7/11/23 Morning Report with @CPSolvers

"One life, so many dreams"* *Case Presenter*: *Ximena Chavarria (@)* *Case Discussants*: *Alec Rezigh (@ABRezMed), Austin Rezigh (@RezidentMD) and Mengyu

CC: 40-year-old male came to ED with agitation and suicidal ideation.

HPI: Pt was brought to the ED by the police after a violent dispute with his wife, patient was agitated, and wanted to kill his wife. On arrival to the ED, he was difficult to apprehend, arrived combative and noncooperative, endorses minor chest pain. At home, he took 30 pills of adderall (30 mg)

In the ED, he received 2 mg IM benzo, and IV fluids (discontinued fluids by himself). Pt received Droperidol 2.5 mg which resolved the agitation.

PMH: ADHD at 15 years of age, Chronic bronchitis

Meds: Adderall

Fam Hx: MI in his grandmother in her 70's

Soc Hx: Smoker (1 pack per day), consumes alcohol socially. Works for a gardener company

Health-Related Behaviors: None

Allergies: None

Vitals: T: Not registered **HR:** 146 **BP:** 156/94 **RR:** 18 **SpO2:** 99% on RA

Exam: (Physical exam done after receiving a dose of benzo)

HEENT: Unremarkable, pupils 3 mm reactive bilaterally

CV: Tachycardia, normal heart sounds

Pulm: Diffuse chest pain with no tenderness

Abd: Unremarkable

Neuro: Oriented to person, place and time

Extremities/skin: Skin warm and dry

Notable Labs & Imaging:

Hematology:

CBC: Unremarkable

Chemistry:

BNP: 113, CPK: 519

Urine toxicology: Positive for Amphetamines and benzo

Troponin: 29 (Mildly elevated - cut off value: 20)

Imaging:

EKG: Left bundle branch block (new)

CXR: Normal

TTE: Newly discovered reduced left ventricle EF 20-25% and Grade 1 Diastolic dysfunction

CT Angio: Mild stenosis, less than 25% in the proximal LAD, less than 50% in RCA, noncalcified plaques - non ischemic cardiomyopathy.

Final Dx: Potential Amphetamine-type Stimulant Induced Cardiomyopathy

Problem Representation: 40-year-old male with ADHD presenting with acute onset agitation and non-reproducible chest pain taking excess adderall, was found to be hypertensive, tachycardic and labs revealed Left bundle branch block. Pt was diagnosed with potential amphetamine type stimulant induced cardiomyopathy due to chronic use.

Teaching Points (Marino):

-If a patient presents with suicidal ideation, check for underlying psychiatric comorbidities and medications. If negative for history, worry about metabolic etiologies or a primary disorder affecting the brain.

-The older you get, the less likely you are to get a primary psychiatric disorder.

-Severe and sudden agitation in an otherwise healthy patient: think about drug overdose with sympathomimetics (cocaine, amphetamines)

-**Chest pain in overdosed patient:** ECG and troponins for basic work-up. (4+2+2). Non reproducible chest pain during the physical exam guide us towards pathology inside the thorax.

-Exposure to one substance should raise your threshold to think about concurrent drug usage.

-Vital signs can give us information about the time course. Is the patient acutely overdosed?

- If new left bundle branch block presents in the ECG, it suggests ACS/MI. Mildly elevated troponins don't necessarily mean ACS, but ischemia from demand due to tachycardia and cardiovascular sympathetic stimulation.

-When a toxidrome is present and the clinical picture is uncertain, time is our best friend to rule out etiologies and narrow down on diagnostic possibilities.

-Newly discovered reduced ejection fraction and diastolic dysfunction on echocardiogram should guide us to think about sympathetic overstimulation (thyroid storm, takotsubo, pheochromocytoma, drug use) and ACS.