Evidence-based common sense: the role of clinical history for the diagnosis of vasovagal syncope

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This editorial refers to 'Diagnostic criteria for vasovagal syncope based on a quantitative history' by R. Sheldon et al., on page 344

In the present article a form of fainting is described for which the term 'vasovagal syncope' will be found most appropriate

Sir Thomas Lewis, 1932

Syncope is a frequent clinical manifestation and represents ~1–2% of emergency room visits and frequently leads to hospital admission and expensive and frequently unnecessary diagnostic tests.\(^1,2\) The cause of syncope is frequently reflex mediated, and particularly vasovagal responses closely followed by orthostatic hypotension and drug-induced syncope are the main causes.\(^3\) By and large, the prognosis of patients with vasovagal syncope is benign; however, quality of life may be severely affected in a significant proportion of patients.

The most challenging problem surrounding the appropriate diagnosis of syncope is that at the time of medical assessment most patients are completely free of symptoms or worrisome clinical findings. The proper diagnosis lies then in a thorough recording of the events preceding and surrounding the syncopal episode, what most of us were taught in medical school as taking the clinical history. It is unclear when the first description of vasovagal syncope was reported in the medical literature, but Hunter (1728–29) may have inadvertently reported the first description when he wrote: 'I bled a lady but she fainted while she continued in the fit the color of the blood that came from the vein was a fine scarlet, the circulation was very languid'.\(^4\) Cotton and Lewis are credited as the first to publish a report on vasovagal syncope. Lewis\(^5\) in 1932 provided the following brilliant clinical and physiologic discussion and coined the term vasovagal syncope.

"On 8 December 1916, the patient was sitting and a few cubic centimetres of blood had been withdrawn from a vein in the arm and the needle removed. He was watching the operation and began to feel queer, "as though his stomach turned upside down"; he complained of dizziness, facial pallor was noticed, and his head fell forward to his knees. He was placed at once in a long easy-chair and further observed. By this time, the pallor was intense and he was restless, the pulse was imperceptible; the heart sounds distant, its rate of beating being 50 b.p.m. From time to time there were retching movements, the pupils were little, if at all dilated. The patient was limp, mentally confused, or actually unconscious, for several minutes; a heavy sweat broke out over his forehead spreading over chest and body and the pallor remained extreme. Respiration was slow and sighing ...'. Today these detailed descriptions are usually missing from our clinical histories and replaced by checklists to order expensive and low-yield diagnostic tests.

Can we improve our ability to diagnose vasovagal syncope and potentially avoid unnecessary testing and hospital admissions? One possibility is to increase the availability of syncope units as proposed by the ESC guidelines and supported by some recent trials.\(^6–8\) Unfortunately, the availability of a syncope expert 24/7 at the emergency room is still far from an achievable goal. Regrettably, emergency room physicians and medical students rarely receive education in the diagnosis and management of syncope during their training.

Sheldon et al.\(^9\) provide us with the first step to achieve this goal. These investigators administered a very detailed questionnaire to 418 patients with syncope and no apparent structural heart disease. The prevalence of each item was compared between patients with positive tilt tests and those with syncope of other known causes. Using a detailed statistical methodology, the authors developed a point score that was tested using receiver operating curves. The causes of syncope were documented in 323 patients and included tilt-positive vasovagal syncope (235) and other diagnosis such as complete heart block and SVT (88). The syncope score developed by the investigators was highly sensitive (89%) and specific (91%) and correctly classified 90% of patients. When the score was applied to an additional 95 patients with unknown cause of syncope and negative tilt test, another 68% were classified as vasovagal syncope.

This study is welcomed, and the development of a simple reproducible score to diagnose vasovagal syncope was direly
needed. This score is based on seven easily obtained questions that include six clinical questions that concentrate on the characteristics of the syncopal episode and one that evaluated ECG findings such as bifascicular block, asystole, SVT, and diabetes. A limitation of this study is that there is no gold standard for the diagnosis of vasovagal syncope and a positive tilt table test may not necessarily be the best standard. This may impair the applicability of the score in a more general population presenting with syncope. Similarly, this score may be limited to patients with no clinical evidence of structural heart disease and possibly not useful in very old patients in which the cause of syncope is usually multifactorial.

Notwithstanding the above, Sheldon and collaborators should be congratulated for providing an evidence-based method that will indeed facilitate and potentially increase the diagnosis of vasovagal syncope, by far the most common cause of recurrent fainting. This is indeed a step forward; the next step is the responsibility of syncope investigators around the world and the need to validate the Calgary syncope score in the most appropriate setting, the emergency room. In the end, we all return to our basic roots, as physicians and a thorough clinical history and physical examination should remain the gold standard for the assessment of syncope. We now have a quantitative method to diagnose vasovagal syncope with an excellent sensitivity; however, this score is useless if the clinical history is incomplete. Let us not be derailed by technology and keep our common sense tuned up and stimulate our peers to use the only diagnostic test that still withstands the pass of time; a complete clinical history.

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References