8/5/24 Cardiology VMR with @CPSolvers

***"One life, so many dreams" Case Presenter**: Rachel Ohman (@RachelOhmanMD) **Case Discussants**: Kaylin Nguyen & Varayini Pankayatselvan (@VarayiniP)*

CC: Failure to thrive

HPI: 53 Y female p/w failure to thrive to ED.The patient was in her usual state until 9 months ago then began to lose weight unintentionally w/o losing appetite, yellowing skin, ongoing abdominal distention. She has now lost 45 pounds and noticed a worsening dyspnea
Denies chest pain ,abdominal pain, orthopnea ,paroxysmal dyspnea, hematemesis, confusion, CP orthopnea, edema.

ROS: no prior liver or kidney disease

PMH:
Asthma adult onset

Meds:

Fam Hx:

Soc Hx:
No substance use
Mother of 4

Health-Related Behaviors:

Allergies:

Vitals: T: HR:77 BP: 92|72 **RR: 18** SpO2: 97

Exam:

Gen: cachetic , no acute distress
HEENT: scleral icterus,
CV: no murmur, JVD 13cmH2O ,increase with inspiration
Pulm: clear to auscultation
Abd: moderately distended
Neuro: alert oriented , no focal deficit , no asterixis
Extremities/skin: faint lower extremities edema

Notable Labs & Imaging:

Hematology:
WBC:5.6 Hgb: 14.2 Plt: 123 eosinophils : 120

Chemistry:
Na: 136 K:4.1 Cl: 106 HCO3: BUN: 15 Cr:0.8 glucose: Mag: 1.8 AST: 45 ALT: 36
Alk-P: 88 bil: 3.1 conj : 1.7 , INR 1.3
Troponin x2 HS 14-17 , ESR \CRP : neg

Imaging:
EKG: normal rhythm CXR: unremarkable , no parenchymal changes
Echocardiogram: low normal biventricular function , elevated atrial pressure(15 mmHg) , RVSP 37,no valvular dx , EF 50-55% , no pericardial effusion
AbdUS: hepatomegaly , ascite,(undergo paracentesis), SAAG: no relevant for PTH, no growth for ascitic fluid
Liver biopsy: congestive hepatopathy, no fibrosis
CTA: no PE, calcified pulmonary nodule CTAP: thickening of the omentum
Pelvic US: fluid ,no mass in the ovaries
Biopsy of omentum: lymphoplasmacytic infiltrate , no malignancy
Culture : no growth , no TB , Serum IGg4 : elevated
Echo: constrictive pericarditis , with inc RA pressure , and hepatic vein diastolic flow reversal
MRI : pericardial thickening , interventricular septal bounce , enlargement of the inf and sup VC and small bilateral pleural effusion
IgG4 staining on omental biopsy : 20% ratio igG4| IgG

Dx: constrictive pericarditis due to igG4 related disease

Problem Representation: 53 F p/w unintentional weight loss and ongoing abdominal distention; loss of function for 9 mo. on her exam has Kussmaul sign; icterus and found to have low Plt high eosinophil. Echo found slightly elevated RVSP.

Teaching Points (Parisa):

unintentional weight loss malignancy; vasculitis; chronic infectious
Jaundice: liver enzyme→ consider GI malignancy + obstructive jaundice
abdominal distention: volume overload(cirrhosis(lack of orthopnea); HF
Kussmaul sign: JVD increase with inspiration:constrictive pericarditis (TB radiation); Right sided volume overload: PH
Narrow pulse pressure: cirrhosis vasoplegic
Right HF causes: acute(PE, TR, IE) vs chronic (left HF, PH)
Adult onset asthma: eosinophilia → myocarditis → hypereosinophilia syn
Thrombocytopenia: check PBS r/o pseudo; secondary to liver; delusional.
Correlate troponin with ECG; Cardiac MRI: fibrosis; edema;Cardiac bx: RV
Congestive hepatopathy secondary to right heart failure → synthetic dysfunction (elevated INR, low Plt)
JVD elevation w/ normal EF: RVHF; constrictive/restrictive pericarditis;
RVSP can be underestimated by Echo/ >35 define as elevated
Adult onset asthma + eosinophil + RHF:AI; infectious(parasite); neoplasm
Sign of diastolic dysfunction echo:isovolumetric relaxation time (IVRT); deceleration time (DT); E/A ratio (early/late ventricular filling pressure)
Constriction Vs restriction: constriction myocardium is healthy pericardial thickening; septal bounce(shudder), annulus reversus; heart expand laterally elongate; intrahepatic duppler during respiration; restrictive infiltrative myocardial involving poorly relaxing
E'or Tissue Doppler Imaging (TDI) → myocardial relaxation properties; restrictive reduced across both septal and lateral walls; constrictive preserved or mildly reduced. Both conditions often show an elevated E/e' ratio due to increased filling pressures.
IgG4: constrictive pericarditis, cachexia, abdominal distension and RVH