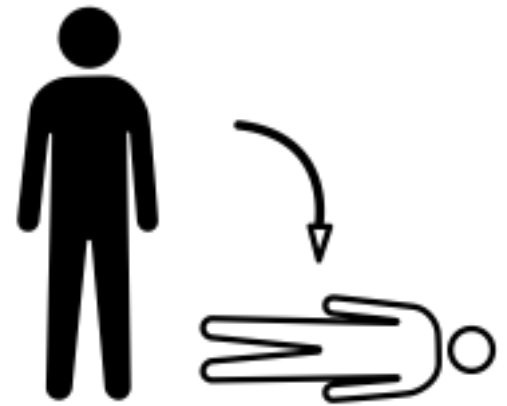


Syncope and the ED

Question:

A 65-year-old male with a past medical history of congestive heart failure presents to the emergency department after an unwitnessed syncope episode where he “fell to the floor” three hours prior to arrival. The event took place when the patient was sitting on his couch and quickly stood up. The patient denies dizziness, headache, shortness of breath, or any other prodromal symptoms. He admits to left-sided pain in his neck when he turns rotates his head bilaterally. This has never happened previously. He denies any family history of syncopal episodes or any other neurological disorder. Patient is afebrile with a blood pressure of 126/78 and heart rate of 80 beats per minute at triage. On physical exam, the patient is A&O x 3. His cardiopulmonary exam is unremarkable. Cranial nerves II-XII are intact and the remainder of the neurological exam is benign. There are no signs of injury or trauma to the head and neck. Orthostatic vitals are negative. His hemoglobin and hematocrit and all other labs are within normal limits. Head CT is negative for acute intracranial processes and ECG is normal. Under the San Francisco Syncope Rule, is this patient “low risk” or “not low risk” for a “serious future outcome”?

- A. The patient is “low risk” because he has a normal ECG.
- B. The patient is “low risk” because he has a normal hematocrit.
- C. The patient is “low risk” because his systolic blood pressure was over 90 at triage.
- D. The patient is “not low risk” because he is over 60-years-old.
- E. The patient is “not low risk” because he has a history of congestive heart failure.



<https://thenounproject.com>



<http://www.tctmd.com>

Answer:

The answer is **E**. The patient is “not low risk” because he has a history of congestive heart failure.

Syncope and the Emergency Department:

The American Heart Association broadly defines syncope as a temporary loss of consciousness usually related to insufficient blood flow to the brain.¹ More specifically, syncope is a sudden and transient loss of consciousness with simultaneous loss of ability to maintain postural tone, followed by spontaneous recovery and a return to baseline neurological functioning.² Neurally Mediated Syncope is the most common type of syncope and is caused by a misregulation of blood pressure and/or the heart rate secondary to a trigger such as pain or emotional stress.¹ Syncope is a common cause for emergency department visits and subsequent admission to the hospital nationwide.²

However, evaluating patients presenting with syncope is challenging due to the variety of potential underlying processes and/or diseases.² These causes can be relatively benign such as the aforementioned, Neurally Mediated Syncope or more significant such as myocardial infarction, cardiac arrhythmia, pulmonary embolism, and occult hemorrhage.² Because of this wide array of possibilities, many patients are admitted for inpatient evaluation when they could have been safely discharged from the emergency department with a “low risk” for a “serious outcome”.² While clinical judgment along with a thorough HPI and physician exam are always of paramount importance, the decision-making process on whether to admit or discharge a patient presenting to the ED with syncope can be facilitated through use of the San Francisco Syncope Rule.³

San Francisco Syncope Rule:

The San Francisco Syncope Rule was established in 2004 and has been recognized as a risk assessment tool to predict whether a patient who presents with syncope is “low risk” or “not low risk” for a future “serious outcome”.³ It has been validated in various settings and patient populations.²

Patients are identified as not at low risk for a serious future outcome if **any** of the following five criteria are present upon admission to the emergency room:

- (1) History of Congestive Heart Failure
- (2) Abnormal ECG
- (3) Shortness of Breath
- (4) Systolic Blood Pressure < 90 mmHg at Triage
- (5) Hematocrit < 30%³

EM CASE OF THE WEEK.

BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE



Care Warriors

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The authors of the San Francisco Syncope Rule recommend using the tool during the initial evaluation of a patient presenting to the ED with syncope and should pay close attention to ECG changes or ECG abnormalities.³

If a patient is deemed “not low risk”, the authors recommend serious consideration of admission with monitoring on telemetry and further inpatient work-up due to the possibility of a serious outcome such as myocardial infarction, cardiac arrhythmia, pulmonary embolism, subarachnoid hemorrhage, or other significant hemorrhage.⁴

The authors state their tool is 96% sensitive though a study by Albert Einstein College of Medicine found the San Francisco Syncope Rule to have a sensitivity of 74%.⁴

Take Home Point:

Hospital admissions due to syncope account for significant health care costs in the United States.² Although the risk assessment tool should not be used along to definitively rule out serious disease, it is a reliable method to assist physicians in their decision-making process of whether to discharge or admit patients presenting to the emergency department with syncope.

REFERENCES

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2. Patel, R, Quinn, J., Syncope: a review of emergency department management and disposition. *Clin Exp Emerg Med*. 2015
3. Saccilotto RT, Nickel CH, Bucher HC, Steyerberg EW, Bingisser R, Koller MT. San Francisco Syncope Rule to predict short-term serious outcomes: a systematic review. *CMAJ: Canadian Medical Association Journal*. 2011
4. MDCalc, San Francisco Syncope Rule, *www.mdcalc.com*.

San Francisco Syncope Rule

Defines high-risk criteria for patients with syncope.

Favorite ★

When to Use ▾	Why Use ▾
Congestive heart failure history	<input type="radio"/> No <input checked="" type="radio"/> Yes
Hematocrit <30%	<input checked="" type="radio"/> No <input type="radio"/> Yes
EKG abnormal (EKG changed, or any non-sinus rhythm on EKG or monitoring)	<input checked="" type="radio"/> No <input type="radio"/> Yes
Shortness of breath symptoms	<input checked="" type="radio"/> No <input type="radio"/> Yes
Systolic BP <90 mmHg at triage	<input checked="" type="radio"/> No <input type="radio"/> Yes

Patient is NOT in the low-risk group for serious outcome.

www.mdcalc.com



This month's case was written by Ian Singer. He is a 4th year medical student at Nova Southeastern University. He completed his emergency medicine rotation at Broward Health Medical Center in October, 2018. Ian plans to pursue a career in Family Medicine.