05/23/24 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter***: *Pranay Joshi (@)* ***Case Discussants***: *Rabih Geha (@rabihmgeha) and Jiazhang Xing (@JiazhangXing)*

CC: 48M presented with dyspnea and an episode of LOC

HPI: The patient had complaint of breathlessness worsened by exertion for 1 day and complained of dizziness followed by LOC. This episode was witnessed by his wife who said that the episode was brief, and no body jerking was noted. After gaining consciousness, he was fully awake and alert and had no other complaints.

ROS negative: chest pain, fever, abdominal pain, N/V, headache, and diarrhea.

PMH:
DM, dyslipidemia.
1 week ago he complained about epigastric pain, and was diagnosed with anterior wall MI, PCI was done and a DES was put in LAD.

Meds:
Ticagrelor, aspirin, rosuvastatin, torsemide, metoprolol, telmisartan, metformin, glimepiride

Fam Hx:
unremarkable

Soc Hx:
No smoking, alcohol, or tobacco chewing

Allergies: nil

Vitals: T: n **HR:** 108 **BP:** 94/68 **RR:** 24 **SpO2**: 96% under RA
Finger sugar: 98

Exam:
Gen: Mild distress, obese.
HEENT: normal
CV: tachycardia, normal S1, S2. No murmur, rubs or gallops. No JVD.
Multiple NSVT were noted on the monitor when being assessed.
Pulm: Bilateral LL crackles, tachypnea noted
Abd: soft and nondistended. Normal bowel sound.
Neuro: AO*3
Extremities/skin: normal.

Notable Labs & Imaging:
Hematology:
CBC: n
Chemistry:
K: 3.2 CRP: high normal Other parts of CBC were normal
Troponin-I: mildly elevated
U/A: normal.
Imaging:
EKG: Q waves in anterior leads and tachycardia.
CXR:
Echocardiogram: LVEF 25%. LAD territory regional wall motion abnormalities. IVC: 18 mm with >50% collapse during inspiration. No pericardial effusion. No valvular abnormalities.
After admission, episodes of monomorphic VT occurred, and left stellate ganglion blockade was performed followed by temporary pacemaker implantation. Next day, EPS was done with ablation and ICD was implanted. He was discharged with beta blockers and amiodarone.

Dx: Electrical storm post myocardial infarction

Problem Representation: 48M who was diagnosed with anterior wall MI, s/p DES in LAD a week ago, presented with dyspnea and an episode of LOC, found to have refractory monomorphic VT and elevated TnI, ultimately diagnosed with electrical strom post-MI

Teaching Points (Parisa):
When we are facing two symptoms choose one with shorter ddx and start from there.
Transient LOC → Intrinsic causes (brain; seizure) ; extrinsic causes outside brain (syncope, sugar)
Stroke is unlikely to be transient and global.
Seizure vs syncope → when there is no accompanying clue; profound clue is SOB→ suggestion of extrinsic issue
Dyspnea plus LOC → prioritizing cardiac causes (obstructive); anemia cardiac causes: auscultation (+) AS; (-) Pulmonary hypertension; left ventricular hypertrophy
3 main mechanism of syncope: 1)OH; 2) reflex; 3) cardiac syncope
Complication of cardiac cath → **acute** presentation: retroperitoneal hematoma(through femoral access; drop Hb); **delayed** presentation: cholesterol emboli
Finding ACS compilation: **Auscultation**; **ECG** (electronic) (bradycardia; AV block; ventricular VT; VF); **Echo** (mechanical) accompanied with elevated JVP
Acute MR → no murmur due to rapid pressure equilibration
delayed perfusion time → Q waves → previous MI; not every patient with previous MI develops q wave; complete MI; actual thrombus is hard and difficult to extract in cath lab.
VT → **monomorphic** (MI → scare → arrhythmogenic) ; **polymorphic** (ongoing ischemia → repeat ischemic evaluation mandatory)
Mechanical complication of ACS → presented with high filling pressure
VT management → classify (mono; poly) → **stable** (antiarrhythmic; amiodarone, so effective and long half life; hard to further ablation/ lidocaine ; Ongoing ischemic VT) vs **unstable** (shock)
Electrical storm post MI → status epilepticus of heart; Mostly happen after ischemia MI **Management** → multiple antiarrhythmic medication; sedation intubation propofol; Decrease sympathetic activity(sympathectomy; beta blocker) If patient is in cardiac shock or HF we need to keep the balance.