SYNCOPE

THE SUDDEN TRANSIENT LOSS OF CONSCIOUSNESS WITH A LOSS OF POSTURAL TONE, WITH CONSCIOUSNESS BEING REGAINED WITHOUT INTERVENTION.

The above definition precludes other common causes of LOC (hypoglycaemia, seizures), but for simplicity, these will be listed in the differential of syncope.

PATHOPHYSIOLOGY:

- The final common pathway resulting in syncope is dysfunction of either both cerebral hemispheres or the brainstem, usually from acute hypoperfusion

DIAGNOSTIC APPROACH:

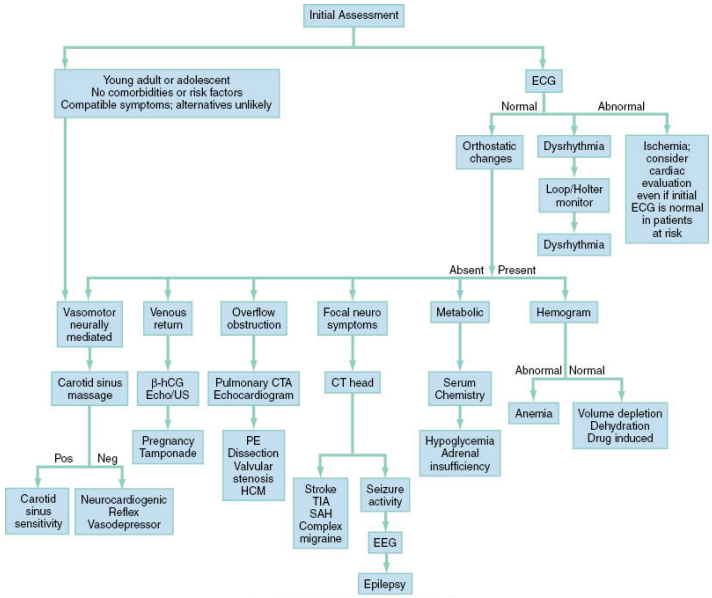
- Potential causes are NUMEROUS
- Life-threatening, or critical diagnoses are considered first

Table 19-3 Critical Diagnoses to Consider in Syncope

Myocardial infarction
Life-threatening dysrhythmias
Thoracic aortic dissection
Critical aortic stenosis
Hypertrophic cardiomyopathy
Pericardial tamponade
Abdominal aortic aneurysm
Pulmonary embolism
Subarachnoid hemorrhage
Stroke
Toxic-metabolic derangements
Severe hypovolemia or hemorrhage

- Evaluation focuses on excluding serious pathology, as most causes are benign.
- Can categorise according to primary mechanism:
    - Focal hypoperfusion of CNS structures
    - Systemic hypoperfusion resulting in CNS hypoperfusion:
        - Outflow obstruction
        - ↓CO (tachycardia, bradycardia)
    - Vasomotor
    - Carotid sinus sensitivity
    - CNS dysfunction with normal perfusion → ↓BSL, hypoxia, seizure, toxins, psychogenic
- SYMPTOMS:
    - Rate of onset, position, rate of recovery important
        - Rapid onset while sitting/supine and prolonged recovery more suggestive of cardiac cause
    - Onset during exertion suggests outflow obstruction
        - After exercise suggests orthostasis
    - Events DURING syncope LESS HELPFUL
        - E.g. tonic clonic movements can occur in any form of syncope
    - Associated symptoms important:
        - Especially chest pain or SOB

        - Tongue-biting/incontinence suggest seizure disorder
    - PMHX:
        - Critical in risk stratification
        - Especially CVS/Cerebrovascular disease, HT, DM
    - Medications:
        - β blockers
        - Vasodilators
        - Diuretics
        - Q-T prolonging agents (amiodarone, procainamide, flecainide, sotalol)
        - Anticonvulsants (carbamazepine, phenytoin)
        - Narcotics
        - Insulin
- ANCILLARY STUDIES:
    - 12 LEAD ECG IS CHIEF DIAGNOSTIC ADJUNCT IN SYNCOPE
        - Warranted in all cases of syncope except in young
        - Dysrhythmia, acute ischaemia
        - RBBB with ST ↑ in V1-3 → BRUGADA
        - RV strain in PE
    - Routine bloods have little utility
    - CT brain not indicated in neurologically intact patient
- ROSEN'S SUGGESTS THE FOLLOWING DIAGNOSTIC ALGORITHM



- Orthostatic vital signs, although unreliable as an evaluation of volume status, may be helpful when positional changes are accompanied by typical presyncopal symptoms
- SCORING SYSTEMS LACK EXTERNAL VALIDATION:
    - SAN FRANCISCO SYNCOPE RULE:
        - In absence of following, patient is at sufficiently low risk to be investigated as an outpatient
            - Abnormal ECG
            - SOB
            - Systolic BP ≤ 90
            - Anaemia (haematocrit ≤ 30%)

    - History of CCF
- Admission should be advocate monitoring if:
    - Age ≥ 45
    - Pre-existing cardiovascular or congenital heart disease
    - Family history of sudden death
    - Serious comorbidities
    - Exertional syncope