



8/16/22 Morning Report with @CPSolvers



Case Presenter: Gigi Liu (@G2Disrupt) Case Discussants: Ravi Singh (@@rav7ks) and Travis Smith (@RosenelliEM)

CC: chest pain and SOB

HPI:

- 60yM w/ HTN, cocaine use p/w 2 d chest pain w/o radiation and SOB after inhale cocaine use
- No diaphoresis, orthopnea, n/v/d/HA

PMH: HTN, asthma

Meds:

Fam Hx: HTN mother father and 2 daughters. father w T2DM and asthma as well

Soc Hx: Former smoker 25p/yr quit 5 yrs ago

Health-Related Behaviors: active cocaine use
Unemployed, former housekeeper

Vitals: T: 96.0 HR: 90 BP: 180/70 RR: 18 SpO2: 97% BMI: 40

Exam:

HEENT: prominent carotid pulse

CV: diastolic murmur in L sternal border, Corrigan (water hammer) pulse

Pulm: CTAB, no crackles wheezes or rales

Abd: mild tenderness in middle ab area. No organomegaly

Extremities/Skin: no edema, clubbing. Prominent radial and distal pulses bilaterally

Notable Labs & Imaging:

Hematology: WBC: 8.85 Hgb: 12.2 Hct: 38.8 MCV: 90 Plt: 157

Chemistry: All nl except Cr: 1.7. Trop 0.06 lactate 1.2

Imaging: EKG: sinus, nl unremarkable
POCUS: heart - parasternal short axis view not suggestive of R heart problems. L heart more concerning
Abdomen - Ab Aorta
CT: **type A aortic dissection involving ascending and descending aorta**

Problem Representation: 60 yoM w/ PMH of HTN, asthma, and cocaine use p/w chest pain and SOB.

Teaching Points (Yazmin):

- Chest Pain → **Cardiac**, Pulmonary or Esophageal (4+2+2)
- Prioritize cardiac system and red flags.
- Cocaine affects directly the cardiovascular system: increases sympathetic output and catecholamine levels. Increasing heart rate, BP, myocardial contractility → Increasing myocardial Oxygen demand + coronary vasoconstriction + enhanced thrombosis.
 - Cocaine also affects cardiac myocytes directly by blocking sodium channels, which decreases left ventricular (LV) contractility and is arrhythmogenic.
- **Water hammer pulse:** Bounding pulse with a rapid upstroke followed by a prompt collapse of the vessel. Occurs due to rapid and large stroke volume ejection into the arterial system and is most commonly associated with **aortic regurgitation**.
 - Referred to as **Corrigan pulse** when present in the carotid artery
- Wide pulse pressure = Stroke Volume ↑ (hyperthyroidism, **AR**, OSA, isolated systolic HTA)
- It important when using POCUS to look for AR to explore the next areas: Anterior chest, back, interscapular, neck, jaw, abdomen and periumbilical area.
- IVC vs AA: DO NOT rely on pulsatility nor wall thickness for identification RELY ON ANATOMY
- IVC: "Slit in between the liver", goes into the RA, hepatic vein joins IVC
- AA: "Outside of the liver" Spine below abdominal aorta, goes outside the heart. Has two vessel take offs: Celiac artery and SMA.
- Common etiology for AD: HTN (Most common) Trauma, vasculitis with aortic involvement, use of amphetamines and cocaine (Due to an associated rapid increase in blood pressure)