

When Syncope Can Kill

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What is your favorite chief complaint?

- A. Dizzy
- B. Dizzy
- C. Dizzy
- D. Dizzy

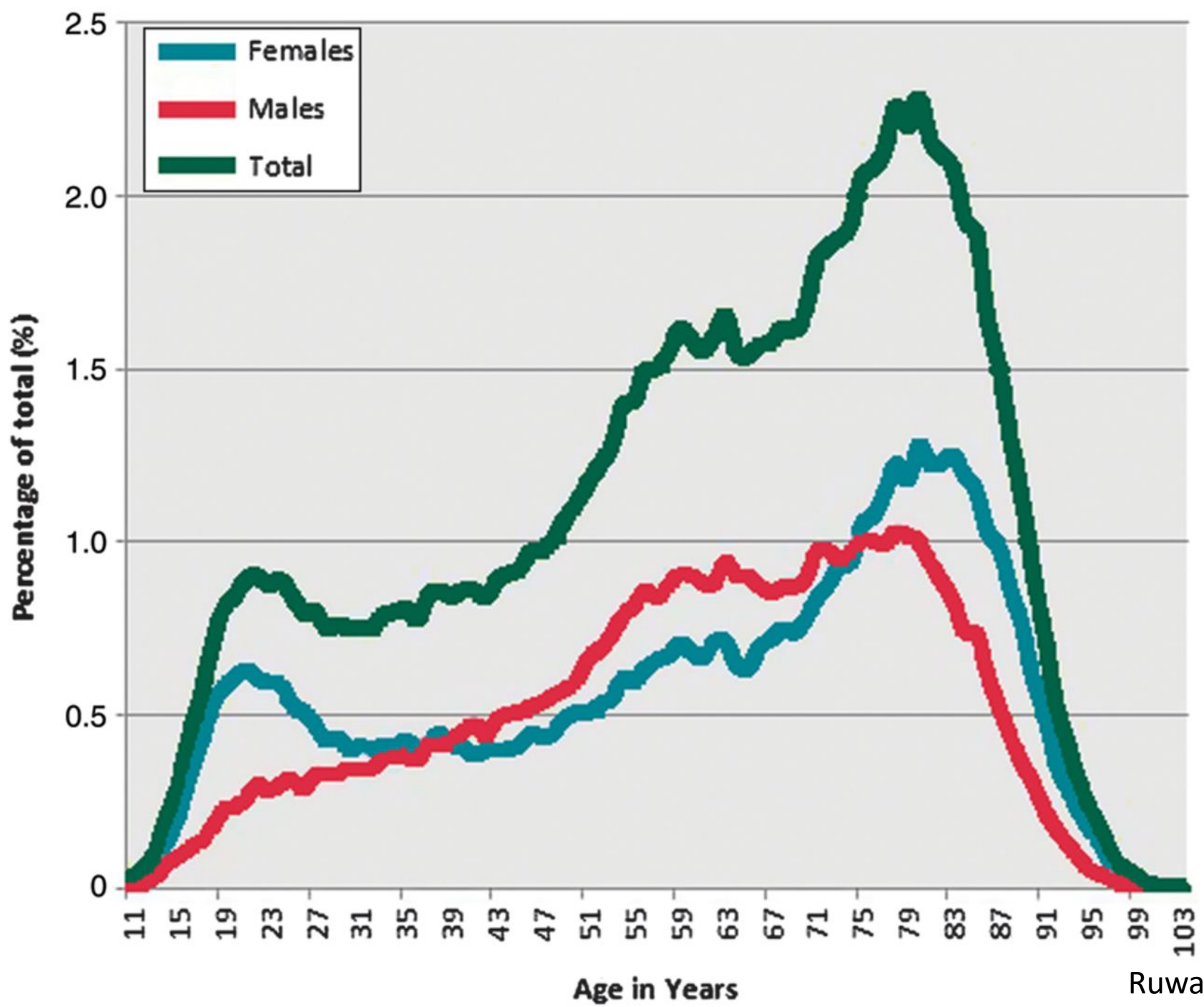
**SO YOUR CHEST PAIN
STARTED 4 DAYS AGO?**



**OF COURSE 3AM IS A
PERFECT TIME TO CALL
FOR AN AMBULANCE.**

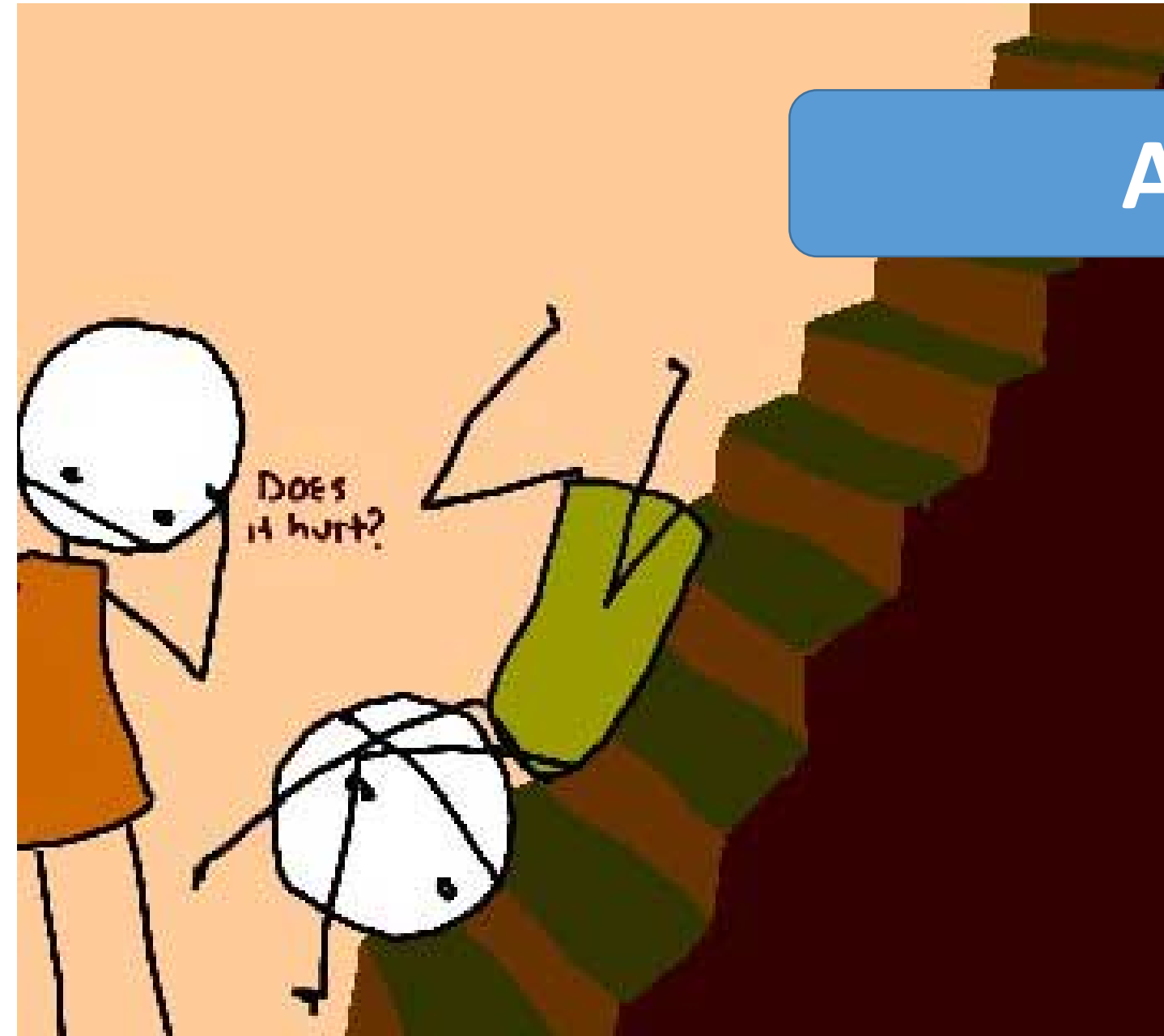
740,000 annual ED visits

35% Lifetime Incidence



Acute Issues

ABC's & Trauma



Why?

Why?

Cardiac

Arrhythmia

Heart Block

ACS

Channelopathy

Structural

Why?

Cardiac	Neurologic
Arrhythmia	Seizure
Heart Block	Structural
ACS	Traumatic
Channelopathy	Psychological
Structural	

Why?

Cardiac	Neurologic	Neuro-mediated
Arrhythmia	Seizure	Vagal
Heart Block	Structural	Autonomic Instability
ACS	Traumatic	Situational
Channelopathy	Psychological	
Structural		

Why?

