Syncope – Key Concepts

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I have no financial conflicts of interest to disclose

Syncope Definition

A sudden and brief loss of consciousness associated with loss of postural tone from which recovery is spontaneous and complete.

NOT syncope:

- Cardiac arrest
- Persistent AMS or coma
  - Stroke
  - Intoxication
  - Hypoglycemia
- Seizure
Syncope vs. Seizure

Preceding symptoms
- Syncope: diaphoresis, nausea, situational factors
- Seizure: aura

Motor activity
- Common during syncope, but usually arrhythmic and short-lived
- Head turns, oral automatisms, eye rolling also common during syncope

Tongue biting
- Very specific (97–99%) for seizure, especially if lateral tongue

Post–event symptoms
- Rapid return to consciousness is predictive of syncope
  ➢ *This is probably the single most useful clinical feature distinguishing syncope from seizure*

Causes of Syncope

- Neurocardiogenic – 25%
- Cardiac – 15%
- Neurologic – 10%
  *(This includes misclassified seizures. Neurologic causes of syncope, including stroke, are uncommon)*
- Orthostatic – 10%
Cause never diagnosed in ~1/3 cases

Cause unknown in ≥50% after ED evaluation
→ Increasing emphasis on risk stratification

“Syncope Plus” syndromes

Syncope + shock

Syncope + cardiopulmonary symptoms

Syncope + abdominal pain

Syncope + pregnancy

Syncope + neurologic symptoms

Syncope + orthostasis

Isolated syncope

Isolated syncope = syncope that occurs without associated symptoms

Likely causes: neurocardiogenic/vaso–vagal (benign) or cardiac (bad)
Neurocardiogenic syncope

- Most common identifiable cause of syncope
- Associated with good prognosis
- Confusing terminology: vaso-vagal, vasodepressor, neurally mediated, primary syncope
- Includes situational and carotid sinus syncope
- Clinical features
  - Provoked by fear, stress, pain, prolonged standing, micturition, defecation, coughing
  - Prodrome of nausea, diaphoresis, lightheadedness
  - Normal exam, normal ECG

Cardiac Syncope

- **Dysrhythmias**
- Structural disease (AS, HOCM)
- MI/ACS *uncommon* in the absence of other symptoms
- Concerning historical features
  - Exertional syncope
  - Lack of prodrome
  - Syncope while seated/supine
  - Associated CP/SOB/palpitations
  - Age/risk profile
  - Family history sudden death
- EKG
  - Dysrhythmias
  - Pre-excitation syndromes
  - Prolonged QT
  - Brugada
  - HCM
- Cardiac markers: not helpful in absence of CP
Risk stratification

Risk factors for poor outcome
- Older age
- Abnormal ECG
- Lack of prodrome
- History of CV disease, especially CHF

San Francisco Syncope Rule
- CHESS mnemonic
  - CHF history
  - Hemoglobin <30%
  - ECG abnormal
  - Shortness of breath
  - Systolic BP < 90mmHg
- 98% sensitive for short-term adverse events in original studies
- However, several validation studies have suggested that the SF rule is NOT reliable in predicting short-term adverse outcomes in syncope
  - Do NOT rely solely on the SF rule to make disposition decisions!

Questions or comments? Please contact me at bbesinger@iuhealth.org