6/22/20 Morning Report with @CPSolvers

***Case Presenter**: Dr. Sherman (@StephVSherman) **Case Discussants**: Kara Lau (@ytk_lau) and Ninad Bhat*

CC: Unresponsive

HPI: 49M found unresponsive in a park

Seen by bystander laying in park. Bystander called 911. EMS only able to get pt to grunt to sternal rub.

Received naloxone without change in mental status

Backpack contained medications filled day before: Trazodone contained 1 pill left. Full bottles of buspirone, Risperidone, loratadine

PMH:
COPD
Anxiety
Depression

Meds:
Trazodone
Buspirone
Risperidone
Loratadine

Fam Hx: N/A

Soc Hx:
Former truck-driver
Experiencing homelessness

Health-Related Behaviors:

Allergies:None

Vitals: **T**: 97.2 **HR**: 84 **BP**: 112/70 (108/67) **RR**: 16 **SpO_2**: 97% RA
Exam:
Gen: Obtunded, agitated with sternal rub
HEENT: PEERL, no signs of trauma
CV: RRR
Pulm: wnl
Abd: wnl
Neuro: moved all 4 extremities equally, not opening eyes to commands

Notable Labs & Imaging:
Hematology:
WBC: Hgb: Plt: → wnl
Chemistry:
Na:141 K:4.2 Cl:96 CO2:24 BUN: 9 Cr: 1.1 (baseline from a few years ago: 0.8) glucose: 98 AG: 21
Ca: Phos: Mag: → wnl
AST: ALT: Alk-P: T. Bili: Albumin: → wnl
Ethanol level: neg, Utox: neg

---------- 9 hours later ----------

Na: 146 K: 4.3 Cl: 105 CO2: 6 BUN: 8 Cr: 1.3 Glu: 99
AG: 35
VBG: 7.2/22, lactate: 9
sOsm: 394 (osmolar gap: >90)
Imaging:
EKG: sinus, QT 550
CXR: wnl NCHCT: wnl
Ethylene glycol: very high

Problem Representation:
49M h/o depression brought to ED after being found unresponsive found ot have elevated anion gap metabolic acidosis, osmolar gap, and AKI 2/2 ethylene glycol poisoning.

Teaching Points (Moses):
Unresponsive:
- Do I need to do something emergently: ABCs, BLS, ACLS etc.
- Diagnostic: MIST &/or shock framework. Collateral via EMS, bystanders, family/friends etc.
- Neuro: diffuse cerebral dysfunction or focal lesion (exp: reticular activating system)

Clinical reasoning: law of proportionality - is the lesion or hypothesized root cause sufficient to explain the severity of a presentation?
- I.e. is the soft BP enough to explain unresponsiveness?
- Is a brainstem lesion likely w/ unresponsiveness + able to move extremities? Answer: No

Schema recap, anion gap metabolic acidosis: *see app & recording*
- Endogenous: lactate, ketones, sulfate/PO_4
- Exogenous: toxic alcohol, other

Long QT:
- LIDO: lytes, ischemia, drugs, others
- For medications, think "the anti-..." psychotics, arrhythmics, depressants, histamines, biotics (exp: macrolides, antimalarials) - *look these up!*

Anion gap: reminder that can have a significant gap even when individual values wnl or minimally abnormal. If lactate goes up by 1, AG should go up by 1.
Osm gap: Osmotically active substance in the body we haven't accounted for.
Toxic ingestion of toxic alcohol:
- initially high Osm gap, low AG → metabolism then leads to lower Osm gap, rising AG.
- Retinal: methanol, crystals in urine: ethylene glycol (can confound lactate measurement)