

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Syncope

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Abstract: Syncope is the sudden loss of consciousness, associated with inability to maintain postural tone, with immediate and spontaneous recovery without requiring electrical or chemical cardioversion . There is no particular treatment to it , only association treatment is present . Treatment of underlying cause is the focus of treatment in syncope. Management measures are placing patients in a horizontal position after the acute event of syncope or Use of compression stocking to improve venous return. Intravenous fluids in patients who are intravascularly volume depleted. Syncope is a complex medical problem, which can lead to very costly medical workups. The symptoms and potential for injury can be very detrimental to patients and those around them. Therefore, it is crucial that the proper etiology is identified.

Introduction :

Syncope is a transient loss of consciousness and postural tone followed by spontaneous recovery. Syncope ultimately results from decreased cerebral perfusion. Syncopal episodes may occur suddenly and without preceding signs or symptoms or may be preceded by dizziness, lightheadedness, diaphoresis, nausea, visual disturbances, or other signs and symptoms. Patients may describe syncopal events in a wide variety of ways, some of which include fainting, blacking out, falling out, having a spell, or losing consciousness. Syncope is responsible for 1 to 3.5 percent of all emergency department visits and 6 percent of all hospital admissions in the United States. Underlying conditions that may cause decreased brain perfusion and lead to syncope can range from benign to life-threatening.

Keywords: syncope, vasovagal , Orthostatic

Meaning:

Syncope is the medical term for fainting or passing out. It is caused by a temporary drop in the amount of blood that flows to the brain. Syncope can happen if you have a sudden drop in blood pressure, a drop in heart rate, or changes in the amount of blood in areas of

your body. If you pass out, you will likely become conscious and alert right away, but you may feel confused for a bit.

Epidemiology :

Syncope is a common condition. It affects 3% of men and 3.5% of women at some point in life. Syncope is more common as you get older and affects up to 6% of people over age 75. The condition can occur at any age and happens in people with and without other medical problems.

What Causes an addition of Syncope ?

1. Cardiovascular disorders

- Cardiac arrhythmias (both tachy and bradyarrhythmias)
- Structural and obstructive disorders (valvular abnormalities, HOCM, MI, PE)

2. Cerebrovascular causes (vertebrobasilar insufficiency)

3. Disorders of blood flow and vascular tone

- Vasovagal (neurocardiogenic)
- Orthostatic hypotension (medications, autonomic failure, peripheral neuropathy, decreased blood flow)
- Situational (cough, micturition, defecation, postprandial, deglutition)
- Carotid sinus syncope

4. Others that mimic syncope

- Seizures
- Metabolic (hypoglycemia, hypoxia, symptomatic anemia)
- Psychogenic (panic attacks)

Vasovagal Syncope (Neurocardiogenic syncope, Common faint

Almost 50% of all cases of syncope is found .vasovagal syncope is sudden drop in heart rate and When faced with certain situations like prolonged standing, crowded places, hot environment, severe pain, extreme fatigue and stress leads to vasodilatation (sympathetic withdrawal) and bradycardia (parasympathetic activity). This condition is also called common faint as it is the common cause of syncope and can occur even in normal people.

What are the symptoms of syncope?

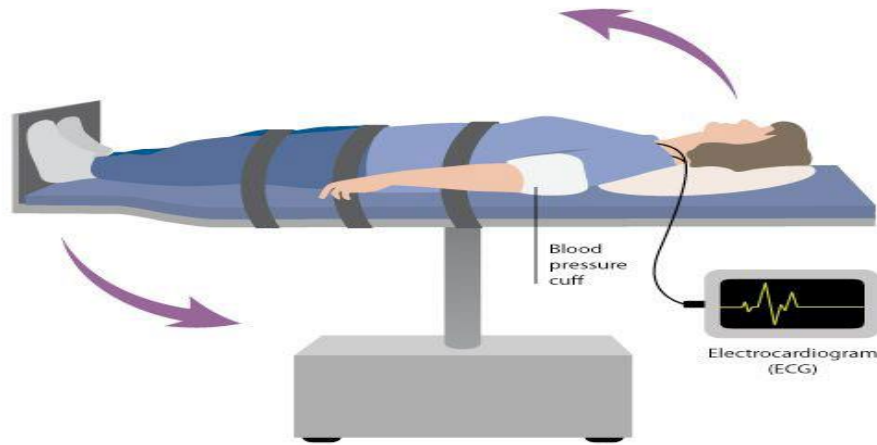
The most common symptoms of syncope include:

