

Project: Ghana Emergency Medicine Collaborative

Document Title: Pulseless Electrical Activity

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Here here 2nd year.
Whoever has the least clothing on.



You may consult:
One PGY-2

Action Page

- ◆ Opening Statement
- ◆ Results
- ◆ ABCDE's
- ◆ Critical Actions
- ◆ HPI
- ◆ Review
- ◆ Background
- ◆ Physical

The Case

- ◆ You walk into LDS Hospital at 7:00am
- ◆ PTS: empty
- ◆ Nurses: Chillin'
- ◆ Overnight doc: Outta here
- ◆ You kick back and get ready to play Bejeweled on your Palm

The Case

- ◆ BANG BANG BANG (Ambulance Door)

**

ABCs

**

History

- ◆ Brought to ER by bystander
- ◆ Found near Pioneer Park,
unconscious
- ◆ No syringes or bottles noted

**

Background History

**

Physical

**

Physical

- ◆ VS: 36.4, 122, 0, Unobtainable BP
- ◆ Gen: Unresponsive
- ◆ HEENT: nl
- ◆ Neck: no JVD
- ◆ Pulm: CTAB
- ◆ CV: No heart tones
- ◆ Abd: nl
- ◆ M/S: nl
- ◆ Neuro: GCS 3

*

Physical

Skin:

Mottled

Medical Alert tag: DM, Renal Failure

LUE: AV Fistula

**

Results

LABS

- ◆ CBC / Diff
- ◆ BMP
- ◆ LFTs
- ◆ Amylase/Lipase
- ◆ Coags
- ◆ Enzymes
- ◆ Type S or C
- ◆ U/A
- ◆ Pregnancy
- ◆ Tox Screens
- ◆ Miscellaneous

IMAGES

- ◆ Radiographs
- ◆ CT Scans
- ◆ MRI
- ◆ Ultrasound

Tracings

- ◆ EKG

**

LABS

- ◆ I-Stat:

pH 7.05, Na 134, K 8.6, Cl 102, CO2 14,
Glu 188, Cr 10.6, H-crit 38

- ◆ All others pending

Results **

LABS

Glucose 180

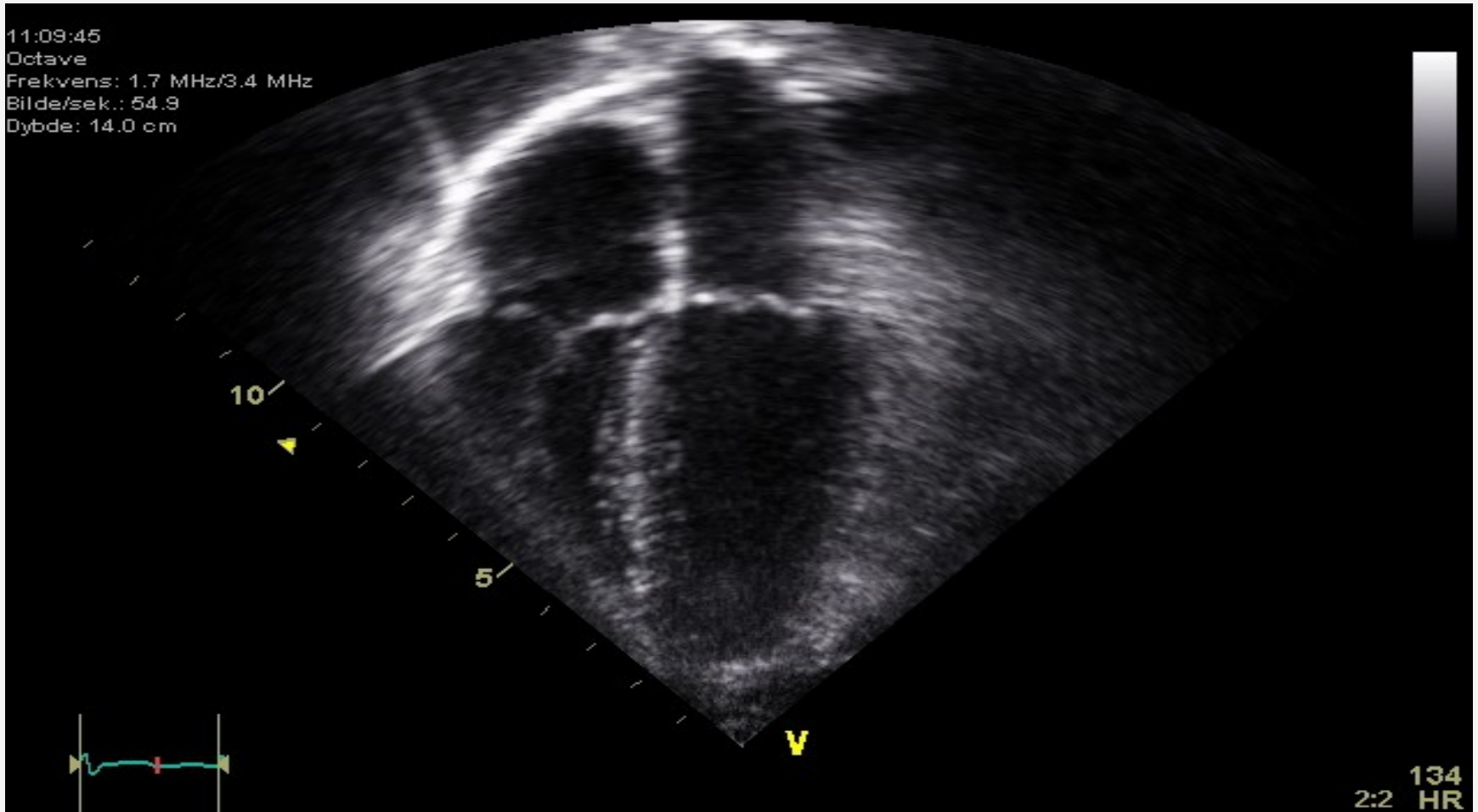
Results **



Results

**

Ultrasound



Results

**

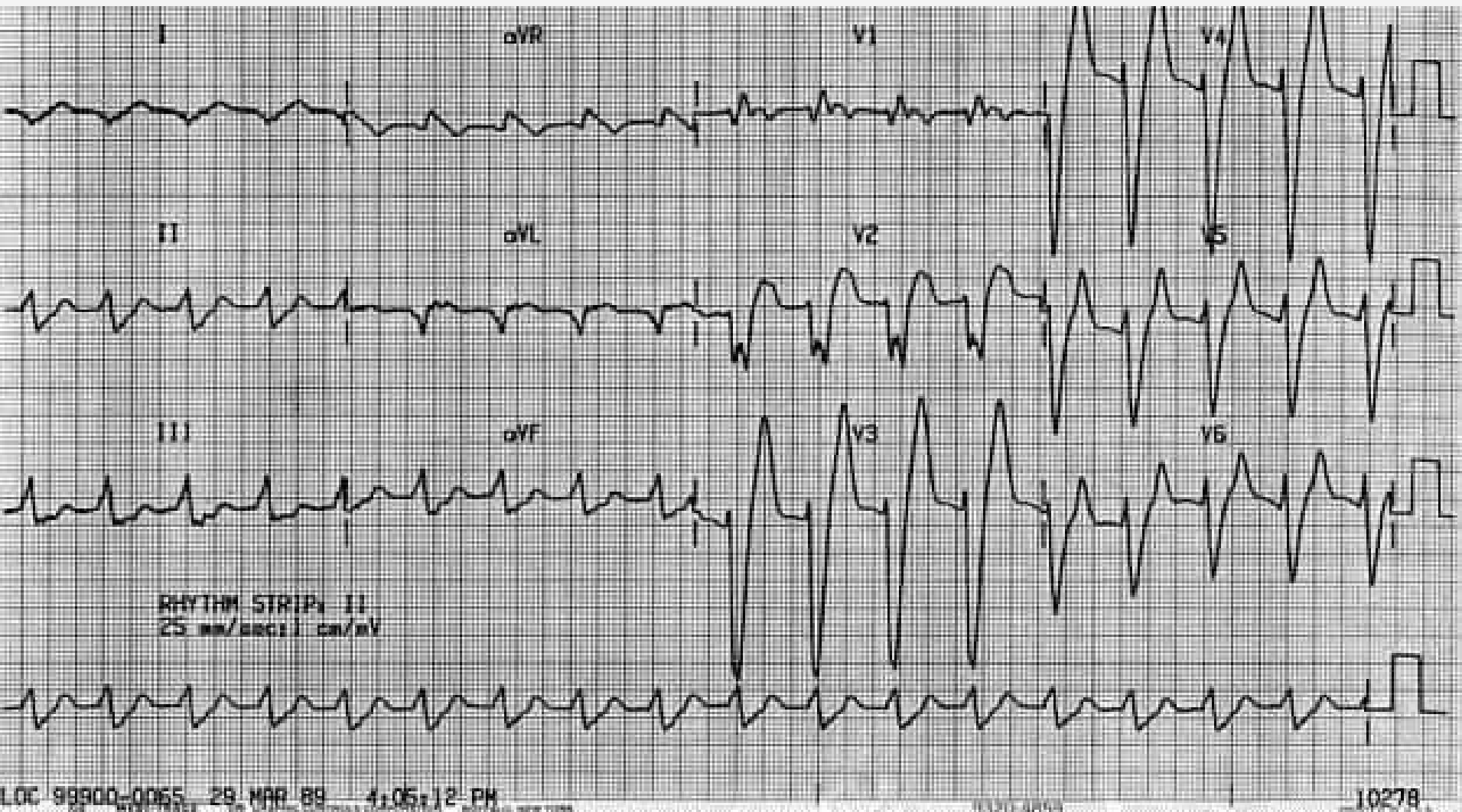
EKG BANK

- ◆ EKG Initial
