9/12/23 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Umbish Dino (@UmbishD) Case Discussants: Ravi (@rav7ks), Hans (@) and Yazmin (@minheredia)

CC: 59 y/o female presenting to ED with chest pain

HPI: Patient was seen 4 months ago. The patient experienced 15-20 mins of central chest pain while hosting a family gathering in the evening, BP at home was normal. The pain persisted but resolved after taking aspirin and nitroglycerin. In the morning, she had a recurrence of the chest pain, and jaw pain, and had 2 episodes of vomiting. Her family rushed her to the ED.

ROS: had palpitations and diaphoresis, no dyspnea, no prior respiratory illness, no cough or sputum, and fever. Rest of ROS was negative.

PMH:
HTN (for 15 years)
DM (for 15 years)
Generalized anxiety
Peripheral neuropathy

Meds:
Amlodipine
Metformin
Glipizide

Fam Hx: No contributory

Soc Hx:
Non-smoker, does not drink, no illicit drug use

Allergies: Denied

Vitals: T: afebril **HR:** 105 **BP:** 90/60 **RR:** 18 **SatO2** 94% RA BMI 32
Exam:
Gen:
CV: Chest auscultation S1, S2 +, no murmurs, JVD hard to appreciate.
Pulm: No wheezes, mild bibasilar crackles
Extremities/skin: trace LE edema
Rest of the exam was unremarkable

Notable Labs & Imaging:
Hematology:
WBC: WNL Hgb: 9.4 HCT 32 MCV 73 Plt: WNL
Chemistry:
Na: 142 K: 4.4 Cl: 104 HCO3: 27 BUN: 20 Cr: 118
Troponin I: 10
Imaging:
EKG: nonspecific changes, normal sinus rhythm, non ST-elevation or depressions. Poor R wave progression. Occasional PACs.
CXR: Some interstitial edema in the bases of lungs, cardiomegaly not appreciated.
Echocardiogram: Left ventricular global hypokinesis, EF 31%, IVC 2.2 cm with less than 50% respirophasic variation
ED management: Given aspirin 325, started on heparin drip, lasix 40 g IV. metoprolol tartrate 25mg. Cardiology was consulted, and she was transferred to the ICU.
Overnight she became hypotensive otherwise stable, beta blockers were stopped.
Cath Lab (next morning): no obstructive CAD, severe anteroapical hypokinesis with apical ballooning.

Dx: MINOCA (Myocardial Infarction with Non-Obstructive Coronary Arteries), a case of Takotsubo cardiomyopathy.

Problem Representation: A 59 y/o female presenting chest pain, partially resolved with aspirin and nitroglycerin. On physical exam was found to be tachycardic and hypotensive. Labs showed elevated troponin I and EKG w/ non specific changes. Echo revealed LV global hypokinesis with EF 31% and cath lab with non obstructive CAD, severe anteroapical hypokinesis, and apical ballooning, with the final diagnosis of **MINOCA, a case of Takotsubo cardiomyopathy**.

Teaching Points (Francisco):
Chest pain -> exclude life threatening events with **4+2+2**
4 Cardiac: ACS, aortic dissection, tamponade, takotsubo
2: Pulmonary: pulmonary embolism, pneumothorax
2: esophageal: rupture, impaction
Response to nitroglycerin does not always mean cardiac cause (+LR 1.1 for ACS) -> esophageal spasm also responds

Palpitations: cardiac, but think also about esophageal causes (spasms, intercostal muscle, hernia)

Risk factors like HTN, DM and anxiety increase the probability of a cardiac cause

hypoTA, tachycardia (sympathetic response), basilar crackles -> cardiogenic shock (check lactate, peripheral perfusion) secondary to AMI -> use **Killip** to stratify patients based on severity

If **right sided** features (JVD elevated, peripheral edema if chronic, muffled heart sounds, hepatomegaly, pulsus paradoxus) -> tamponade (beck's triad is rare)

No EKG changes and no chest pain -> not active ACS, but something is "wrong" with the heart -> POCUS is the next step (ejection fraction)

Delta troponin: increasing (evolving process - myocarditis, **MINOCA** - takotsubo and vasospastic angina) or decreasing (old MI)

Pharmacology details: Do not give nitroglycerin to RV ischemia, Before starting B-blockers -> patient needs to be compensated