

Friday 16 morning – Cipressi Room



CORE CURRICULUM SYNCOPE 2015 UPDATE



Case Study #1

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**NO CONFLICT OF
INTEREST TO
DECLARE**

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Syncope 2015 update Case Study #1

SCENARIO

- 45 year-old man found down on the street, wondering what happened.
- No prior history.
- Normal physical examination.
- No medications.
- Normal ECG.
- Admitted to EMERGENCY DEPARTMENT.
- **HOSPITAL ADMISSION OR NOT?**

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Challenges of Syncope Workup

- Identify pts requiring immediate intervention when diagnosis is established.
- Identify, among pts without a diagnosis, what is the appropriate strategy for evaluation: *inpatient or outpatient?*

Consider the potential risk for adverse outcomes if evaluation and workup is delayed.

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restricted CO, but may be in part due to an in or OH. For instance, in the setting of valvular syncope is not solely the result of restricted CO part due to inappropriate reflex vasodilation or cardiac arrhythmia. Furthermore, arrhythmias, fibrillation, are frequently important causes of the mechanism of syncope may be multifactorial. If the heart as the cause of the problem is justified, then correct the underlying structural disease, when

1.2 Epidemiology

Age of first faint

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SYNCOPE OR NOT?

- The patient doesn't know what happened to him:
probably he had no premonitory symptoms or post-event amnesia.
- Did he recover spontaneously without sequelae?
Apparently yes.
- Did he lose the consciousness? Did he lose the postural tone?
- How long did he remain fainted?

Do we have an eyewitness?

Case Study # 1

45 year-old man found down on the street wondering what happened.

What could an eyewitness tell us?

- *Duration of loss of consciousness and evidence of seizure activity.*

Syncope defined as TLOC with an inability to maintain postural tone, **rapid and spontaneous recovery.**

Mild and brief, tonic-clonic activity may accompany syncope of any etiology (“convulsive syncope”).

- *Witness also may report falls or trauma secondary to the episode.*
- *Post-syncopal duration of confusion or lethargy.*

After syncope, patients may appear confused, but this resolves **within moments.**

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WAS FOUND AND ADMITTED IN THE ED

- Completely recovered;
- Normal physical;
- Normal ECG;
- No other relevant information.

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Which of the listed diagnoses should be considered possible?

1. Paroxysmal arrhythmia
2. Fall
3. NM Syncope
4. Epilepsy
5. All of them

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Which of the listed diagnoses should be considered possible?

1. Paroxysmal arrhythmia
2. Fall
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5. All of them

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SYNCOPE OR NOT?

- Did the patient lose the consciousness? **Suppose yes.**
- Did the patient lose the postural tone? **Suppose yes.**
- How long did he remain fainted?
Spontaneous recovery in less than 1 minute.

Suppose it was a syncope.

Admission or not?

American College of Emergency Physicians (ACEP) Clinical Policy on Syncope

A guideline for physicians working in hospital-based EDs. Based on review of literature.

Inclusion Criteria.

Adult presenting to the ED with syncope.

Exclusion Criteria.

Children or patients in whom the episode of syncope is thought to be secondary. (seizures, chest pain, headache, abdominal pain, dyspnea, hemorrhage, hypotension, or a new neurologic deficit).

Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope - ACEP Guidelines

History and physical examination data to stratify patients with syncope:

- *Level A recommendations.*

History or physical examination findings consistent with **heart failure** (**consider high risk**).

- *Level B recommendations.*

1. Older age, structural heart disease, or a history of coronary artery disease (**consider high risk**).

2. Younger patients with non-exertional syncope, without history or signs of cardiovascular disease, no family history of sudden death, and without comorbidities (**consider low risk**).

Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope - ACEP Guidelines

Considered High-risk for Adverse Outcome

- Older age and associated comorbidities*
- History or presence of heart failure, coronary artery disease, or structural heart disease
- Abnormal ECG†
- HCT <30 (if obtained)

**Different studies use different ages for decision making.*

†ECG abnormalities, including acute ischemia, dysrhythmias, or significant conduction abnormalities.

Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope - ACEP Guidelines

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

- *Level A recommendations.* None specified.
- *Level B recommendations.*
 1. Admit patients with syncope and evidence of heart failure or structural heart disease.
 2. other factors that lead to stratification as high-risk for adverse outcome.
- *Level C recommendations.* None specified.

Critical Issues in the Evaluation and Management of Adult Patients Presenting to the Emergency Department with Syncope - ACEP Guidelines

*American College of Emergency Medicine
policy on syncope*

Applying the I

- all patients with syncope were identified;

reduced from 57.5% to 28.5%.

Our patient would not be admitted

Predicting adverse outcomes in syncope

- To determine if a predefined decision rule could identify patients with syncope in risk;
- Prospective, observational, cohort study;
- Consecutive patients with syncope ≥ 18 yo;
- Primary outcome: critical intervention or an adverse outcome **within 30 days**.

