

symptoms with tachycardia and hypotension. The patient described by Kosinski et al.²⁵ was taking fluoxetine, methylbarbital, and clonazepam for depression and seizure disorder. Exercise provoked tachycardia and then hypotension.

This mixed bag of exercise-associated symptoms may be related to decreased basal blood volume, cardiac vagal sensitivity, or both. Such patients require critical study, because they do not suffer from classic vasovagal syncope. Healthy subjects can develop postexercise asystole³⁹ and hypotension.⁴⁰ In regard to the risk of death with exercise, a recent report of autopsy findings in 134 cases of sudden death in young competitive athletes discovered only three who showed "absence of structural heart disease on standard [not carefully focused on heart pathology] autopsy examination."⁴¹

Kosinski and Grubb's last paragraph is a reprise of interspecialty conflict, which we shall not join. They cite an abstract²⁶ that described components of what is defined as a "neurologic workup" of patients with syncope. We agree, no matter who orders them, that such studies as carotid ultrasound, EEG, head CT, brain MRI, transcranial Doppler, brainstem potentials, and carotid arch angiogram are practically never indicated. The tilt-table venture is the most frequent extravagant procedure. Our criticism concerns the quasireligious diagnostic dependence on magical gadgetry. We concur with a prominent cardiologist, M. C. Petch, whose concise review of this field was aptly entitled "Syncope: an accurate history tells all."⁴²

