

Syncope: simple or sinister?

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Syncope is a transient loss of consciousness that can have a benign or serious cause. It can also be the presenting feature of a surgical emergency, as described here.

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Syncope is a transient loss of consciousness with spontaneous return to baseline neurological function, requiring no resuscitation efforts.¹ It is a common problem, causing around 3% of presentations to the emergency department.

Syncope is a symptom, not a diagnosis. It can present a challenge to clinicians because of the wide range of possible causes, ranging from the benign to the serious. In around 50% of patients presenting with syncope, the cause cannot be found, even when patients are admitted to hospital and extensively investigated.

The main concern in syncope is about missing an underlying diagnosis that has a high risk of morbidity or mortality but is potentially reversible. Serious causes of syncope include cardiac arrhythmias, valvular disease, pulmonary embolism, poor cardiac output (e.g. heart failure), aortic dissection, a leaking aneurysm and gastrointestinal bleeding. Patients with a cardiac cause for syncope are at high risk and have a mortality of up to 33% within one year.

Common causes of syncope after exclusion of potentially life-threatening diagnoses are shown in the box on page 65. Simple 'vasovagal' syncope does not affect mortality. Several clinically derived risk stratification rules have been developed, but none eliminate diagnostic uncertainty.¹

Typical characteristics of simple vasovagal syncope include:

- a prodrome
- often a sinus bradycardia (vasovagal syncope)
- complete recovery
- no additional features.

The mainstay of assessment is good history taking, including:

- accounts of bystanders
 - enquiry about risk factors:
 - Did the syncope occur during exercise or while supine?
 - Was the syncope preceded by sudden-onset palpitations?
 - Is there a family history of sudden cardiac death or predisposing conditions? Are there other disease symptoms?
 - enquiry about medication use:
 - Are multiple medications being taken? Is the patient older?
 - Can the medications cause dehydration or vasodilation?
- A good physical examination includes:
- measurement of vital signs
 - a focused cardiac and neurological examination.

Important signs that suggest simple vasovagal syncope, but which are not diagnostic, include a postural blood pressure drop of more than 20 mmHg and an increase in pulse rate of more than 20 beats per minute when the patient stands up after lying supine for five minutes.

Essential investigations include an ECG and measurement of blood glucose concentration. Other investigations and possible referral of the patient for hospital admission should be decided on an individual basis. Routine laboratory screening is not supported by evidence and rarely changes management.

Here we describe an unusual presentation of syncope in an elderly man. This contrasts with the common presentation of older syncope in an older patient – presentation to the emergency department for investigation after full recovery from a syncope episode.

THE CASE

An ambulance telephoned ahead to a tertiary referral hospital late one afternoon to report they were bringing in a 76-year-old man who had ‘fainted’ and impaled himself on a sharp metal fence

post. The post had penetrated his neck with little bleeding.

Arrival and assessment

On arrival, the patient was fully alert and complaining of lower left abdominal pain. His vital signs were critical: systolic blood pressure 70 mmHg, heart rate 120 beats per minute and respiratory rate 50 breaths per minute.

A brief medical history was taken and revealed only hypercholesterolaemia treated with a statin and hypertension treated with prazosin. The patient had no allergies.

Physical examination quickly showed that the patient had multiple pathologies. The neck wound extended into the mouth but was not bleeding severely. The abdomen was distended and tender on examination. A rapid bedside ultrasound examination of the abdomen revealed a ruptured abdominal aortic aneurysm.

Surgery

The patient was transferred urgently to an operating theatre where he underwent open repair of a ruptured 8 cm infrarenal aortic aneurysm. A 5 cm aneurysm of the left common iliac artery was also found and resected. The aneurysms were repaired with synthetic grafts.

The neck wound was then explored. As the wound was located in neck zone 2 (between the cricoid and the angle of the mandible), which contains the major blood vessels, airway and other vital structures, surgical repair was indicated.

During surgery, the patient’s blood requirements included 12 units of packed red blood cells, four units of fresh frozen plasma, two units of platelets, cryoprecipitate and tranexamic acid.

Outcome

The patient recovered and was discharged home with no major sequelae after 21 days in hospital. This is an example of a dramatic episode of syncope with a fortunate outcome.

COMMON CAUSES OF SYNCOPE AFTER EXCLUSION OF POTENTIALLY LIFE-THREATENING DIAGNOSES^{1*}

- Vasovagal – increased vagal parasympathetic tone leading to bradycardia and hypotension; this typically follows:
 - urination
 - coughing
 - defaecation
 - Valsalva manoeuvre
 - difficulty swallowing
 - situational stress
- Vasoactive medication
 - direct effect: antihypertensives, cardiac blockers, nitrates
 - indirect effect (through prolonging QT interval): side effect of psychotropic medications, antiemetics
- Alcohol
- Postural
 - standing up suddenly
 - volume loss, dehydration (diuretics)
- Carotid sinus pressure
 - tight collar or tie
 - sudden or forced neck rotation

* Modified from McDermott D, Quinn J. Approach to the adult patient with syncope in the emergency department. UpToDate.com.¹

KEY POINT

Syncope often has a benign cause, but in up to a third of cases the cause is serious, and may even be a life-threatening emergency. **MT**

REFERENCE

1. McDermott D, Quinn J. Approach to the adult patient with syncope in the emergency department. UpToDate.com. Wolters Kluwer Health; 2012. Available online at: <http://www.uptodate.com> (accessed March 2013).

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