Management of transient loss of consciousness in emergency department: what’s new from 2018 European Society of Cardiology guidelines?

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Introduction

The first European Society of Cardiology (ESC) guidelines for the management of syncope were published in 2001, with subsequent versions in 2004 and 2009. The last version has been published in March 2018. One of the most important aspect characterizing this latter document is the management (diagnosis and risk stratification) of patients referred for transient loss of consciousness (TLOC) in Emergency Department (ED).

In general, 1-1.5% of referrals to the ED are for syncope; of these, about 50% are hospitalized. The use of clinical decision rules and standardized protocols has not changed this rate significantly. Hospitalization costs account for >75% of the total costs, and most hospitalizations are unnecessary. Among the patients who present to the emergency department for syncope, 0.8% die and an average of 3.6% have some serious outcome within the next 7-30 days. Therefore, only a small minority will potentially benefit from urgent hospitalization. Unnecessary admission in low-risk patients can be harmful. One major challenge in syncope management is reduction of inappropriate admissions and inappropriate use of tests while maintaining the safety of the patient. The document gives strong focus to pathways and organizational issues. In particular, the guidelines propose a care pathway for management of the patient with TLOC from their arrival in the ED, and give practical instructions on how to set up outpatient syncope clinics (syncope units) aimed at reducing hospitalization, under- and mis-diagnoses, and costs.

An ambitious goal: towards zero admissions for diagnosis of syncope

Zero admission will hardly be reached, nevertheless this term indicates a virtuous objective to be aimed. How to approach this goal? The ESC guidelines recommend to follow these 3 steps: i) Manage patients with syncope secondary to an organic disease according that disease; ii) Organize a syncope Observation Unit in ED and link it via fast track with a hospital Syncope Unit; iii) Select the patients who require admission.

Manage patients with syncope secondary to an organic disease according that disease

Syncope is a symptom, not a disease. Identify the underlying cause of syncope. Normally the presenting complaint of syncope will focus on treating this underlying cause (Figure 1). Many (40-45%) non-cardiovascular and some cardiovascular life-threatening events rather than the syncope itself. Subsequent management will focus on treating this underlying cause (Figure 1).

Organize a syncope observation unit in emergency department and link it via fast track with a hospital syncope unit

The implementation of novel care pathways and organizational approaches such as ED observation units and syncope in- and outpatient units (Figure 2) offer safe and effective alternatives to admission. Patients that have neither high- nor low-risk features that suggest a benign underlying cause can be established. The primary aim for an ED clinician is then to establish an underlying diagnosis, especially those associated with the potential for rapid clinical deterioration. It is the acute underlying disease that most frequently determines short-term adverse events rather than the syncope itself. Subsequent management will focus on treating this underlying cause (Figure 1).

Patients with low-risk features

These patients do not need further diagnostic tests in the ED as they are likely to have reflex, situational, or orthostatic syncope. They may benefit from reassurance, or counseling.

Patients with high-risk features

These patients should be classified as high risk; they require an intensive diagnostic approach and may need urgent treatment and admission. These patients should be monitored (although it is unclear for how long this should be, most studies suggesting up to 6 hours in the ED and up to 24 hours in hospital) in a setting where resuscitation can be performed in case of deterioration.

Patients that have neither high- nor low-risk features

These patients will require expert syncope opinion, which can
probably be safely managed in an outpatient setting. There is no
direct evidence that admitting patients to hospital changes their
outcome, whilst there is evidence that management in an ED
observation unit and/or fast-track to a syncope outpatient unit is
beneficial.

Select the patients who require admission

The diagnostic tests, procedures, and interventions that may
require admission in patients with high-risk features are listed in
Table 1.

In practice, following Table 1, the majority of patients affected
by unexplained syncope, who usually are admitted for diagnostic
purposes, can safely be managed in ED syncope observation unit
and in syncope out-patient unit instead of being hospitalized. In
those situations, the stay in ED observation unit and the fast-track
to syncope out-patient unit allow to down-grade the risk of the
patients from high to intermediate or low, thus allowing to avoid
hospitalization. Admission remains necessary only for the few of
them who require invasive diagnostic procedures, i.e., electrophys-
iological study or angiography and for those who need treatment or
have had injury secondary to syncope.

<table>
<thead>
<tr>
<th>Favour initial management in ED observation unit and/or fast-track to syncope unit</th>
<th>Favour admission to hospital</th>
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<tbody>
<tr>
<td>High-risk features and:</td>
<td>High-risk features and:</td>
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<tr>
<td>- Stable, known structural heart disease</td>
<td>- Any potentially severe coexisting disease that requires admission</td>
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<tr>
<td>- Severe chronic disease</td>
<td>- Injury caused by syncope</td>
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<td>- Syncope during exertion</td>
<td>- Need of further urgent evaluation and treatment if it cannot be</td>
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<td>- Syncope while supine or sitting</td>
<td>achieved in another way (i.e. observation unit),</td>
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<td>- Syncope without prodrome</td>
<td>e.g. ECG monitoring, echocardiography,</td>
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<td>- Palpitations at the time of syncope</td>
<td>stress test, electrophysiological study, angiography, device malfunction, etc.</td>
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<td>- Inadequate sinus bradycardia or sinoatrial block</td>
<td>- Need for treatment of syncope</td>
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<tr>
<td>- Suspected device malfunction or inappropriate intervention</td>
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<tr>
<td>- Pre-excited QRS complex</td>
<td></td>
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<td>- SVT or paroxysmal atrial fibrillation</td>
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<td>- ECG suggesting an inheritable arrhythmogenic disorders</td>
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<td>- ECG suggesting ARVC</td>
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Figure 1. The management of patients presenting to the emergency department (ED) for transient loss of consciousness suspected to be
syncope. This includes pulmonary embolism presenting with shortness of breath, pleuritic chest pain, and syncope, but not trauma sec-
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References


