BETTER MIND YOUR P’S AND Q’S
CARDIAC EFFECTS OF DRUGS OF ABUSE

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DISCLOSURES
PILL PARTY
CASE # 1

- 37 year old male with PMHx sig for opiate abuse presents with cc of syncope x 2
- 138/72, 118, 22, 36.8 98% RA
- Exam is unremarkable
- EKG
EKG
TORSADE

- Loperamide
  - Imodium
- Methadone
- Methamphetamines
- Bath salts
• 40 year old female presents with agitation

• Visiting from out of town
  • Went to a party
  • Took every marijuana product she could find

• 168/110, 132, 22
EKG
BICARB GIVES ME GAS!
REPEAT EKG
• 23 year old male with altered mental status after bath salt ingestion
• 163/101, 128, 24, 100%
• On exam
  • Bruising
Case(s) # 4

- Patient #1
  - A 36 year-old female presents with dizziness, palpitations, difficulty breathing and total body tingling, one hour after smoking synthetic “marijuana”

- Patient #2
  - A 26 year old male presents with a complaint of paresthesias and syncope, one hour after ingesting marijuana brownies
EKGS

Patient #1

Patient #2
SELECTED ECG’S FOR BOTH PATIENTS

Patient #1

Patient #2

Close up of $V_1$
Case(s) # 4 Continued

• Patient #1
  • Developed rapidly evolving tachydysrhythmias
  • Treated with adenosine, diltiazem, cardioversion, amiodarone, and lidocaine
  • ECMO
  • Died after one month of hospitalization
  • Serum Aconitine = 5.4 ng/mL (4 hours)

• Patient #2
  • Developed rapidly evolving tachycysrhythmias
  • Treated with calcium, sodium bicarbonate, mag, cardioversion and amiodarone.
  • Discharged on HD 2 in good condition
  • Serum Aconitine = 1.8 ng/mL (3.5 hours)
Aconite

- Also known as Monkshood, Wolfsbane, Devil’s helmet
- Used in traditional Chinese medicine
- Voltage sensitive sodium channel opener
  - Increased intracellular sodium and calcium
- Arrhythmia’s secondary to delayed after-depolarizations and early after depolarizations.
- Similar to cardiac glycosides but without hyperkalemia (Na/K ATPase unaffected)
SYNTHETIC MARIJUANA

- Not marijuana!
  - Not regulated
  - Highly variable
SUMMARY

• Drugs of abuse can have cardiac implications
  • We are still learning

• We still don’t know all that synthetic marijuana does

• Be ready to match the creativity of our patients!