Foundations Frameworks

Approach to Syncope

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1. **Immediate Life Threats**: first, one must rule out 3 simple 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. STEMI: it would be a rare presentation for a patient to present with isolated syncope, but it must be ruled out. 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)
        i. 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, post-ictal state
3. **Evaluate for Arrhythmogenic 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. Arrhythmogenic Right Ventricular Dysplasia: epsilon waves, V1-V3 – QRS wide, prolonged S wave upstroke, T wave inversion
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; 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 complete rectal exam and hemoglobin
5. **Determine 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: CHESS mnemonic, any positive criteria = patient is high risk for a serious outcome within 30 days (death or dysrhythmia)

References:

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