Cardiac	Neurologic	Neuro-mediated	Pharmacologic
Arrhythmia	Seizure	Vagal	Polypharmacy
Heart Block	Structural	Autonomic Instability	Overdose
ACS	Traumatic	Situational	HTN Adjustments
Channelopathy	Psychological		
Structural			

Why?

Cardiac	Neurologic	Neuro-mediated	Pharmacologic	Orthostatic
Arrhythmia	Seizure	Vagal	Polypharmacy	Trauma
Heart Block	Structural	Autonomic Instability	Overdose	GI Bleed
ACS	Traumatic	Situational	HTN Adjustments	Dehydration
Channelopathy	Psychological			Third Spacing
Structural				



Step 1

“I know what happened”

“I don't know what happened”

Every question means something

Did he actually pass out → Syncope vs Pre-Syncope

For how long → arrhythmogenic vs structural or metabolic

Did he hit the ground → Head or neck trauma?

What were the preceding symptoms → Palpitations or aura or dizziness?

How does he feel now → postictal or dizzy?

Bit lip or incontinent → Seizures

Seizure activity

PMHx → Predisposing factors

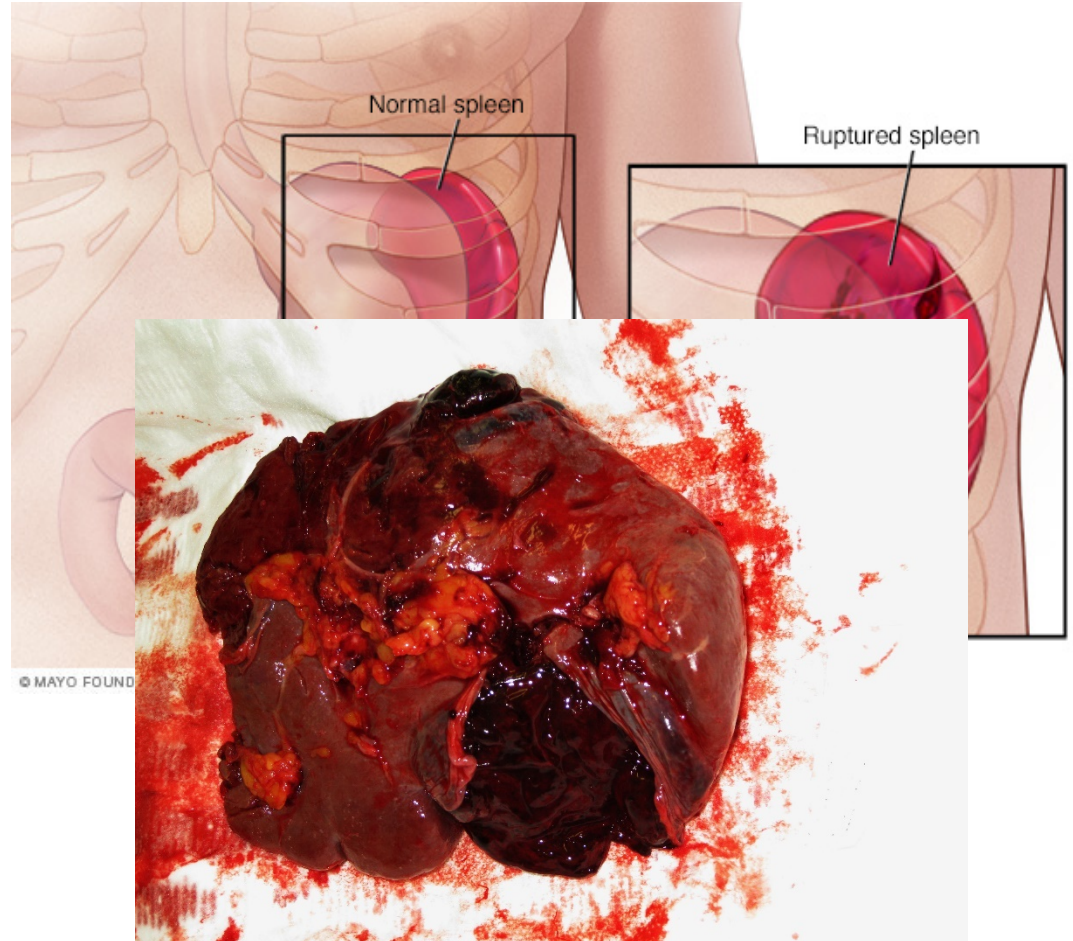
Quick Cases



16 y/o girl with recent fever, fatigue, and abdominal pain

- More Questions?
- More exam?