Predicting adverse outcomes in syncope

Sensitivity	97% (93–100%)
Specificity	62% (56–69%)
Negative Predictive Value	99% (97–100%)
Positive Predictive Value	44% (36–52%)
Reduction in Admissions	48% (43–54%)

Figure 2. Performance of the decision rule.

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- 1) Signs and symptoms of ACS, HF, conduction disorders or any structural heart disease?
- 2) Persistent abnormal vital signs?
- 3) Volume depletion? GI/GI bleeding? GI/GI bleeding?
- 4) Recent (or past) (neuro) event?
- 5) Recent (or past) (neuro) event?
- 6) Recent (or past) (neuro) event?
- 7) Family history of sudden death?

Our patient would not be admitted

Short- and Long-Term Prognosis of Syncope, Risk Factors, and Role of Hospital Admission

Results From the STePS (Short-Term Prognosis of Syncope) Study

To assess short and long-term prognosis of syncope and associated risk factors.

- 4 general hospitals in Milan area;
- establish the predictors of adverse events within 10 days and 1 year from the visit in the ED;
- mortality, rate of major therapeutic procedures;
- to determine whether hospital admission affected prognosis of syncope.

Short- and Long-Term Prognosis of Syncope, Risk Factors, and Role of Hospital Admission

Results From the STePS (Short-Term Prognosis of Syncope) Study

Inclusion criteria

- > 18 years old;
- syncope within the previous 48 h at the ED;
- 676 pts enrolled – 670 pts 10 days follow-up/
667 pts 1 year follow-up.

Short- and Long-Term Prognosis of Syncope, Risk Factors, and Role of Hospital Admission Results From the STePS (Short-Term Prognosis of Syncope) Study

Within 10 days from syncope:

6.1% of patients had serious outcomes

Independent risk factors:

1. abnormal ECG at presentation
2. concomitant trauma
3. absence of presyncopal symptoms
4. male gender

Short- and Long-Term Prognosis of Syncope, Risk Factors, and Role of Hospital Admission Results From the STePS (Short-Term Prognosis of Syncope) Study

Within 1 year from syncope:

6.0% mortality (40 deaths)

Independent risk factors:

1. age older than 65 years
2. coexistence of neoplasms
3. cerebrovascular diseases
4. structural heart diseases
5. ventricular arrhythmias

Short- and Long-Term Prognosis of Syncope, Risk Factors, and Role of Hospital Admission

Results From the STePS (Short-Term Prognosis of Syncope) Study

- almost 50% of admitted subjects were older than 65 years of age.
- a favorable short-term prognosis was associated with a better long-term prognosis.
- patients who were discharged after the short-term prognosis were “sicker” than discharged patients.

patient would be admitted?

OESIL RISK SCORE

Emergency Department

INDEPENDENT RISK FACTORS

- Age older than 65
- Structural heart disease
- Symptoms
- Symptoms

patient would be admitted?

Clinical predictors of cardiac syncope at initial evaluation in patients referred urgently to general hospital: the EGSYS Score.

PREDICTORS OF CARDIAC SYNCOPES - FOLLOW UP (14 +/- 73 DAYS)

- Abnormal ECG and/or heart failure
- Palpitations before syncope
- Syncope during exertion
- Syncope during sleep
- A score ≥ 2 predicted cardiac syncope.
- A score ≥ 2 predicted cardiac syncope and/or precipitating factors.

A score ≥ 2 predicted cardiac syncope – sensitivity: 95% and specificity: 61%

patient would be admitted?

Hospital Admission or Not?

High-risk pts require hospital admission.

Low risk pts don't.

WHAT ABOUT INTERMEDIATE-RISK PATIENTS?

- Take into consideration other symptoms, other medical problems, and social factors.

Absence of premonitory symptoms or amnesia; we don't know if he was running or walking or standing for a long time; first episode at 45 yo;

- Take into consideration the need of additional tests and how fast they should be performed.

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What strategy would you recommend for the patient?

1. In-hospital continuous ECG-monitoring, while blood tests and cardiovascular risk stratification;
2. Autonomic evaluation after 1;
3. EP study first;
4. Discharge with loop recorder;
5. More than one is correct.

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What strategy would you recommend for this patient?

1. In-hospital continuous ECG monitoring; blood tests and cardiac catheterization;
2. Autonomic testing;
3. EP study;
4. Implantable loop recorder;
5. Home monitoring is correct.

SYNCOPE OBSERVATION UNIT

Randomized Clinical Trial of an Emergency Department Observation Syncope Protocol vs. Routine Inpatient Admission

An ED Observation Syncope Protocol

- Lower admission rate (15% vs. 92%)
- Shorter hospital stay (29 vs. 47 hours).
- Similar serious outcome rates after hospital discharge at 30-days and 6-months.
- Lower Hospital costs.
- No differences in quality-of-life scores or in patient satisfaction.

THANK YOU!

