Cardiac Syncope

Key Points:

- Syncope can be divided into cardiac, neurologic, vasovagal, orthostatic, medication, and unknown causes. In the majority of cases, the cause is unknown.
- Common arrhythmic causes of syncope include sinus bradycardia, AV nodal block, and VT from ischemic heart disease.
- Common causes of non arrhythmic cardiac syncope include aortic stenosis and hypertrophic cardiomyopathy.

A. General Approach to Syncope

1. Cardiac (arrhythmia/structural dz) - 18%
2. Neurologic (TIA, sz, migraine) - 10%
3. Vasovagal (+ carotid sinus, situational) - 24%
4. Orthostatic - 8%
5. Medications - 3%
6. Unknown - 37%

B. Cardiac Syncope

1. Arrhythmic causes
   a. Bradycardia (too slow)
      - Sinus bradycardia: sick sinus, tachy-brady, meds (β-blocker, CCB, etc.)
      - AV block (2nd/3rd degree): structural changes (age-related), meds, ischemia
   b. Tachycardia (too fast)
      - SVT’s: rare cause of syncope, typically AVNRT/AVRT
      - VT
         ♦ Commonly from structural heart dz (CAD, cardiomyopathy, etc.)
         ♦ Less common:
            o Congenital or acquired long QT
            o VT in structurally normal hearts
            o RV dysplasia
            o Brugada syndrome
            o Ventricular bigeminy

2. Non-arrhythmic causes
   a. Common
      - Aortic stenosis: with exertion, look for angina, CHF
      - HOCM: LV outflow tract obstruction, can be younger patients
   b. Uncommon
      - Big and bad:
         ♦ PE
         ♦ Aortic dissection
         ♦ Tamponade
      - Oddballs:
         ♦ Pulmonary HTN
         ♦ Atrial myxoma
         ♦ Subclavian steal