Ruptured spleen from Mono



82 y/o male w/ frequent falls, passing out

- More Questions?
- More exam?

Chronic Subdural Hemorrhage from falls



60 y/o female passed out and still feels weak

- More Questions?
- More exam?



Recently added 2 new antihypertensives

28 y/o male with syncope after MVC
yesterday

- More Questions?
- More exam?

Liver Laceration



17 y/o female passed out with significant recent weight loss

- More Questions?
- More exam?



Hypokalemia after vomiting from bulimia

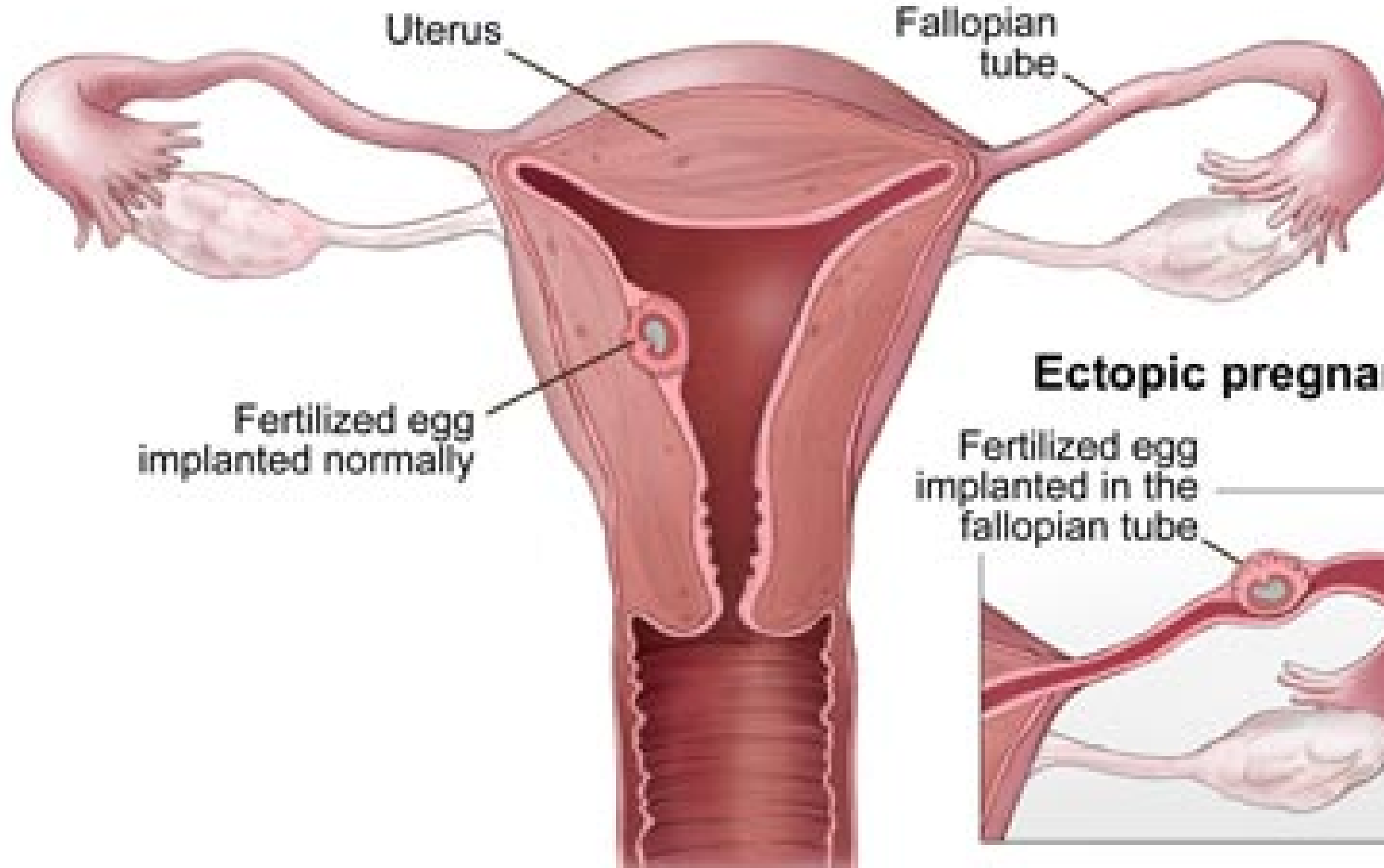
38 y/o female passed out

“I felt really dizzy and then blacked out. I almost passed out earlier this morning”

Follow up Q's?

