged, containing multiple circumscribed indeterminate hypoattenuating lesions 4x3 cm
PSA: normal **Urine cultures**: normal
MRI Prostate: multiple ring enhancing and diffusion restricted prostate abscesses, largest in posterior peripheral zone
IR Consult for liver biopsy: mild mixed portal inflammation with focal mild lobular inflammation and focal patchy bile duct proliferation. Portal and mild periportal fibrosis. No significant steatosis. No alpha 1 antitrypsin globules seen. Patchy hemosiderin deposition in copper cells and hepatocytes, no carcinoma seen.

Course: got discharged because the patient stabilized after antibiotics
CT: showed central hypoenhancing lesion seen on prior imaging was not clearly identified.
MRI 2 months later: lesion markedly decreased in size

Dx: Disseminated klebsiella infection

Problem Representation: 40 yo male develops inflammatory syndrome in multiple organs after presenting initially to the PCP annual follow up including lesions in the liver, kidneys, prostate turned out to be disseminated klebsiella infection

Teaching Points (Varsha)

Liver chemistry: Markedly elevated ALP → plugging biliary canaliculi/ space occupying lesion → compression of biliary system- malignancy/ granulomatous disease. Ramps up slowly Vs acutely as AST/ALT → seen in hepatocyte destruction.

- GGT → to rule out bone driven ALP elevation and confirm cholestatic liver disease.
- **ALP**: ominous marker; most driver of ALP elevation - space occupying lesion/pressure/replacing patient tissue with something else → Hepatic: extrahepatic: pancreatic ca, intrahepatic: granuloma; bone - tumors
- non space occupying cause - bone: osteomalacia, Hepatic: primary biliary cholangitis/drug induced cholestasis

Every electrolyte has a best friend - sodium and glucose → every 100 raise in glucose, 2 mEq drop of Na

Cirrhosis: common causes: Alcoholic liver disease, metabolic syndrome

- Does the patient actually have cirrhosis?
- Not a radiographic diagnosis, correlate with → Liver ft: INR, Plt count, albumin, stigmata of advanced liver disease.
- Condition started with cholestasis → PBC and PSC → only 2 cholestatic condition leading to cirrhosis
- Portal vein dilation → affects liver but with + IVC dilation → extrahepatic factor as well → maybe heart involvement Or liver disease extending to IVS → infective/ abscess, hepatocellular carcinoma, tumor thrombus

Diabetes/cirrhosis/immunocompromised state→ increased risk of Gram negative rods infection→ hypermucoviscous klebsiella → increased risk of abscess → liver, eyes>> endocarditis, aortitis, GU (prostate), meningitis