

Cat naps: an elderly woman with recurrent syncope

An otherwise healthy 87-year-old woman who was not taking medications presented to our emergency department after experiencing an episode of presyncope. While in the emergency department the woman, whose baseline heart rate was 72 beats/min, experienced multiple witnessed episodes of vomiting, presyncope and syncope, each lasting about 30 seconds. The episodes were associated with sinus pauses of 3–4 seconds' duration observed on the patient's cardiac monitor and appeared to be precipitated by neck movement to either side. The episodes could also be reproduced with light palpation of the right carotid artery but not the left. The top panel of Fig. 1 depicts part of an electrocardiogram taken during a bradycardiac episode (heart rate 25 beats/min) precipitated by massage of the right carotid artery. The bottom panel of Fig. 1 (heart rate 65 beats/min) shows a lack of cardiac response to palpation of the left carotid artery. The remainder of the clinical examination, laboratory work-up and electrocardiogram were within normal limits except for evidence of a urinary tract infection on routine urinalysis. There were no signs of orthostatic hypotension or valvular heart disease on cardiac auscultation.

The patient was admitted with a diagnosis of carotid sinus hypersensitivity. A single-lead (ventricular) pacemaker was inserted 1 week after her urinary tract infection had resolved. She was discharged from hospital without complications, and at follow-up 3 months later she reported no further episodes of presyncope or syncope. Of

interest, the patient stated that, for 1 month before presenting to the emergency department, she had felt unwell and sleepy whenever her 9-kg Persian cat, Sidney, (Fig. 2) had slept on the right side of her neck but not when he had lain elsewhere on her body. Despite having a pacemaker now, she is still reluctant to allow her cat to sleep near her neck.

Carotid sinus hypersensitivity (Charcot-Weiss-Baker syndrome) may present with significant sinus pauses of more than 3 seconds (cardioinhibitory), a fall in resting systolic blood pressure of 50 mm Hg or more (vasodepressor) or a combination of both (mixed). Stimulation of the right carotid artery has been observed to result in more prominent cardioinhibitory effects than stimulation of the left artery. The reasons for this are unclear but may be secondary to more prominent vagus nerve stimulation from the right carotid sinus. The diagnostic yield of carotid sinus massage on either side may be increased if performed in the head-up phase of a tilt-table test.¹

Carotid sinus hypersensitivity is highly prevalent among elderly people with unexplained syncope, with rates as high as 45%.² Typically, patients describe symptoms associated with the use of high neck collars, head turning or shaving. This condition has also been described with seat-belt use³ and with head and neck cancers.⁴ The majority of patients, however, cannot recall a specific precipitating factor.⁵ Cardiac pacing is helpful for those with a cardioinhibitory response but not for



those with a vasodepressor response.⁶

Our patient's symptoms may have been due to the weight of her cat on her right carotid sinus. This vignette illustrates the value of careful history taking in determining the cause of syncope and the importance of considering carotid sinus hypersensitivity in the differential diagnosis of unexplained syncope in elderly patients.

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