- Palpitations
- Pregnancy
- Abdominal Pain
- Vaginal Bleeding
- Seizure hx

Normal pregnancy



Ectopic pregnancy

Fertilized egg implanted in the fallopian tube



Some Stats

- 1 in 50 pregnancies are ectopic!
- Classic triad occurs <50% of time
 - Abdominal Pain
 - Amenorrhea
 - Vaginal Bleeding
- Syncope is presenting symptom ~20% of time



38 y/o female passed out

“I don’t know what happened”

Move to bystanders

- If no bystanders ->
 - Look for meds or bracelet
 - Anti-epileptics
 - Insulin
 - New meds – anti HTN

Key exam findings?



Supporting Evidence

Seizure History

Postictal Phase

Bit Tongue

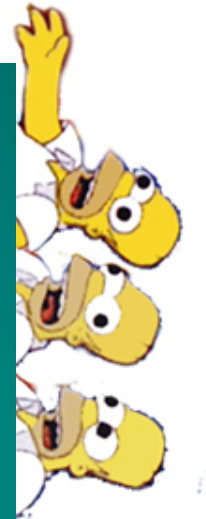
Incontinent Urine

Aura

THE PHASES OF A "TONIC-CLONIC" SEIZURE



THE "AURA" PHASE
~ LIGHT-HEADEDNESS
~ DIZZINESS
~ CONFUSION
~ HALLUCINATIONS



PHASE
S
ING
HAG ROLLING
ING STOPS

68 y/o male passed out



But now he's awake

And feels fine

And wants to RMA

The Vagal

Vasovagal Syncope → Emotional, Fatigue

Situational Syncope → Distended viscera (stomach, bladder)

Carotid Sinus Syncope → Tight neck

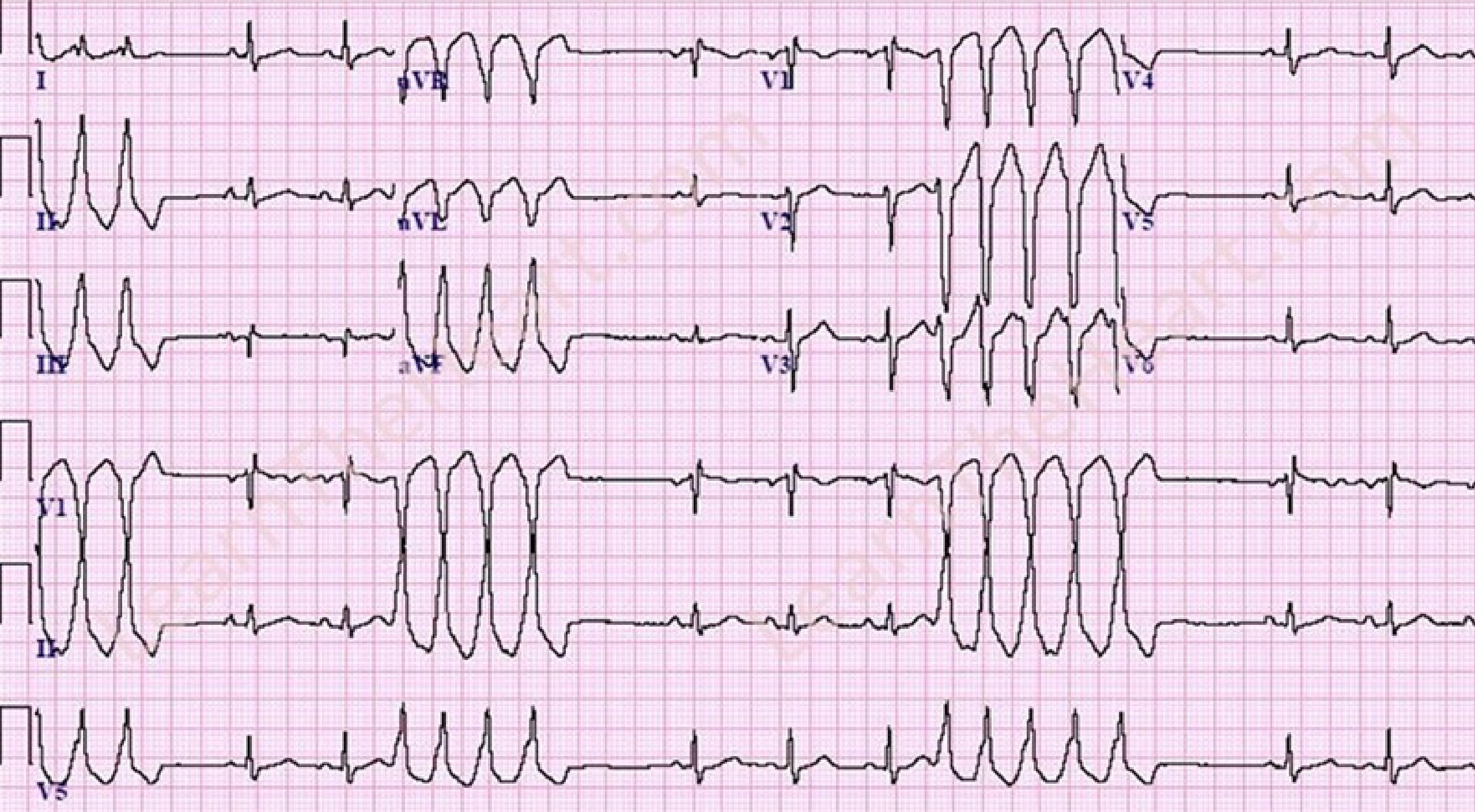
1. Abrupt withdrawal of sympathetic tone
2. Increase in parasympathetic tone
3. Rapid autocorrection



