


Syncope

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Syncope

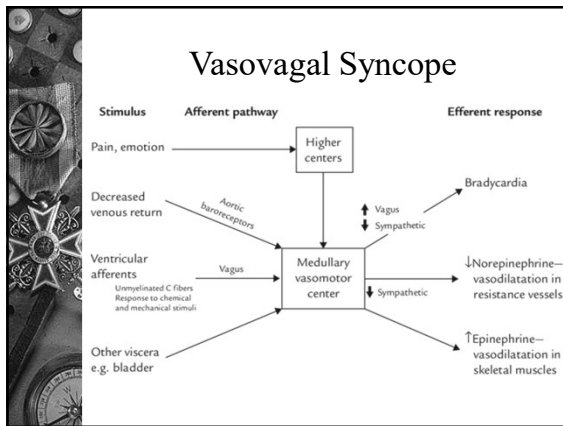
- ♦ 6% of all Medical Admissions
- ♦ Cerebral Hypoperfusion
- ♦ 50 % defy diagnosis inspite of History, Physical, EKG
- ♦ 30% first year mortality if untreated in cardiac patients with syncope

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- ♦ **Near Syncope / Pre Syncope**
- ♦ **Vasodepressor Syncope**
- ♦ Vagally mediated cardioinhibitory causing bradycardia and vasodepressor component causing hypotension
- ♦ **Orthostatic Hypotension**
- ♦ **Situational Syncope** ie: cough, micturition, deglutition, defecation, post prandial
- ♦ **Exertional** ie: exercise, aortic stenosis, tachy arrythmias, hypertrophic cardiomyopathy, pulmonary hypertension, pulmonic stenosis, atrial myxoma, congenital long QT syndrome, and right ventricular dysplasia

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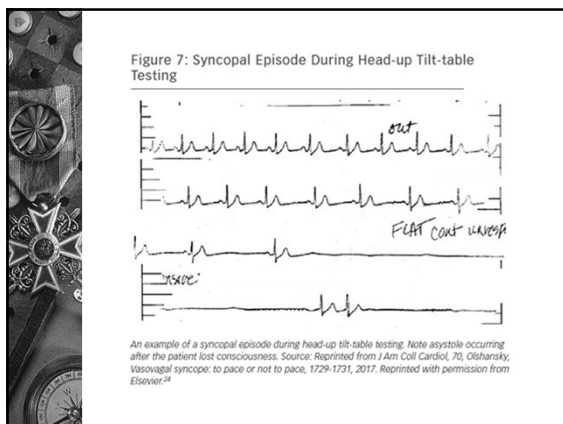
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TABLE 1


Types of syncope

| |
|--|
| Neurally mediated (60%–70%) |
| Vasovagal |
| Situational |
| Carotid sinus hypersensitivity |
| Postexertional |
| Orthostatic (10%) |
| Cardiac (10%–20%) |
| Structural heart disease with cardiac obstruction |
| Ventricular tachycardia |
| (structural heart disease or primary electrical disease) |
| Bradyarrhythmias |
| (degenerative conduction disease, drug effect, structural heart disease) |
| Other |
| Acute illness |
| Arterial occlusion with neurologic deficit |
| (carotid, vertebralbasilar, proximal subclavian) |
| Psychogenic |

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- ♦ Carotid Sensitivity: two components
 - Bradycardia
 - Vasodepressive
- ♦ Drop Attacks ie: Stokes Adams attacks-due to heart block
- ♦ Seizures
- ♦ Vertebral Basilar TIA's
- ♦ Panic Attacks
- ♦ Psychogenic Syncope
- ♦ Sleep Disorders


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PHYSICAL EXAM

- ♦ Orthostasis
- ♦ Aortic Stenosis
- ♦ Cardiomyopathy
- ♦ Carotid Bruits
- ♦ Carotid Massage


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Diagnostic Tests

- ♦ EKG
- ♦ 24 hour Holter Monitor
- ♦ Loop Recorder
- ♦ Event Recorders
- ♦ Signal Average EKG
- ♦ Tilt Tests
- ♦ Programmed Electrical Stimulation
- ♦ CT of the Brain
- ♦ Echocardiogram
- ♦ Carotid Doppler
- ♦ Polysomnography


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Therapy

- ◆ Neurally mediated syncope:
 avoid triggers
- ◆ Beta blockers
- ◆ Florinef
- ◆ Pacemaker
- ◆ Alcohol / Diabetes
- ◆ Catheter Ablation
- ◆ Valve replacement
- ◆ Myomectomy
- ◆ Coronary revascularization

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Case Study #1

- ◆ 60 yr old WM with inferior wall MI 5 years ago, presents with sudden onset of LOC, at rest lasting for a few minutes. He reports confusion upon recovery for 15 minutes. Denies CP.

