

## Syncope

Syncope is a form of transient spontaneous loss of consciousness due to conditions that lead to abrupt global cerebral hypo-perfusion. It has rapid onset, self-limited and is associated with complete and usually prompt recovery. While syncope is a very common clinical problem, the causes are numerous and syncope itself may be a premonitory sign of something worse to come. Clinical disorders causing syncope range from benign (i.e. abnormal reflex) to potentially life-threatening (i.e. ventricular tachyarrhythmia) conditions [1–3]. Even when the prognosis is apparently good, syncope, especially if recurrent, may result in untoward consequences such as physical injury, car accidents, frequent hospitalizations, economic loss, and reduced quality of life. No doubt, syncope places a heavy burden on the patient, the family, the clinician, and the health care system. Several guidelines, scores, and recommendations for the diagnosis and management of patients with syncope have been published in the last decade [4–7]. Some provide recommendations on the need for admission and further diagnostic work-up to rule out high-risk causes of syncope; however, it remains a reality that a significant number of low-risk patients are unnecessarily admitted for further investigation.

Consequently, it is paramount to start an appropriate and directed diagnostic work-up in order to assess the cause of syncope, to stratify the risk of associated serious consequences, and to prescribe effective treatments to prevent recurrences and reduce long-term risk [8, 9]. However, evaluation of syncope is challenging for several reasons, such as, the numerous potential causes, the unpredictable and periodic nature of syncope with long intervals between episodes, the short duration of the symptoms, and the absence of specific and gold standard tests that make a certain diagnosis often elusive [9, 10].

A syncope unit or service, defined as a facility featuring a standardized approach to the diagnosis and management of syncope with dedicated staff and rapid access to appropriate diagnostics and

therapies, may be useful in this regard [9]. Several studies have shown that patients managed by such a service have better outcomes, have shorter hospital stays, and incur lower health care costs. What it really comes down to, though, is understanding of the nature of the problem and assessing it in a careful, complete and standardized way. Symptom/rhythm correlation remains a cornerstone to the assessment and, while much information can be gleaned through a carefully obtained history, specific testing may be required [11]. Arrhythmias and neutrally-mediated reflex bradycardia and hypotension remain important causes of syncope.

Depending on the frequency of the events, a single surface 12-lead electrocardiography may be enough to establish the connection between the symptom and the cardiac rhythm (i.e. complete heart block). However, extended monitoring may be needed if the cause of recurrent syncope remains uncertain. 24-hour or 48-hour Holter monitoring may be sufficient when symptoms are frequent. However, extended monitoring with external loop recorders may be needed to confirm or refute that an arrhythmia is the responsible cause of syncope. New leadless arrhythmia monitoring devices, lasting 14 days or more, with better patient compliance, may increase the diagnostic yield [12–16]. When symptoms are sporadic, implantable recorders can increase the period of monitoring to 2–3 years and can be an effective modality to secure a diagnosis.

In this Focus Issue of the Cardiology Journal, diagnostic and therapeutic aspects regarding syncope are addressed by eminent leaders and researchers in the field. The result is an up-to-date, unique, and comprehensive look at syncope presented in a way that we trust will entice you and will enhance your care of patients with syncope.

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