

## SYNCOPE

Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope  
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## What is syncope? Introduction

- Symptom complex
- Transient loss of consciousness and postural tone
- Spontaneous recovery
- It's not vertigo, seizures, coma, altered mentation



## Methodology

- Inclusion criteria - search criteria
- Exclusion criteria
  - children
  - syncope secondary to another disease process
  - chest pain, seizures, headache, abdominal pain, dyspnea, hypotension, hemorrhage



## 1. What history and physical examination data help risk-stratify patients with syncope?

- Prodromal symptoms - duration
- Position changes or seated?
- Rate of recovery
- Movements during event\*



## Past medical history\*

- Cardiac
  - CAD / CHF - Ejection fraction < 30%
  - Valvular heart disease
- Cardiac risk factors / Age
- Medications
  - QT period prolonging medications



## Historical green lights

- Recurrent syncope +/-
- Psychologically noxious stimulus
- Reflex syncope



### Physical exam red flags

- Maybe - orthostatic VS changes
- Maybe - blood pressure L & R arms
- Maybe - irregular pulse
- Signs of congestive heart failure
- Hypotension
- Significant murmur



### What history and physical examination data help risk-stratify patients with syncope?

- **Level A:** Use history or physical examination findings consistent with heart failure to help identify patients at higher risk of adverse outcome
- **Level B**
  - Consider older age, structural heart disease, or a history of coronary artery disease as risk factors for adverse outcome.
  - Consider younger patients with syncope that is nonexertional, without history or signs of cardiovascular disease, a family history of sudden death, and without comorbidities to be at low low risk of adverse events.
- **Level C - none**



### What diagnostic testing data help to risk-stratify patients with syncope?

- History and physical guide ancillary studies
- Routine laboratory work usually unrewarding\*



### Electrocardiography

- Electrocardiography - ECG almost all cases
  - PR interval
  - QT interval
  - Right ventricular strain patterns
  - Heart blocks



### 2. What diagnostic testing data help to risk-stratify patients with syncope?

- **Level A:** Obtain a standard 12-lead ECG in patients with syncope
- **Level B - None**
- **Level C**
  - Laboratory testing and advanced investigative testing such as echocardiography or cranial CT scanning need not be routinely performed unless guided by the specific findings in the history or physical examination



### 3. Who should be admitted after an episode of syncope of unclear cause?

- Does admission influence outcomes?
- Common sense
- Evidence



### Who should be admitted after an episode of syncope of unclear cause?

- New approach - risk stratification
- Following history, physical examination, ECG
- Who needs further workup?
  - Inpatient or observation unit?
- Moving away from specific diagnostic assignment....



### Low Risk Group

- Age < 50 years\*
- No history of cardiovascular disease
- Symptoms of reflex or neurally-mediated syncope
- Normal cardiovascular examination
- Normal ECG findings



### High Risk Group

- Chest pain suggestive ACS
- History or signs of congestive heart failure
- History of moderate / severe valvular disease
- ECG abnormalities
  - ischemic changes, prolonged QT (>500 ms)
  - complete heart block, brady or tachy rhythms



### Intermediate Risk Group

- Age  $\geq 50$  years
- History of CAD, CHF, MI
- Family history of unexplained sudden death
- Cardiac devices without evidence of dysfunction



### San Francisco Syncope Rule

- Systolic BP < 90 mmHg at triage
- Shortness of Breath
- History Congestive Heart Failure
- Abnormal ECG
- Hematocrit < 30%

If any positive, then at high risk for serious outcome  
If all negative, then at low risk for serious outcome



### Who should be admitted after an episode of syncope of unclear cause?

- Level A- none specified
- Level B
  - Admit patients with syncope and evidence of heart failure or structural heart disease
  - Admit patients with syncope and other factors that lead to stratification as high-risk for adverse outcome (older age / comorbidities, Abnormal ECG\*, HCT < 30, History of heart failure or CAD)
- Level C- none specified

\*ECG - acute ischemia, dysrhythmias, or significant conduction abnormalities

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