A. Seizures
B. Complete heart block
C. Ventricular tachycardia
D. Psychogenic

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Case #2

- ◆ 75 y.o. WF with long HX of angina, and inoperable CAD, presents with episodic LOC at rest lasting few minutes followed by confusion for 15 minutes. EKG show nonspecific ST-T changes

A. Ventricular tachycardia
B. Ventricular fibrillation
C. Complete heart block
D. Orthostatic hypotension
E. Seizures

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Case #3

- ♦ 26 y.o WF, Pharmacist, with HX of SVT on Quinidine, develops URI. She takes ERYC for two days. Now has multiple episodes of blackouts.

- A. Dehydration
- B. SVT
- C. Torsades de Pointe
- D. Vasovagal

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Case #4

- ♦ 35 y.o WF, presents blackouts, happened after telephone ringing awakes her suddenly from sleep. Positive FX of sudden death.

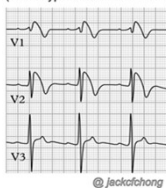
- A. Romano-Ward syndrome
- B. Brugada syndrome
- C. Congenital prolonged QT interval
- D. Seizures

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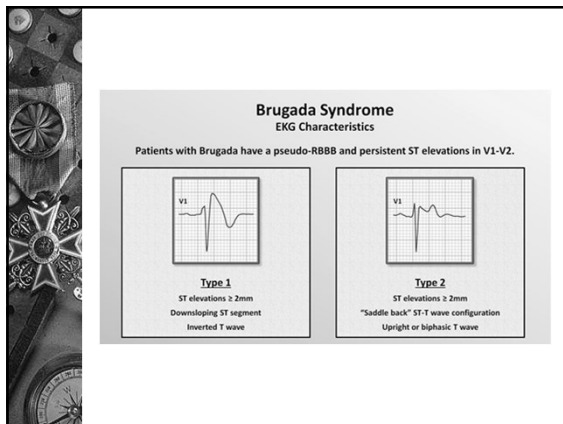
EMNote

Brugada Syndrome

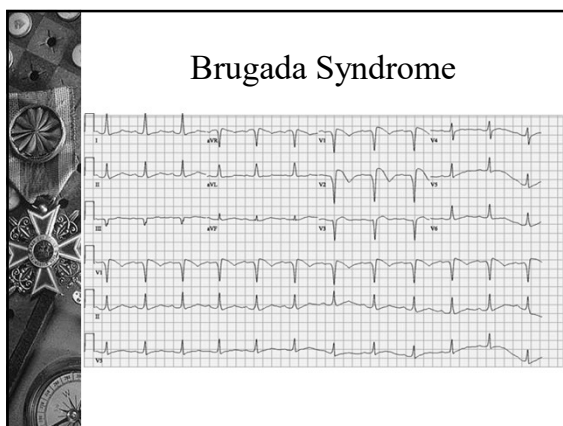
1. **Synonyms:**
 - Pokkuri Death Syndrome
 - SUNDS: Sudden Unexpected Nocturnal Death Syndrome
2. **Na channelopathy:**
 - Familial clustering, autosomal dominant inheritance
3. **Manifestations:**
 - Syncope, VT, VF, sudden death at sleep
4. **Treatment:**
 - ICD (implantable cardioverter-defibrillator), quinidine
5. **Diagnostic ECG**
(coved type STE & TWI in V1-3)