- ◆ EKG #2
- ◆ EKG #3
- ◆ EKG #4
- ◆ EKG #5

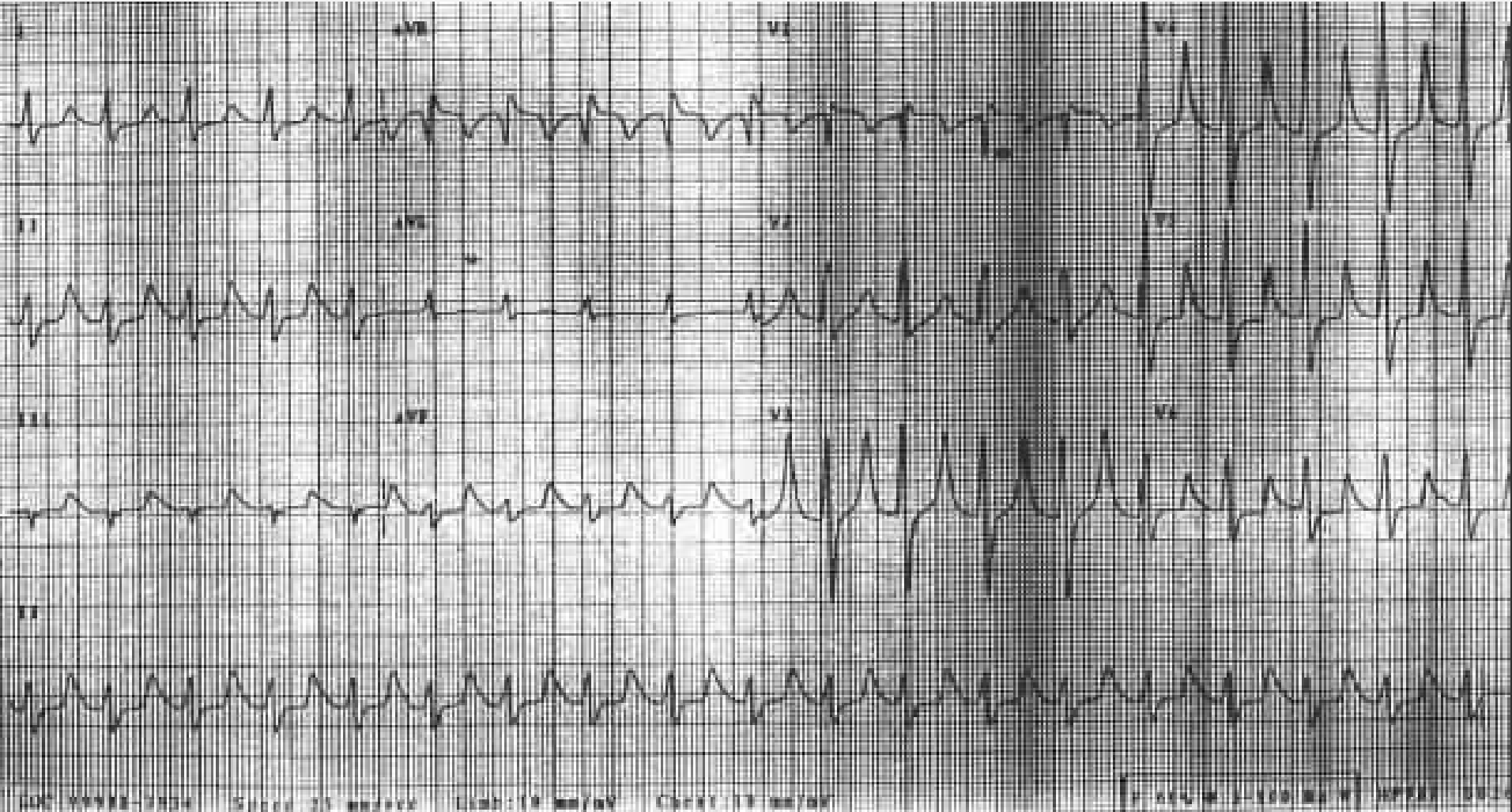
- ◆ Rhythm Strip 1
- ◆ Rhythm Strip 2
- ◆ Rhythm Strip 3