- Blacking out
- Feeling lightheaded
- Falling for no reason
- Feeling dizzy
- Feeling drowsy or groggy
- Fainting, especially after eating or exercising
- Feeling unsteady or weak when standing
- Changes in vision, such as seeing spots or having tunnel vision
- Headaches

Many times, patients feel an episode of syncope coming on. They have what are called “premonitory symptoms,” such as feeling lightheaded, nauseous, and heart palpitations (irregular heartbeats that feel like “fluttering” in the chest).

TESTS TO DETERMINE CAUSES OF SYNCOPE INCLUDE:

- **Laboratory testing:** Blood work to check for anemia or metabolic changes.
- **Electrocardiogram (EKG or ECG):** A test that records the electrical activity of your heart. Electrodes (small sticky patches) are applied to your skin to collect this information.
- **Exercise stress test:** A test that uses an ECG to record your heart’s electrical activity while you are active. This is done on a treadmill or stationary bike, which helps you reach a target heart rate.
- **Ambulatory monitor:** You will wear a monitor that uses electrodes to record information about your heart’s rate and rhythm.
- **Echocardiogram:** A test that uses high-frequency sound waves to create an image of the heart structures.
- **Tilt table (head-up tilt test):** A test that records your blood pressure and heart rate on a minute-by-minute or beat-by-beat basis while the table is tilted to different levels as you stay head-up. The test can show abnormal cardiovascular reflexes that cause syncope.



- **Blood volume determination:** A test to see if you have the right amount of blood in your body, based on your gender, height and weight. A small amount of a radioactive substance (tracer) is injected through an intravenous (IV) line placed in a vein in your arm. Blood samples are then taken and analyzed. The blood volume analyzer system used at Cleveland Clinic can provide accurate test results within 35 minutes.
- **Hemodynamic testing:** A test to check the blood flow and pressure inside your blood vessels when your heart muscle contracts and pumps blood throughout the body. A small amount of a radioactive substance (tracer) is injected through an intravenous (IV) line placed in a vein in your arm and three sets of images are taken.
- **Autonomic reflex testing:** A series of different tests are done to monitor blood pressure, blood flow, heart rate, skin temperature and sweating in response to certain stimuli. These measurements can help your doctor determine if your autonomic nervous system is working normally or if there is nerve damage.

Treatment / Management

Treatment of underlying cause is the focus of treatment in syncope. During an acute episode, patients should be made to sit or lay down quickly and raising the legs help recovery in patients with reflex postural hypotension event. Placing patients in a horizontal position after the acute event and preventing rising too soon. Treatment of any injuries sustained during a sudden fall from syncope warrants immediate attention.

1. **Vasovagal syncope:** Conservative measure includes avoiding situations or stimuli that have caused them, Tilt training and increasing use of salt and fluid. Drug therapy with beta-blockers, SSRIs, hydrofludrocortisone, proamatine, and few other medications might be useful if conservative measures fail.

2. **Orthostatic hypotension:** Rising slowly from supine and sitting position, a gradual change in posture. Avoiding medications that can cause orthostatic hypotension (diuretics,

vasodilators). Use of compression stocking to improve venous return. Intravenous fluids in patients who are intravascularly volume depleted.

3. Cardiovascular disorders: Treating underlying condition by Cardiology.

Conclusion:

Syncope is a complex medical problem, which can lead to very costly medical workups. The symptoms and potential for injury can be very detrimental to patients and those around them. Therefore, it is crucial that the proper etiology is identified. Since neurocardiogenic syncope is a noncritical disorder, which in most cases is controllable with proper treatment, it is reassuring when people "fail" their tilt test. In other words, a positive tilt test brings relief to patients who have suffered with presyncope or syncope.

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