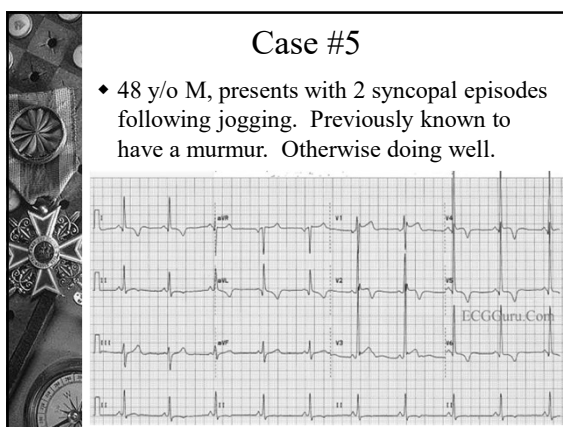
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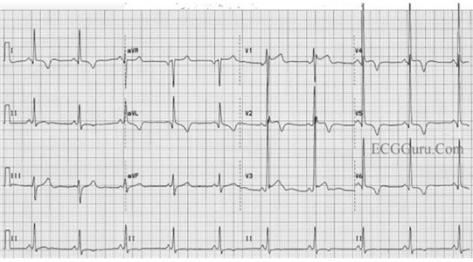
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A. IHSS
B. Aortic stenosis
C. Dehydration
D. Ventricular tachycardia

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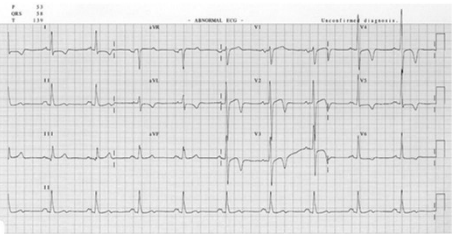
Case #6

♦ 18 y.o. WM, collapses during basketball game. B/P onsite is 80/40, systolic murmur noted. Patient confused for 15 minutes

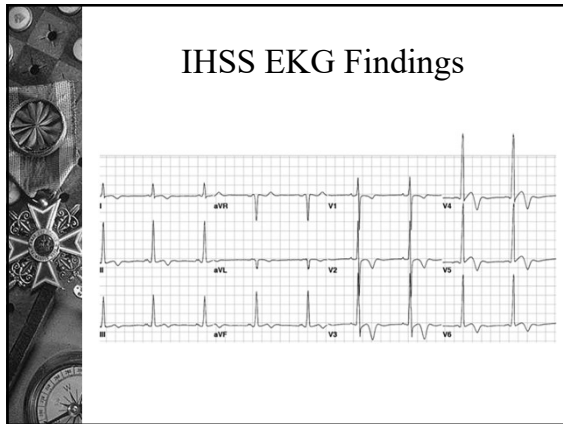
A. Bicuspid aortic valve
B. IHSS
C. Dehydration
D. Seizures

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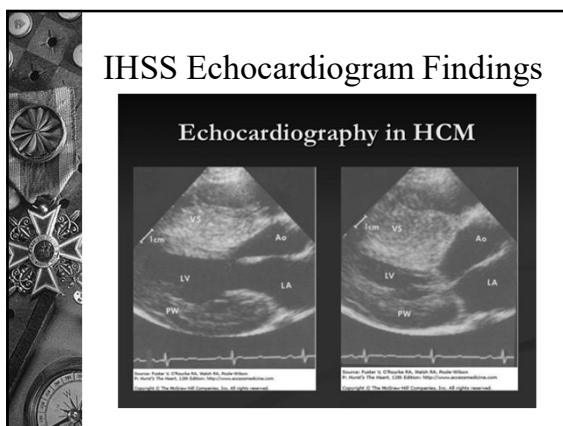
IHSS EKG Findings



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Case #7

♦ 24 y.o. Hispanic F, presents after passing out at the check out counter at Costco. Multiple previous syncopal episodes, with quick recovery after each episode

- A. Prolonged QT interval
- B. Brugada syndrome
- C. Vasovagal syncope
- D. Arrhythmogenic right ventricle

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Case #8

- ♦ 39 y.o. F with diabetes, had recent onset of severe headaches, mild gait disturbance, was found unconscious by husband in the kitchen, left hemiparesis noted, possible urinary incontinence noted, confused for 2 hours

A. Migraines
B. Atrial fibrillation
C. Seizures
D. Stroke

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Case #9

- ♦ 79 y.o. M reports passing out while shaving with electric razor on 2 occasions. Significant lacerations were noted

A. Electrocution
B. Psychogenic
C. Carotid hypersensitivity
D. Vertebrobasilar insufficiency

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Case #10

- ♦ 79 y.o. WM found slumped on the floor of bathroom at 2am, with pants down.

