Adult and Pediatric Syncope and Presyncope

Aliases

Loss of consciousness, passed out, fainted

Patient Care Goals

1. Stabilize and resuscitate when necessary
2. Initiate monitoring and diagnostic procedures
3. Transfer for further evaluation

Patient Presentation

1. Syncope is heralded by both the loss of consciousness and the loss of postural tone and resolves spontaneously without medical interventions. Syncope typically is abrupt in onset and resolves equally quickly. EMS clinicians may find the patient awake and alert on initial evaluation.
2. Near syncope is defined as the prodromal symptoms of syncope. The symptoms that can precede syncope last for seconds to minutes with signs and symptoms that may include pallor, sweating, lightheadedness, visual changes, or weakness. It may be described by the patient as “nearly blacking out” or “nearly fainting.”
3. Rapid first aid during the onset may improve symptoms and prevent syncope.

Inclusion Criteria

1. Abrupt loss of consciousness with loss of postural tone
2. Prodromal symptoms of syncope

Exclusion Criteria

Conditions other than the above, including:

1. Patients with alternate and obvious cause of loss of consciousness (e.g., trauma – See Head Injury Guideline).
2. Patients with ongoing mental status changes or coma should be treated per the Altered Mental Status Guideline.
3. Patients with persistent new neurologic deficit [See Stroke/Transient Ischemic Attack Guideline].

Patient Management

Assessment

1. Pertinent history
    a. Review the patient's past medical history, including a history of:
        i. Cardiovascular disease (e.g., cardiac disease/stroke, valvular disease, hypertrophic cardiomyopathy, mitral valve prolapse).
        ii. Seizure.
        iii. Recent trauma.
        iv. Active cancer diagnosis.
        v. Dysrhythmias including prior electrophysiology studies/pacemaker and/or implantable cardioverter defibrillator (ICD).
        vi. History of syncope.
        vii. History of thrombosis or emboli.
    b. History of Present Illness, including:
        i. Conditions leading to the event: after transition from recumbent/sitting to standing; occurring with strenuous exercise (notably in the young and seemingly healthy).
            i. Syncope that occurs during exercise often indicates an ominous cardiac cause. Patients should be evaluated in the emergency department.
        ii. Patient complaints before or after the event including prodromal symptoms.

        iii. History of symptoms described by others on scene, including seizures or shaking, presence of pulse/breathing (if noted), duration of the event, events that lead to the resolution of the event.
    c. Review of systems:
        i. Current medications (new medications, changes in doses)
        ii. Fluid losses (nausea/vomiting/diarrhea) and fluid intake
        iii. Last menstrual period/pregnant
        iv. Occult blood loss (gastrointestinal (GI)/genitourinary (GU))
        v. Palpitations
        vi. Unilateral Leg swelling, history of recent travel, prolonged immobilization, malignancy
2. Pertinent Physical exam including:
    a. Attention to vital signs and evaluation for trauma.
    b. Note overall patient appearance, diaphoresis, pallor.
    c. Detailed neurologic exam (including stroke screening and mental status).
    d. Heart, lung, abdominal, and extremity exam.
    e. Additional evaluation:
        i. Cardiac monitoring
        ii. Oxygen saturation (SPO2)
        iii. Ongoing vital signs
        iv. 12-lead EKG
        v. Blood glucose level (BGL)

Treatment and Interventions:

Should be directed at abnormalities discovered in the physical exam or on additional examination and may include management of cardiac dysrhythmias, cardiac ischemia or infarct, hemorrhage, shock, and the like.

a. Manage airway as indicated.
b. Administer **oxygen** as appropriate for dyspnea or distress with a target of achieving greater than 93% saturation for most acutely ill patients.
c. Evaluate for hemorrhage and treat for shock if indicated.
d. Establish IV/IO access ***[AEMT].***
e. Consider normal saline/lactated ringers IV/IO fluid bolus 20 ml/kg if clinically appropriate.
f. Apply **ECG** cardiac monitor**.**
g. Apply **12-lead ECG.**
h. Monitor for and treat arrhythmias (if present refer to appropriate guideline).

Patient Safety Considerations:

1. Patients suffering syncope due to arrhythmia may suffer recurrent arrhythmia and should therefore be placed on an ECG cardiac monitor.
2. Geriatric patients suffering falls from standing may sustain significant injury and should be diligently screened for trauma; go to General Trauma Management guidelines.

Notes and Educational Pearls Key Considerations

- By being most proximate to the scene and to the patient's presentation, EMS providers are commonly in a unique position to identify the cause of syncope. Consideration of potential causes, ongoing monitoring of vitals and cardiac rhythm as well as detailed exam and history are essential pieces of information to pass onto hospital providers.
- All patients suffering from syncope deserve hospital level evaluation, even if they appear normal with few complaints on scene
- High risk causes of syncope include the following:

    a. Cardiovascular
        i. Myocardial infarction

ii. Aortic stenosis
iii. Hypertrophic cardiomyopathy
iv. Pulmonary embolus
v. Thoracic aortic dissection
vi. Lethal dysrhythmia

b. Neurovascular
i. Intracranial hemorrhage
ii. Transient ischemic attack or stroke

c. Hemorrhagic
i. Ruptured ectopic pregnancy
ii. GI bleed
iii. Aortic rupture

- Consider high risk 12-lead ECG features including, but not limited to:

a. Evidence of QT prolongation (generally over 500ms)
b. Delta waves
c. Brugada syndrome (incomplete RBBB pattern in V1/V2 with ST segment elevation)
d. Hypertrophic obstructive cardiomyopathy

Pertinent Assessment Findings

- Evidence of trauma
- Evidence of cardiac dysfunction (e.g. evidence of CHF, arrhythmia)
- Evidence of hemorrhage
- Evidence of neurologic compromise
- Evidence of alternate etiology, including seizure
- Initial and ongoing cardiac rhythm
- 12-lead ECG findings

Quality Improvement

Associated NEMSIS Protocol(s) (eProtocol.01)

- 9914149—Medical-Syncope

Key Documentation Elements

- Presenting cardiac rhythm
- Cardiac rhythm present when patient is symptomatic
- Any cardiac rhythm changes

Performance Measures

- Acquisition of 12-lead ECG
- Application of ECG cardiac monitor

EMS Compass® Measure *(for additional information, see www.emscompass.org) Stroke-01: Suspected stroke receiving prehospital stroke assessment.* To measure the percentage of suspected stroke patients who had a stroke assessment performed by EMS

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