04/01/22 Morning Report with @CPSolvers

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CC: Epigastric pain with one week of pain.

HPI: 25-year-old-male w/ one week of epigastric pain. Pain worsened in intensity (10/10), constant in nature, was radiating to back, and was a/w N/V.

ROS: Denies melena, dark urine, hematemesis

PMH: PSVT, COVID thrice (Last 2 weeks ago)

Meds: **Metoprolol**

Allergies: seafood and chocolate

Fam Hx:

Soc Hx: Brazilian student living in Portugal for 3 years in an urban area w/ normal habitability conditions

Health-Related Behaviors: Cannabis occasionally, no cigarettes or alcohol

Vitals: **T**: 38.4 **HR**: 80 **BP**: 60/40 **RR**:30 **SpO**: 98% with NRBM (15 L 02)

Exam:

Gen: Somnolent but arousable on stimulation

CV: normal auscultation

Pulm: Reduced breath sounds at both bases

Abd: Tender to palpation at RUQ and epigastric, guarding present

Neuro: AAOx3

Extremities/Skin: Cold, poor perfusion, no jaundice

Notable Labs & Imaging:

Hematology:

WBC: 14.8 (N 9.7, L 3.3 E 0) Hgb: 14.4 Plt: 403

Improved on fluids

Chemistry:

Na: 136 K: 5.3 Cl: 98 CO2: BUN: 15 Cr: 1.4 glucose: 86 AG 24, AST: 732 ALT: 991 Alk-P: 104 T. Bili: 1.2 (direct 0.26) GGT 117 (mild) LDH: 1400 Albumin: normal Lipase: normal T-Troponin mildly elevated

ABG: pH 7.18, pCO2 38 pO2 88 Bicarb 14, Lactate 6.7

Drug urea: THC

EKG: normal sinus rhythm, right bundle branch block

Imaging:

Abdomen USG: non distended gallbladder, no gallstones, no dilation of biliary tree, diffuse thickening of gallbladder, perivesicular fluid

Sudden worsening- intubated- heart block- on vasopressors and atropine

Echo: moderate MR, RVSP-24, mild dilation of RV, severely decreased EF

CT: large bilateral pleural effusion

Final dx: **MIS-A**

Problem Representation: 25yoM w/ PMH significant for PSVT on metoprolol and Covid p/w 1w of severe epigastric pain radiating to the back a/w N/V. VS: fever, low BP and tachypnea. PE : reduced BS at both bases, abd guarding and poor perfusion. Labs: high K, AST/ALT and LDH

Teaching Points (Samy):

- Approaching epigastric pain: poorly localizable (acute RCA-occlusion, pulm., mediastinal dz, stomach, pancreas, liver spleen, etc.) - stress tests (exercise->CV; eating->luminal, biliary, pancreatic or vessel dz)
- +Radiation to back (organs in retroperitoneum): vascular (aorta), pancreatic or duodenal dz, ascending and descending colon
- PSVT: (ANRT, AVRT - narrow complex tachycardias) high cure rate through cardiac ablation, also think about PAT, atrial flutter
- Covid-Co: hypercoagulability (CSVT, PE, BCS), myopericarditis, ARDS, MIS-C, MIS-A,...
- Shock: distributive, obstructive, cardiogenic, hypovolemic: look at JVP, skin (dry/wet, warm/cold), stroke volume, mentation, volume status and urine output (BUS-Mnemonic: Brain, Urine, Skin)
- Patients in shock and on a beta blocker? Chronotropic incompetence and lactate may be falsely low (inhibit glycolysis -> less substrate for lactate synthesis)
- Shock with elevated lactate and normal creatinine? Takes time to rise.
- Most common cause of ischemic ALI: right heart disease (LHF, pericardial tamponade,...)
- ALI (only AST/ALT elevation): plumming (biliary excretion, vascular input and output), ALF (additionally elevated INR and hep. encephalopathy): hepatitis, toxin
- Gallbladder inflammation in a septic patient without gallstone dz? Consider acalculous cholecystitis in the setting of systemic disease.
- Systemic inflammation with signs of shock and progression of cardiac conduction abnormalities:: think of cardiac inflammation (endo-, myo- pericardial dz)
- LIDO mnemonic for progressive heart block: lytes (Mg, K, phos), ischemia/infiltrative dz (GCM, sarkoid, amyloidosis, lyme, chagas), drugs (antiarrhythmics, etc.) and hypoxia
- Hyperacute HF: ischemia (conduction dz, myocardial necrosis), myocarditis (mostly GCM, but also lymphocytic, eosinophilic), peripartal CMP (multipara, last trimester, prolactin mediated), wet beri-beri (thiamin def.), thyrotoxicosis, Tako-Tsubo-CMP
- Excessive ferritin? Consider massive cytokine release (most commonly), HLH, AOSD, MIS, hemochromatosis: CXCL9 can be helpful (IFN-gamma -> elevation only in prim./sec. HLH)