A. Mechanical fall
B. Orthostatic hypotension
C. Bradycardia
D. Seizure

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Case #11

- ♦ 19 y.o. college student, reports sudden falls and weakness of body without LOC, usually after exciting / emotional events. Incidentally has been falling asleep in class

- A. Narcolepsy
- B. Cocaine abuse
- C. Alcohol intoxication
- D. Too much partying
- E. Lack of sleep

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Case #12

- ♦ 56 y.o WM sp MI with PVC's placed on procainamide, presently with multiple near syncopal and syncopal episodes.

- A. Hypotension
- B. Bradycardia
- C. Ventricular tachycardia
- D. Hypokalemia

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Case #13

- ♦ 40 y.o WF on oral contraceptives, just returned from Europe, reports passing out for 30 sec. She reported palpitations and SOB upon recovery.

- A. Myocardial infarction
- B. Aortic dissection
- C. Pulmonary embolism
- D. Seizure

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Case #14

- ♦ 42 y/o M with a BMI of 32 reported a car crash on I-4 during his commute. He wakes up fatigued and tired every day, snores, has lack of energy, mild personality changes, and can not exactly recall what happened.

- A. Brain tumor
- B. Cardiomyopathy
- C. Sleep apnea
- D. Car problems

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Case #15

- ♦ 56 y/o F had recent oophorectomy for cancer, now at home recovering. On day #12, she passed out in kitchen while walking and awoke with slight shortness of breath. No leg pain.

- A. Dehydration
- B. Myocardial infarction
- C. Pulmonary embolism
- D. Psychogenic due to pain
- E. Narcotic overdose

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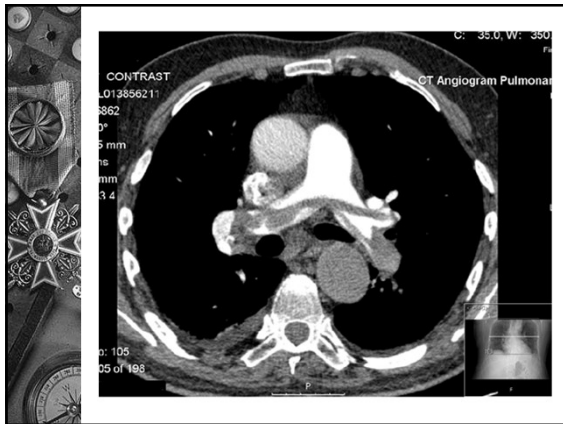


Case #16

- ♦ 65 y/o M in rehabilitation following extensive back surgery with post-operative prolonged ileus. Blood pressure 110/70. Positive orthostasis. No other EKG changes. No shortness of breath. BUN 30. Creatinine 1.2. Hemoglobin 10.

- A. Myocardial infarction
- B. Transient heart block
- C. Pulmonary embolism
- D. GI bleed

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Case #17

♦ 59 y/o M with hyperlipidemia and hypertension, had tearing chest pain radiating to the back with syncope and fluctuating left hemiparesis. EKG shows sinus tachycardia. Blood pressure 170/100. Chest X-Ray unremarkable.

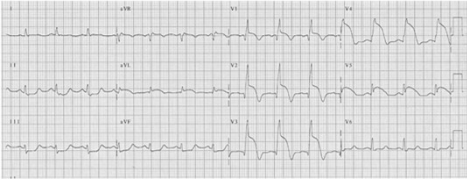
A. Myocardial infarction
B. Pulmonary embolism
C. Aortic dissection
D. Esophageal perforation

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Case #18

♦ 72 yr old M patient in rehab underwent carotid endarterectomy, has history of PCI, has syncope at the breakfast table lasting 30 seconds. He now has chest tightness, shortness of breath, and diaphoresis. What is the cause of his syncope?

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A. Stroke
B. Pulmonary embolism
C. Ventricular tachycardia/fibrillation
D. Bradyarrhythmia

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This Concludes
Dr. Jamnadas Lecture

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