12/26/23 Morning Report with @CPSolvers

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

CC: A 26 yo Male w/ SOB and chest pain.

HPI:
Patient presents in ED.
Patient developed symptoms after taking "ECSTASY." Fully alert and oriented. Developed ventricular bigeminy w/ ST depressions (Inferior leads & V3-4). Agitated after assessment and received 8.5 mg Lorazepam, 400mg IM Ketamine and Dexmedetomidine gtt. → ICU

(ECSTASY=MDMA=3,4-Methylenedioxy methamphetamine)

PMH: NA

Meds: NA

Fam Hx:
HTN in mother; Type 2 DM in father

Soc Hx:

Health-Related Behaviors: No alcohol or tobacco use. Ecstasy

Allergies: No allergies

Vitals: T: 37.6 **HR:**90 **BP:** 130/72 mmHg **RR:**18 **SpO2:** 98%
Exam:
Gen: Agitated, minimal interaction
CV: reg rate and rhythm, no murmurs
Pulm: clear b/l, no wheeze or rhonchi
Abd: Soft non tender, nl exam
Neuro: alert, but not very well oriented, no focal deficit
Extremities/skin: no rash, no lesions

Notable Labs & Imaging:
Hematology:
WBC: 10.6 Hgb: 16 Plt: 254
Chemistry:
Na:132 K:3.7 Cl:101 BUN: 14 Cr:0.79 AST: 18 ALT:10
hs-Troponin: 13 (nl) -> repeat was normal
Imaging:
Chest CT: consolidation on RUL and RLL w/o GGO. GGO in posterior left lobe.
Hypoxemia-> Intubation, Amiodarone discontinued. Probable diagnosis of Ecstasy Induced Lung Injury & Aspiration pneumonia → ARDS
Extubated and became hypoxic, therefore re-intubated;
Bronchoscopy: pink tiny sequestrations. Echo: EF 45-50% w/ global hypokinesis of L ventricle 2/2 substance abuse.
Patient remained agitated, diaphoretic, and could not recognise his girlfriend.
MRI: extensive intraventricular hemorrhage, intraparenchymal hemorrhage of the right caudate, subarachnoid hemorrhage near the right vertex, and diffuse axonal injury involving the splenium of the corpus callosum.
Dx: Diffuse intracranial hemorrhage likely 2/2 MDMA use.

Problem Representation: A 26 yoM who consumes Ecstasy p/w acute SOB, chest pain and agitation. First EKG notable for ventricular bigeminy and ST-depressions in inferior leads and V3-V4. Vitals and PE unremarkable. Labs notable for Hb of 16 and an initially normal hs-Trop.

Teaching Points (Shreyas Nandyal):
1/ Acute onset SOB in young person - we first pivot to cardiopulmonary causes (ACS/ PE/ Pneumothorax). EKG demonstrated sinus rhythm, bigeminy, PVC, and ST depressions in 2,3,aVF, STE in aVR - ischemia.
2/ Young patient - **bad genes, bad luck and risky behavior.**
3/ Stimulant use (ecstasy) + SOB shortly after - could be an ongoing toxidrome or a withdrawal ; **PE** can help tease out. **Collateral information** from observers is always useful information to gather.
4/ It is important to evaluate vital signs considering that the patient could have received medications that can alter the overall picture. For example a HR of 90 can still be high considering that the patient received high dose of sedatives.
5/ Reflexes, clonus should be looked for on neuro exam; **Wound/ skin lesions** are important to look for when we are suspecting toxidromes (drug-patch/ injection marks)
6/ Chest pain -it is useful to **activate the 4+2+2 framework** by CP Solvers (4-ACS, Aortic dissection, tamponade, Takutsubo ; 2- PE/Pneumothroax ; 2- Esophageal rupture/ impaction)
7/ Approach to chest pain with normal PE and normal troponin - repeat labs, Echo
8/ Further testing showed consolidation in the right lung with GGO in the posterior left lobe and profound hypoxemia requiring intubation. Aspiration and subsequent lung injury was a concern.
9/ Persistent sympathetic overdrive (agitation) raises concern for thyrotoxicosis, **thorough CNS workup** and review of medications, serotonin syndrome (possibly masked by the sedatives)
10/ Hypercapnia -> vasodilation of cerebral BV -> cerebral edema
11/ Time is the best diagnostic test; final Dx - diffuse intracranial bleed 2º to MDMA