



10/04/21 Morning Report with @CPSolvers



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CC: Chest pain, diaphoresis and collapse.

HPI: 79yoM. He was watching TV when he developed chest pain, became diaphoretic and collapsed. Wife called EMS, was found to be in V. fib cardiac arrest, wand was shocked 3 times, given amiodarone w/ ROSC, intubated on field. Unclear down time.

PMH: Type 2 Diabetes, Hyperlipidemia, hypertension, CAD, peripheral artery disease w/ stable intermittent claudication, carotid artery disease s/p carotid endarterectomy a few years ago, history of frequent PVCs (most recently 4.8% burden on Holter few months ago)
Meds: Amlodipine, aspirin, atorvastatin, lisinopril, metformin, metoprolol, mirabegron, silodosin, omeprazole
Soc Hx: Former tobacco use (10 pack/year).

Vitals (neighboring hospital):

HR: 82 **BP:** 142/64

Notable Labs & Imaging (neighboring hospital):

Hematology: WBC: 17 Hgb:15.7 **Chemistry:** K: 3.9 glucose: 302 Ca: AST: 181 ALT: 223 Cr: 1.4 lactate: 5.6 troponin: 21 → 65 → 240

CXR: Possible PNA + pan-scan showed LLL atelectasis

EKG: Notable for subtle inferolateral ST depression, but no STE

EKG (at OSH): Sinus tach around 100-120, no clear ischemic changes, slight STDs in lateral leads

EKG (new hospital): NSR at 80, no ischemic changes, normal intervals, no PVCs. Possible loss of septal forces although noisy baseline. T wave flattening in the anterior fields. *TTM initiated to normothermia and transferred*

Exam (new hospital):

RR: 32 **BP:** 105/59 **HR:** 80 **SpO2:** 95% - On volume control, VT 450mL, PEEP 8, FIO2 62%, RR 20

Gen: intubated, sedated, paralyzed **HEENT:** oropharynx clear **CV:** RRR, normal S1 and S2, no murmurs **Pulm:** coarse breath sound **Abd:** soft, non-tender, protuberant but non-distended

Neuro: normal **Extremities/Skin:** 2+ pulses, no peripheral edema
Became tachycardic. Developed sustained VT. Received compressions, shocks, and amio and lidocaine. Was hypotensive to 80s/50s à started on levophed and then vasopressin.

Imaging: TTE: Mild concentric LVH, LV wall thickness: ↑, LV systolic function moderate impaired, LV diffusely hypokinetic. EF 30%. No thrombus. RV systolic function mildly decreased. Restricted aortic leaflet opening consistent with valvular aortic stenosis.

Cardiac MRI: Large amount of patchy mid-myocardial late gadolinium enhancement throughout the basal segment, more pronounced in the basal anterior, anteroseptal and inferior septal walls.

Final Diagnosis: No evidence of active myocardial inflammation. Bilateral pulmonary nodules and ground glass opacities w/ variable FDG uptake are likely infectious/inflammatory. Increasing right lower lobe consolidative opacity compared to recent chest CT may represent aspiration. FDG avid mediastinal nodes likely reactive/inflammatory. Intense uptake along the diaphragm and intercostal muscles may be related to muscle activation in the setting of cough. W/o clear evidence for sarcoidosis or other infiltrative heart disease, though myocarditis would be difficult to exclude.

Problem Representation: 79 M presenting with chest pain, diaphoresis and collapse, found to be in V. fib cardiac arrest

Teaching Points (Rafa):

• **ELDERLY PATIENT W/ CHEST PAIN PROGRESSING TO CARDIAC ARREST**

Cardiac arrest : sudden cessation of cardiac activity with hemodynamic collapse

Typically d/t sustained ventricular tachycardia /ventricular fibrillation

What could be the cause: CAD - most common cause - acute MI / Cardiomyopathy (eg, stress-induced cardiomyopathy / dilated cardiomyopathy)/ Channelopathies (syncope in a young patient during exercise - long QT syndrome)/ Toxins (cocaine) / medications (TCA)/ Electrolytes abnormalities / Myocarditis / Congenital coronary artery anomalies

• **SUSTAINED VENTRICULAR ARRHYTHMIA**

Most commonly d/t acute ST elevation MI
Less common in unstable angina or acute non-ST elevation MI

• **RHYTHMS W/ LONG QRS vs NARROW QRS**

Narrow - the origin of the rhythm is supraventricular + there's no bundle branch block

Long - the origin of the rhythm is ventricular
A normal QRS requires a supraventricular rhythm and intact His-Purkinje system

• **CARDIAC SARCOIDOSIS:** atrioventricular block, arrhythmias, heart failure, and sudden cardiac death are the most common clinical manifestations - non-caseating granulomas on biopsy