TIGHT COLLAR

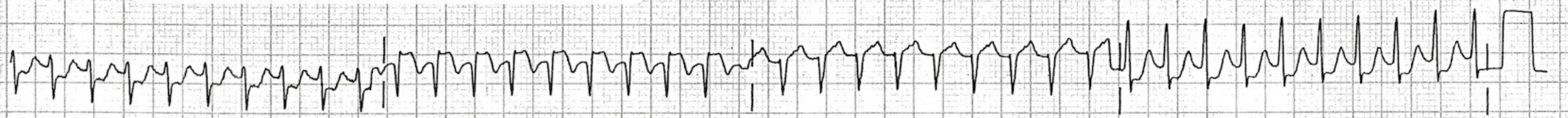
“My heart was beating really fast and then I woke up on the floor”

- Assessment?
- Questions?
- Plan?



“I get really nervous sometimes and feel like I will pass out – I guess this time I did”

- Assessment?
- Questions?
- Plan?



I

aVL

V2

V5



II

aVF

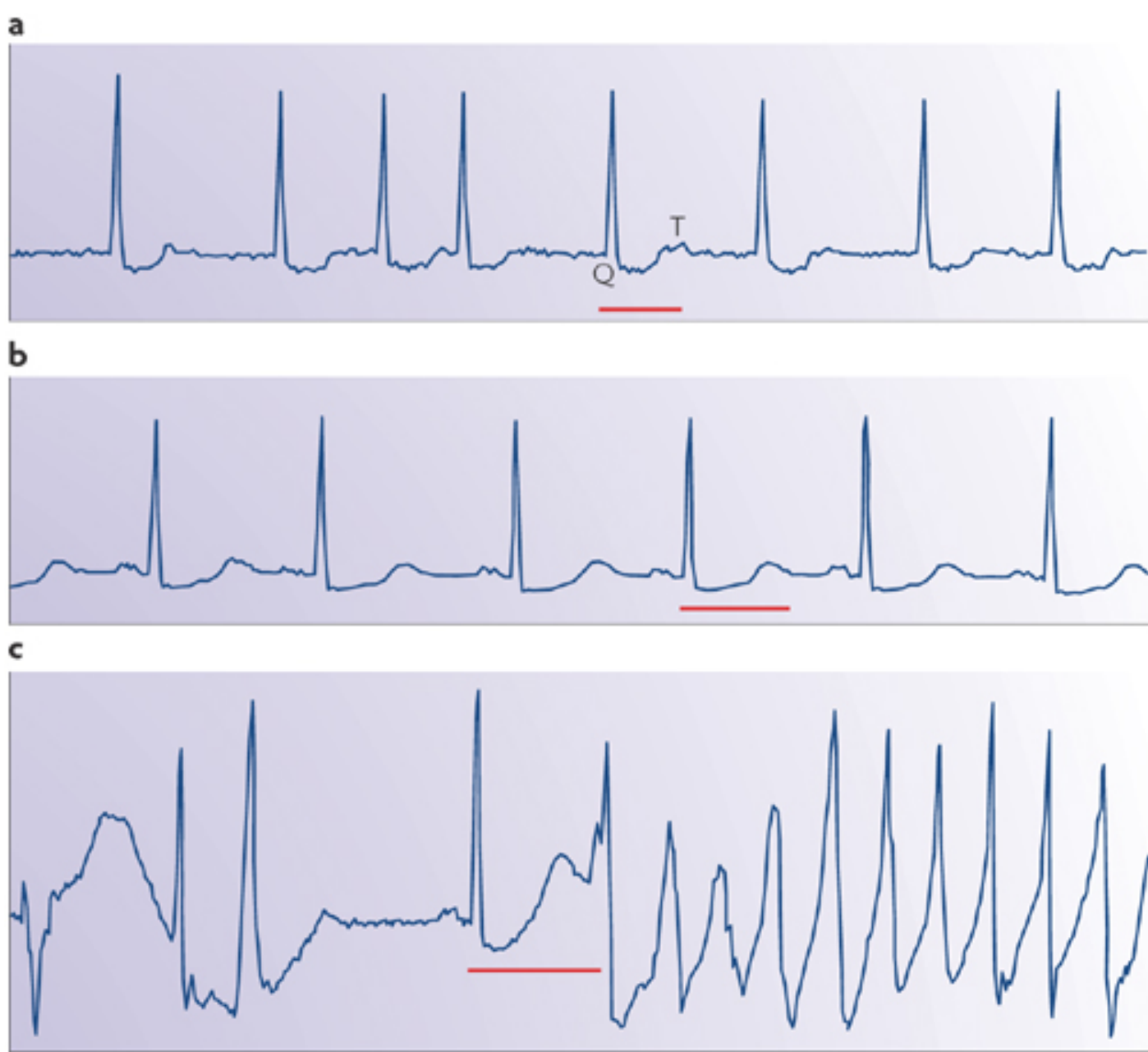
V3

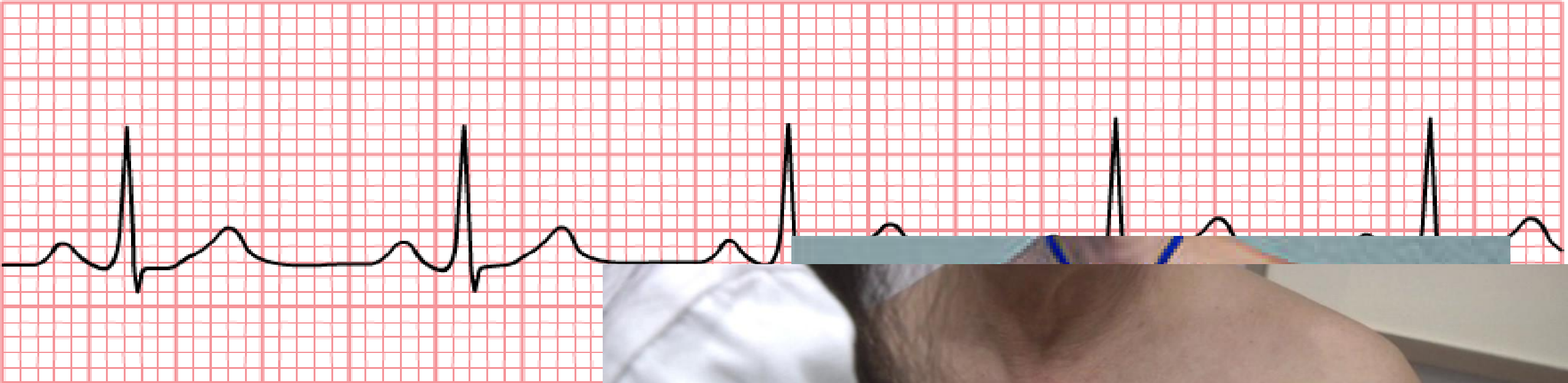
V6



RHYTHM STRIP: aVL
25 mm/sec; 1 cm/mV





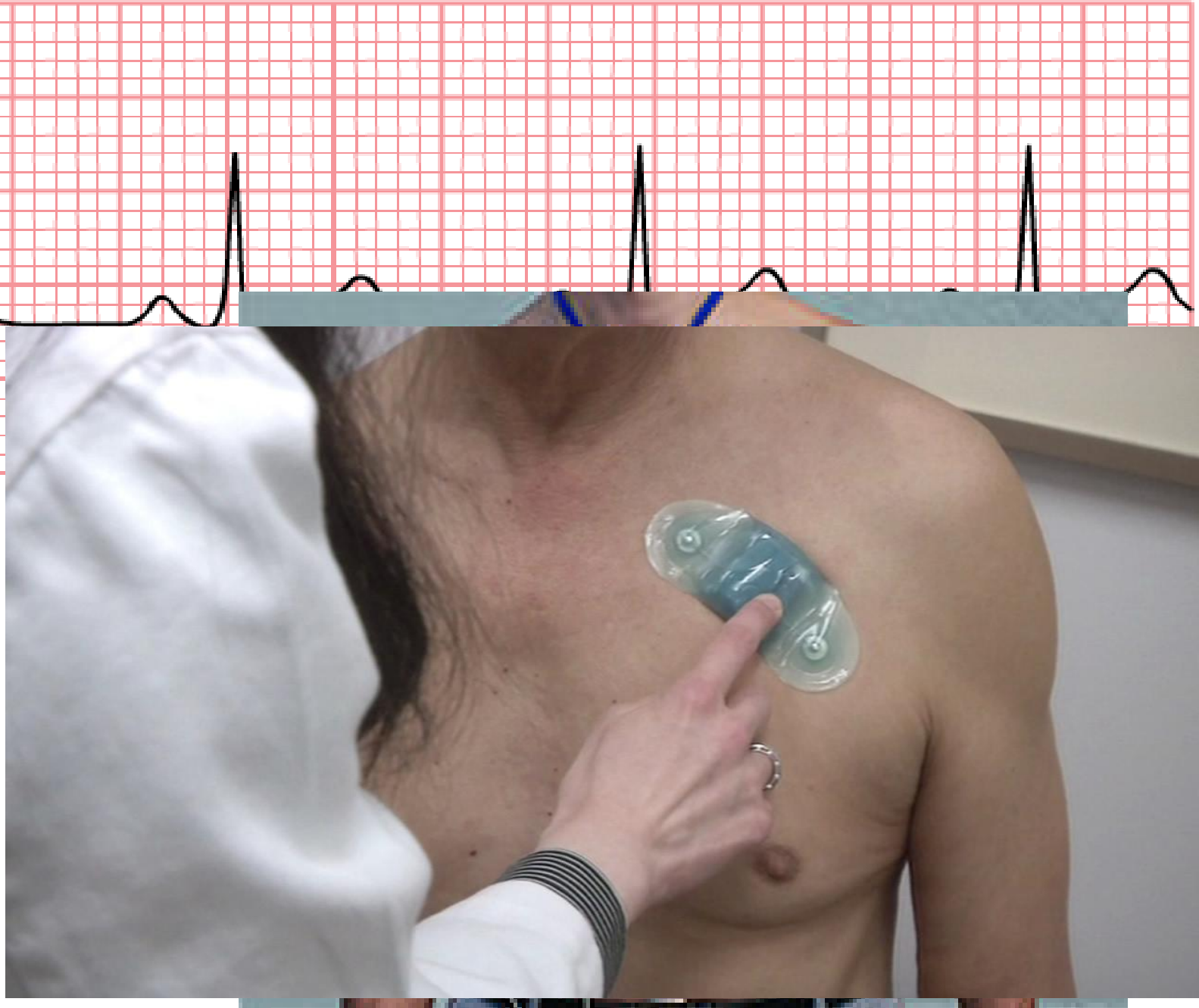


Need to catch it!

- Admit to hospital
- Telemetry, echo
- Holter monitor
- Zio Patch
- Loop recorder

Once caught -> treat!

- Ablation, meds, AICD



Things To Remember

- Passing out is a LOT of things and SUPER common
- Cardiac issues are the most worrisome
- Minimum ECG & D-stick
- But there are many other causes
 - Hypovolemia from missed trauma
 - Ectopics
 - Electrolytes
 - Dehydration



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