William M. Landau, MD

St. Louis, MO

Dewey A. Nelson, MD

Wilmington, DE

Copyright © 1997 by the American Academy of Neurology

References

- Landau WM, Nelson DA. Clinical Neuromyology XV. Fainting science: neurocardiogenic syncope and collateral vasovagal confusion. *Neurology* 1996;46:609-618.
- Kapoor WN. Diagnostic evaluation of syncope. *Am J Med* 1991;90:91-106.
- Kapoor WN, Karpf M, Wieand S, Peterson JR, Levey GS. A prospective evaluation and follow-up of patients with syncope. *N Engl J Med* 1983;309:197-204.
- Savage DD, Corwin L, McGee DL, Kannell WB, Wolf PA. Epidemiologic features of isolated syncope: the Framingham study. *Stroke* 1985;16:626-629.
- Calkins H, Byrne M, El-Attassi R, Kalbfleisch S, Langberg JJ, Morady F. The economic burden of unrecognized vasodepressor syncope. *Am J Med* 1993;95:473-479.
- Mozes B, Confino-Cohen R, Halkin H. Cost-effectiveness of in-hospital evaluation of patients with syncope. *Isr J Med Sci* 1988;24:302-306.
- Grubb BP, Gerard G, Roush K, et al. Cerebral vasoconstriction during head-upright tilt-induced vasovagal syncope: a paradoxical and unexplained response. *Circulation* 1991;84:1157-1164.
- Janosik D, Gomez C, Njemanze P, et al. Abnormalities in cerebral blood flow autoregulation during tilt-induced syncope. *PACE* 1992;15:592.
- Njemanze P. Cerebral circulation dysfunction and hemodynamic abnormalities in syncope during upright tilt test. *Can J Cardiol* 1993;9:238-242.
- Fredman C, Bierman K, Patel V, et al. Transcranial Doppler ultrasonography during head-upright tilt-table testing. *Ann Intern Med* 1995;123:848-849.
- Ohara C, Kobayashi Y, Veda H, et al. Possible syncopal attack without hypotension during head-up tilt test: an assessment of middle cerebral artery blood flow velocity. *PACE* 1996;19:711.
- Kosinski D, Grubb BP, Temesy-Armos PN. The use of serotonin reuptake inhibitors in the treatment of neurally mediated cardiovascular disorders. *J Serotonin Res* 1994;1:85-90.
- Dan D, Grubb BP, Mouhaffel A, Kosinski D. Use of serotonin reuptake inhibitors as primary therapy for carotid sinus hypersensitivity. *PACE* 1997;20:1633-1635.
- Rubin A, Gerard G, Bork C, Grubb B. Central dizziness associated with cerebral blood flow disorders. *Am J Otol* 1994;15:625-631.
- Barron H, Lesh M. Autonomic nervous system and sudden cardiac death. *J Am Coll Cardiol* 1996;27:1053-1060.
- Zipes D, Dimarco J, Gillette PC, et al. Guidelines for clinical intracardiac electrophysiological and catheter ablation procedures. *J Am Coll Cardiol* 1995;26:555-573.
- Benditt D, Ferguson D, Grubb BP, et al. Tilt table testing for assessing syncope. *J Am Coll Cardiol* 1996;28:263-275.
- Grubb BP, Gerard G, Roush K, et al. Differentiation of convulsive syncope and epilepsy with head-up tilt testing. *Ann Intern Med* 1991;115:871-876.
- Rea R, Thames M. Neural control mechanisms and vasovagal syncope. *J Cardiovasc Electrophysiol* 1993;4:587-595.
- Kosinski D, Grubb BP, Temesy-Armos P. Pathophysiological aspects of neurocardiogenic syncope: current concepts and new perspectives. *PACE* 1995;18:716-724.
- Sakaguchi S, Shultz JJ, Renole SC, et al. Syncope associated with exercise, a manifestation of neurally mediated syncope. *Am J Cardiol* 1995;75:476-481.
- Calkins H, Seifert M, Morady F. Clinical presentation and long-term follow-up of athletes with exercise-induced vasodepressor syncope. *Am Heart J* 1995;129:1159-1164.
- Tse H, Lau C. Exercise-associated cardiac asystole in persons without structural heart disease. *Chest* 1995;107:572-576.
- Sneddon JF, Scalia G, Ward D, et al. Exercise induced vasodepressor syncope. *Br Heart J* 1994;71:554-557.
- Kosinski D, Grubb BP, Kip K, et al. Exercise-induced neurocardiogenic syncope. *Am Heart J* 1996;132:451-452.
- Blanc Z, Maglio C, Budziszewski M, et al. Neurologic "workup" in patients with syncope in the era of managed care: resource utilization and cost. *PACE* 1996;19:742.
- Petersen MEV, Williams TR, Sutton R. Psychogenic syncope diagnosed by prolonged head-up tilt testing. *Q J Med* 1995;88:209-213.
- Brook R, Ruskin JN, Powell AC, et al. Prospective evaluation of day-to-day reproducibility of upright tilt table testing in unexplained syncope. *Am J Cardiol* 1993;71:1289-1292.
- Moya A, Permanyer-Miralda G, Sagrion-Saulea J, et al. Limitations of head-up tilt test for evaluating the efficacy of therapeutic interventions in patients with vasovagal syncope: results of a controlled study of Etilefrine versus placebo. *J Am Coll Cardiol* 1995;25:65-69.
- Kapoor WN. Evaluating unexplained syncope with upright tilt testing. *Cleve Clin J Med* 1995;62:305-310.
- Ruiz GA, Peralta A, Gonzalez-Zuelgaray J, Duce E. Evolution of patients with clinical neurocardiogenic (vasovagal) syncope not subjected to specific treatment. *Am Heart J* 1995;130:345-350.
- Sra JS, Akhtar M. Cardiac pacing during neurocardiogenic (vasovagal) syncope. *J Cardiovasc Electrophysiol* 1995;6:751-760.
- Fog M. Cerebral circulation, the reaction of the pial arteries to a fall in blood pressure. *Arch Neurol Psychiatry* 1937;37:351-364.
- Wolff HG, Forbes HS. The cerebral circulation. V. Observations of the pial circulation during changes in intracranial pressure. *Arch Neurol Psychiatry* 1928;20:1035-1047.
- Finnerty, Jr. FA, Witkin L, Fazekas JF, et al. Cerebral hemodynamics during cerebral ischemia induced by acute hypotension. *J Clin Invest* 1954;33:1227-1232.
- Landau WM. Clinical neuromyology XIII. Neuroskepticism: sovereign remedy for the carotid sinus syndrome. *Neurology* 1994;44:1570-1576.
- Alboni P, Menozzi C, Brignole M, et al. An abnormal neural reflex plays a role in causing syncope in sinus bradycardia. *J Am Coll Cardiol* 1993;22:1130-1134.
- Brignole M, Gianfranchi L, Menozzi C, et al. Role of autonomic reflexes in syncope associated with paroxysmal atrial fibrillation. *J Am Coll Cardiol* 1993;22:1123-1129.
- Osswald S, Brooks R, O'Nunian S, et al. Asystole after exercise in healthy persons. *Ann Intern Med* 1994;120:1008-1011.
- Fleg J, Lakaha E. Prevalence and significance of post exercise hypotension in apparently healthy subjects. *Am J Cardiol* 1986;57:1380-1384.
- Maron BJ, Shirani J, Poliac LC, et al. Sudden death in young competitive athletes: clinical demographic and pathological profiles. *JAMA* 1996;276:199-204.
- Petch MC. Syncope: an accurate history tells all. *BMJ* 1994;308:1251-1252.

Correction

The article "Long-term follow-up after temporal lobe resection for lesions associated with chronic seizures" by Eliashiv et al. was inadvertently published twice in *Neurology* (Neurology 1997;48:621-626 and Neurology 1997;48:1383-1388.) We apologize for any inconvenience or confusion this may have caused.

Neurology®

Correction

Neurology 1997;49:904
DOI 10.1212/WNL.49.3.904

This information is current as of September 1, 1997

Updated Information & Services

including high resolution figures, can be found at:
<http://n.neurology.org/content/49/3/904.full>

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/about/about_the_journal#permissions

Reprints

Information about ordering reprints can be found online:
<http://n.neurology.org/subscribers/advertise>

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright . All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