**

EKG (Initial)



EKG #2



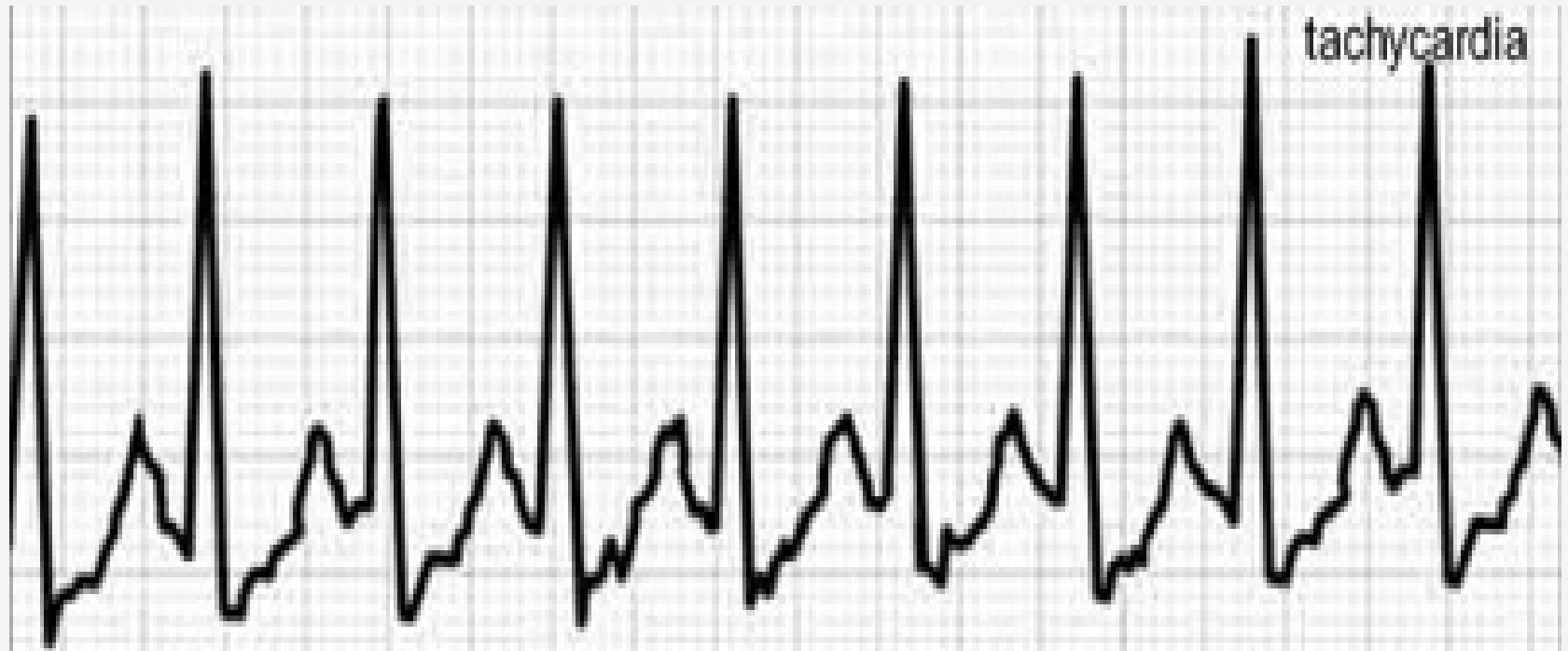
Rhythm Strip 1



◆ EKG

◆ ***

Rhythm Strip 2



◆ EKG

◆ **

Critical Actions

- ◆ Initiate ACLS
 - Airway management
 - Chest Compressions
 - Epinephrine
- ◆ Recognize/Treat Hyperkalemia
- ◆ Consult Nephrology for hemodialysis
- ◆ ICU admit

**

Important Actions

- ◆ C-Collar
- ◆ Narcan/Thiamine/Glucose (or check glucose stat)
- ◆ Consider all causes of PEA

Hyperkalemia

Classification

(Note, clinical severity not necessarily level-dependent)

Mild

5.5 – 6.0

Moderate

6.1 – 7.0

Severe

7.0 +

Hyperkalemia

- ◆ Decreased or impaired excretion
 - Renal Failure, obstruction, SCA...
- ◆ Addition of K⁺ into extracellular space
 - K⁺ supplement, rhabdo, hemolysis
- ◆ Transmembrane shifts
 - Acidosis, Dig toxicity, Succinylcholine
- ◆ Factitious

Hyperkalemic EKG

1. Peaked T waves, shortened QT, ST depression
2. Widening QRS, increased PR, dec p-wave amplitude
3. P wave disappears, sine wave
4. V-fib / asystole

Hyperkalemia Treatment

- ◆ Calcium
 - Ca Chloride 5cc of 10% sol over 2 min
 - Ca Gluconate 10cc 10% sol over 2 min
- ◆ Dextrose 50 ml D50W
- ◆ Insulin 5-10 units reg IV
- ◆ Na Bicarb 50-100 mEq
- ◆ Albuterol 5mg neb
- ◆ Kayexelate 25-50 g po/pr

Hyperkalemia Treatment

- ◆ Hemodialysis

Question for the Interns

- ◆ Name a cause of hyperkalemia in which you would want to avoid using calcium?

Causes of PEA

- ◆ H
- ◆ H
- ◆ H
- ◆ H
- ◆ H

- ◆ T
- ◆ T
- ◆ T
- ◆ T
- ◆ T

Causes of PEA

- ◆ Hypovolemia
- ◆ Hypothermia
- ◆ Hypoxia
- ◆ Hydrogen anion
- ◆ Hypo/Hyper-K
- ◆ Tamponade
- ◆ Tension PTX
- ◆ Tablet
- ◆ Thrombosis (ACS)
- ◆ Thrombosis (PE)

PEA Treatment

- ◆ Ventilate / Chest Compressions
- ◆ Reverse underlying bad boy
- ◆ Epinephrine
 - 1 mg IV q 3-5 min
- ◆ Atropine
 - Use if HR < 60
 - 1 mg IV q 3-5 min (Max 0.4 mg/kg)

AAA



2:51:37 pm
6C2-S
HC4.0MHz 120mm
OB
General /V
80dB T1/+1/3/3
Gain= -7dB Δ=2
Store in progress



BBB

PROFILE



3:07:18 pm
6C2-S #46
HC4.0MHz 130mm
OB
General /V
80dB T1/+1/3/3
Gain= -8dB Δ=2
Store in progress

