01/02/23 Morning Report with @CPSolvers

Case Presenter: *Dr. Amos Lal (@)* ***Case Discussants***: *Dr. Ognjen Gajic (@ogi_gajic)*

CC: syncope and seizure

HPI: 60yo M Code Blue for syncope and brief tonic-clonic seizure.

PMH: Cerebral palsy
Post-colectomy for UC
CPN for ileus

Meds:

Vitals: **T:** **HR:** 145 **BP:**60s **RR:** **SpO_2:** 85%
Primary survey: A - protects
B- Mildly increased WOB
C - mottled, SBP60, HR 145
D - aVpu (verbal), nonfocal
E - abdOMEN distended, no peritoneal sounds
U: no B-lines, no cardiac tamponade, enlarged RV, hyperdynamic LV, small free abdOMEN fluid
L - POC Lactate: 10.8, PaO2 60, PaCO2 40, pH 7.3, Hct: 28, K 3.8, WBC: 18, Hb 9, Cr 1.4

Notable Labs & Imaging:
Imaging: EKG: incomplete RBBB, CXR: wnl, POCUS: distended RV (D-sign), no tamponade

Barely stable (SpO2 90%, RR30, HR130, BP 95/55) after: HFNC O2 (100%, 50L/min), 500 mL LR, NE 0.5/kg/min, VP 0.08/kg/min, EPI 0.1/kg/min, empiric AB and IV heparin

Abx: vancomycin, cefepime, metronidazole

HR and RR decreased when talking to the patient about his book.

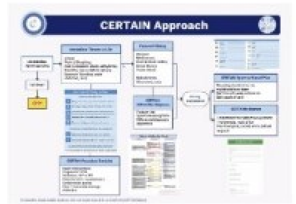
Further imaging:
CT: saddle pulmonary embolism

Started on tPA. ECMO team on stand-by. Shock resolved in 24hr.

Final Dx: Pulmonary embolism

Problem Representation: 60yo M post-colectomy for UC had code blue for seizures and syncope, found to be in shock with RBBB, enlarged RV and CT imaging showing saddle pulmonary embolism.

Teaching Points (Yazmin):



Immediate assessment
- For immediate assessment and treatment of critical px: **ABCDE (+ UL)**
- Evaluate **rhythm** (obtain EKG) + obtain an **IV access** immediately to start treatment with Lidocaine and Ketamine.
- Is the px in **shock**? With the first assessment try to determine which type.
  - High Lactate + Mottling → suspect sepsis
  - Skin examination provides important clues about tissue perfusion: cold skin is associated with low cardiac output state in a critical px

Evaluation of additional studies
- **Chest X-Ray:** Cardiac Silhouette, Lung Volumes, Presence of B-Lines
- **EKG:** Try to obtain a baseline EKG. Determine rate, pattern of QRS complexes, QRS morphology, P waves, relationship between P waves and QRS complexes → RBBB
- **POCUS:** Enlarged RV, restrict fluids.

Next steps
- The coronary pressure is priority so the **vasopressor of choice is epinephrine** to keep the coronaries perfused/**Vancomycin** and Cefepime are the tx of choice on a px that has been hospitalized + **Metronidazole** for anaerobics coverture
- If High risk (massive) PE and shock → thrombolytics but FIRST! Determine if there is Bleeding risk to start TPA → **Next step prior to CT chest/abdomen** → to determine intubation with ketamine vs. propofol, first consider risk/benefits since there are patients that may not need an invasive procedure (consider positive pressure ventilation as added stress on the RV)
- A px in severe shock → very high risk for cardiac arrest even with no sedation.

System-Based Assessment and Plan → CERTAIN APPROACH
- In critically ill px dividing problems according to organ systems **facilitates systematic evaluation to PREVENT ERROR AND OMISSION**: CV, Lung protective ventilation, fluid balance review, glucose control, review ID → Alteplase for PE, HFNC, consider use iNO and ECMO to make an "easier" ECMO cannulation (could potentially mitigate ischaemia reperfusion injury and end-organ dysfunction, whereas iNO can cause vasodilation of the ventilated region of the lungs, decreasing shunting and improving V/Q mismatching.)