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LECTURE

Syncope of unknown cause: when to think of stroke?

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Abstract

Syncope is defined as transient loss of consciousness (TLOC) due to cerebral hypoperfusion, characterized by a rapid onset, short duration, and spontaneous complete recovery. (1) The main pathophysiologic mechanisms are a low peripheral resistance or a low cardiac output [1]. They are not mutually exclusive. As a sudden event, other diagnosis of TLOC are important to consider namely epileptic seizures. Also, there are other events where patients appear to be unconscious, but they are not (such as in cataplexy or in a psychogenic seizure/syncope). Furthermore, the loss of consciousness may have a longer duration (metabolic disorders or intoxication) [2]. Syncope is also considered a stroke mimic (up to 15% of stroke mimic cases) [3]. Quite frequently, patients with syncope underwent a CT-Scan as their initial approach in emergency room. However, this is seldom abnormal (about 5%), except in presence of trauma, neurological deficits or complaints (mainly headache), or age greater than 60 years [4, 5]. This raises a question: how often is syncope caused by central phenomena, in particular, stroke? In the latter, loss of consciousness can only occur in vertebrobasilar events (involving thalami or brainstem) [6], is usually not transient, and is almost always accompanied by focal neurological deficits [1].

Syncope may not be "benign". Orthostatic hypotension has been considered a risk factor for stroke, even after controlling for risk factors [7]. Focal deficits were observed in 5.7% of patients with syncope [8], and borderline infarctions where more prevalent in subjects reporting hypotensive symptoms at stroke onset [9]. It is particularly important to consider a significant arterial stenosis when neurological focal deficits develop [10]. However, even in these cases, syncope is usually considered the cause of (but is not caused by) cerebral hypoperfusion.

In conclusion, syncope is very seldom caused by a stroke, and other etiologies should be pursued, even in the presence of focal deficits. Head imaging should be reserved for trauma patients or if focal neurological deficits are a concern.

References

1. Brignole M, Moya A, de Lange FJ, Deharo JC, Elliott PM, Fanciulli A, et al. 2018 ESC Guidelines for the diagnosis and management of syncope. Eur Heart J. 2018;39(21):1883-948.
2. Thijs RD, Bloem BR, van Dijk JG. Falls, faints, fits and funny turns. J Neurol. 2009;256(2):155-67.
3. Fernandes PM, Whiteley WN, Hart SR, Al-Shahi Salman R. Strokes: mimics and chameleons. Pract Neurol. 2013;13(1):21-8.
4. Grossman SA, Fischer C, Bar JL, Lipsitz LA, Mottley L, Sands K, et al. The yield of head CT in syncope: a pilot study. Intern Emerg Med. 2007;2(1):46-9.
5. Mitsunaga MM, Yoon HC. Journal Club: Head CT scans in the emergency department for syncope and dizziness. AJR Am J Roentgenol. 2015;204(1):24-8.
6. Nadarajan V, Perry RJ, Johnson J, Werring DJ. Transient ischaemic attacks: mimics and chameleons. Pract Neurol. 2014;14(1):23-31.
7. Eigenbrodt ML, Rose KM, Couper DJ, Arnett DK, Smith R, Jones D. Orthostatic hypotension as a risk factor for stroke: the atherosclerosis risk in communities (ARIC) study, 1987-1996. Stroke. 2000;31(10):2307-13.
8. Ryan DJ, Harbison JA, Meaney JF, Rice CP, King-Kallimanis B, Kenny RA. Syncope causes transient focal neurological symptoms. QJM. 2015;108(9):711-8.
9. Ryan DJ, Kenny RA, Christensen S, Meaney JF, Fagan AJ, Harbison J. Ischaemic stroke or TIA in older subjects associated with impaired dynamic blood pressure control in the absence of severe large artery stenosis. Age Ageing. 2015;44(4):655-61.
10. Ruff RL, Talman WT, Petito F. Transient ischemic attacks associated with hypotension in hypertensive patients with carotid artery stenosis. Stroke. 1981;12(3):353-5.

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