7/12/24 Morning Report with @CPSolvers

"One life, so many dreams" Case Presenter: Masah Mardini (@) Case Discussants: Rabih (@rabihmgeha) and Reza (@DxRxEdu)

CC: 57 y/o female presents to ED with sudden exacerbation of central chest pain.

HPI: the pain started 5 days prior to presentation after her son passed away. She described the pain as squeezing pain, which was intermittent and tolerable before it exacerbated . it was not related to any strenuous physical activity. The pain radiated to the left arm , the neck, ,the jaw, and left shoulder. Associated with dizziness, nausea and profound sweating .

1 month prior: hyponatremia, hypokalemia - hospitalization due to indapamide, non specific chest pain

ROS: + SOB, nausea, dizziness, no HA, no urinary symptoms.

PMH:
Obesity , htn, type 2 dm, dyslipidemia , OA

Meds:
Metformin
Insulin degludec
Atorvastatin
Amlodipine
Liraglutide
Gliclazide
Indapamide
Empagliflozin

Fam Hx:
Unknown

Soc Hx: lives with her son and grandchildren, active around the house

Health-Related Behaviors:
Non-smoker, does not drink alcohol

Allergies: no known allergies

Vitals: T: afebrile 36.4 **HR: 102** **BP:** 153/81 **RR:** 20 SpO2: 98%RA

Exam:

Gen: alert, oriented ,in discomfort

HEENT:

CV: normal S1 S2 , RRR, JVP not raised , no LL edema

Pulm: bilateral fine and coarse basal crepitation

Abd: soft, nontender, normal bowel sounds

Neuro: no abnormalities

Extremities/skin: unremarkable

Notable Labs & Imaging:

Hematology:
WBC: 7.3 Hgb: 12.3 Plt:

Chemistry:
Na:134 K 4.1: Cl: HCO3: BUN: Cr: glucose: 13.3 Ca: Mag:
Troponin 1171 CRP: 50.2
Pt: 10.6 ptt: 22.9 LDL 1.35 LDH 201
HBA1C 7.2 CK MB 72 mildly elevated

Imaging:
EKG: (same as previous EKG)normal sinus rhythm, Q waves in lead III , aVF and V3, poor R wave progression , no new ST or T wave changes.
CXR: normal CT angio: nl
Echocardiogram: normal LV dimension with mild impairment of systolic function . Diastolic function grade 1 wall motion abnormalities: akinetic mid and apical septum and apical inferior wall, apical ant wall
Coronary angio was done and showed: normal coronary angiography, no coronary arterial plaques , apical LV ballooning
Dx: Takotsubo cardiomyopathy , started on HF therapy .

Problem Representation:
A 57 y/o F who presents with sudden onset central chest pain, after her son passing away. The pain was associated with diaphoresis , basal crepitation on examination., and elevated troponin. Nl coronary angio and no acute changes on ekg , with echo showing akinesia.

Teaching Points (Ethan)

Red flag features of chest pain here: SOB (thorax is not only hurting but also not working), profound diaphoresis (increase in autonomic system; in sweat gland, sympathetic and parasympathetic tone work synergically; in chest pain -> increase in sympathetic tone)

Relation to catastrophic event the patient experienced: takotsubo cardiomyopathy.

The patients also have risk factors of CAD -> has to consider ACS especially the prognosis depends on time to treatment

Three emergent causes of cardiac chest pain: ACS, PE, aortic dissection

Tachycardia but hypertensive: is the excessive catecholamine pathologic or physiologic (i.e., to prevent hypotension)? In the cases without substance abuse, consider the sources like pain, acute stress event (e.g., PE, ACS)

ECG, CXR, TnI could help make a lot of progress

In the case, systemic features are scarce and the signatures are focused in heart -> isolated heart syndrome

Elevated TnI: myocardial cell necrosis (decreased supply to myocardium, increased demand of myocardium, or others) -> **trend the troponin!**

The nature of presentation here suggests continuation of myocardial injury -> tops of the pyramid (myocarditis, takotsubo, infiltrative cardiomyopathy)

*Apical hypokinesis is a sensitive but not specific finding of takotsubo cardiomyopathy (LAD obstruction could also do it) -> heart catheterization is needed, cardiac MRI could also help (late gadolinium enhancement could be seen in MI and myocarditis but not in takotsubo (Seyma))