



FOUNDATIONS
of Emergency Medicine

Foundations Frameworks

Approach to Syncope

Author: *Quentin Reuter, MD*

Editors: *Emilie Powell, MD; Kristen Grabow Moore, MD, MEd*

1. **Address Immediate Life Threats:**
 - a. Unstable Vital Signs: did the patient pass out because they have a HR of 30 or a BP of 70/40?
 - b. Glucose: rule out hypoglycemia
 - c. Acute MI: it would be a rare presentation for a patient to present with isolated syncope, but it must be ruled out (e.g., a right sided infarct with bradycardic cardiogenic shock could present atypically with syncope)
2. **Seizure vs Syncope:** once the patient is stabilized, take a closer history to determine if patient had a seizure or syncopal event
 - a. **Syncope:** prodrome (lightheadedness, vision blacking out, flushed, nauseated), although not all syncope has a prodrome
 - b. **Seizure:** history of seizure, seizure-like activity (although this can be reported in syncope too), urinary incontinence, tongue biting, postictal state
3. **Evaluate for Arrhythmic Syncope:** scrutinize EKG for the following-
 - a. Bradycardia, Tachycardia, AV Blocks
 - b. Wolff-Parkinson White: delta waves, short PR interval
 - c. Long QT syndrome (and Short QT syndrome)
 - d. Brugada: ST elevation in V1-V2 of varying morphology (depending on type)
 - e. Hypertrophic Obstructive Cardiomyopathy: dagger Q waves, ST-segment changes, T-wave inversion
 - f. Arrhythmic Right Ventricular Dysplasia: epsilon waves, V1-V3 with wide QRS, prolonged S-wave upstroke, and T-wave inversions
4. **Rule Out Non-Cardiac Life Threats:** rule out the following pathologies, most can be done with simple history and bedside testing (i.e. urine hCG, ultrasound, accucheck, EKG)
 - a. Subarachnoid Hemorrhage: report of thunderclap headache preceding syncope
 - b. Pulmonary Embolism: chest pain, shortness of breath; evaluate Wells' criteria
 - c. Aortic emergency: aortic dissection or ruptured abdominal aneurysm: sudden onset chest, abdominal, back pain (beware: many variable presentations); bedside ultrasound; CTA
 - d. Ectopic pregnancy: urine HCG; bedside ultrasound, including FAST, if positive
 - e. Anemia: any cause but specifically, GI bleed; with clinical suspicion, perform rectal exam and check hemoglobin
5. **Disposition**
 - a. Consider admission based on syncope history
 - i. Drop syncope (sudden syncopal event without prodrome): concerning for V tach
 - ii. Exertional syncope: concerning for HOCM
 - iii. Repeat Syncopal Events: likely not safe for discharge
 - b. Admission vs Discharge: consider cardiac risk profile
 - i. San Francisco Syncope Rule: CHES mnemonic, any positive criteria = patient is high risk for a serious outcome within 30 days (death or dysrhythmia) but poor sensitivity

References:

- Adams, James G. et al. Emergency Medicine: Clinical Essentials. Second Edition. Syncope. pg557-560. 2013