David M. Solomon, MD, RDMS
Maria Saccio, RN
Krista Savarese, DO
Barry Hahn, MD

From the Department of Emergency Trauma Medicine, Hackensack University Medical Center, Hackensack, NJ (Solomon); and the Department of Emergency Medicine, Staten Island University Hospital, Staten Island, NY (Saccio, Savarese, Hahn).

0196-0644/$-see front matter
Copyright © 2009 by the American College of Emergency Physicians.
doi:10.1016/j.annemergmed.2009.06.013

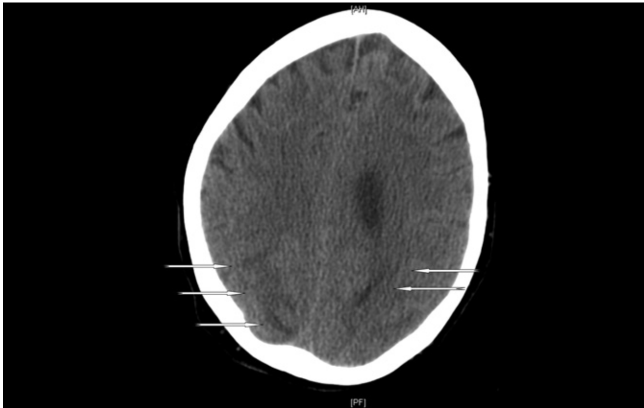

Figure 1. Bilateral posterior parietal occipital lobe hypodensities without mass effect.

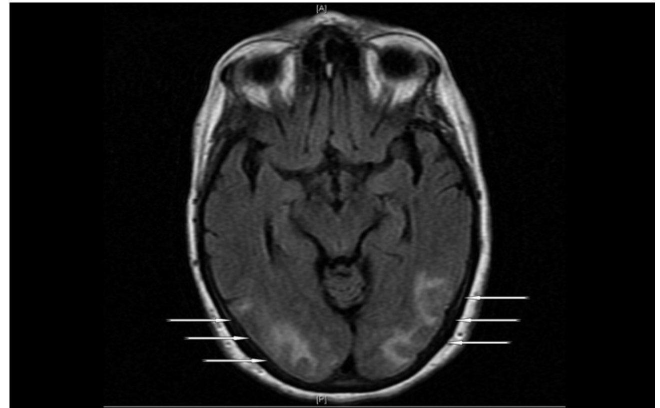

Figure 2. Confluent and patchy areas of increased signal within the periventricular and subcortical white matter, predominantly in the parietal occipital lobes but also extending to the frontal lobes. Used with permission of Barry Hahn, MD, Department of Emergency Medicine, Staten Island University Hospital, Staten Island, NY.

[Ann Emerg Med. 2010;55:225.]

A 60-year-old man with a history of hypertension and renal insufficiency presented to the emergency department (ED) after a single generalized tonic-clonic seizure. On awakening, he complained of a headache and blurred vision. According to his family, he was lethargic and vomited that morning and had not taken his blood pressure medications for several days. In the ED, the patient's blood pressure was 220/130 mm Hg. He was arousable to voice and displayed no neurologic deficits. A computed tomographic scan revealed bilateral posterior hypodensities without mass effect (Figure 1). Magnetic resonance imaging showed increased fluid-attentuated inversion recovery signal in the same region (Figure 2).

For the diagnosis and teaching points, see page 231.
To view the entire collection of Images in Emergency Medicine, visit www.annemergmed.com

- Personal or recreational items, such as tickets to theatrical or sporting events
- Direct subsidy of any expenses (such as registration, travel, lodging, meals) incurred in attending CME events or other educational or professional meetings (All industry support for such activities should be provided directly to the activity provider to offset program costs or to a general fund for continuing education programs.)
- Cash or cash equivalents such as gift certificates or vouchers
- Gifts offered in exchange for prescribing or using a product
- Medical equipment, such as stethoscopes or otoscopes
- Payment for token consultant or advisory arrangements
- Medical products for the personal use of the physician, the physician's staff, or family members

Revised and approved by the ACEP Board of Directors titled, "Gifts to Emergency Physicians from Industry" October 2009

Revised and approved by the ACEP Board of Directors October 2001, June 2002

Reaffirmed by the ACEP Board of Directors March 1997

Originally approved by the ACEP Board of Directors September 1992

As an adjunct to this policy statement, ACEP's Ethics Committee has prepared a Policy Resource and Education Paper (PREP) entitled, "Gifts to Emergency Physicians from the Biomedical Industry"

doi: 10.1016/j.annemergmed.2009.11.013

IMAGES IN EMERGENCY MEDICINE

(continued from p. 225)

DIAGNOSIS:

Posterior reversible leukoencephalopathy. Posterior reversible encephalopathy syndrome is a clinical and radiographic entity most commonly characterized by headaches, altered mental status, and vision loss. Seizures are common at the onset but can develop later. Posterior reversible encephalopathy syndrome is most commonly associated with an abrupt increase in blood pressure but can be observed with eclampsia, immunosuppressive medications, and renal failure.[1] The exact pathogenesis is unclear but is thought to be related to the breakdown of cerebral autoregulation, resulting in disruption of the blood-brain barrier and also resulting in vasogenic edema.[2] The most common abnormality on neuroimaging is edema of the white matter in the posterior portions of the cerebral hemispheres, especially bilaterally in the parieto-occipital regions.[3] Treatment involves blood pressure control, removal of any offending medications, and seizure prevention. With prompt treatment, most patients recover completely within hours to days. Untreated, this condition may lead to posterior circulation infarction or hemorrhage.[4]

REFERENCES

1. Hinchey J, Chaves C, Appignani B, et al. A reversible posterior leukoencephalopathy syndrome. *N Engl J Med.* 1996;334:494-500.
2. Port JD, Beauchamp NJ Jr. Reversible intracerebral pathologic entities mediated by vascular autoregulatory dysfunction. *Radiographics.* 1998;18:353-367.
3. Lee H. Posterior reversible encephalopathy syndrome. *Appl Radiol.* 2007;36:42-43.
4. Striano P, Striano S, Tortora F, et al. Clinical spectrum and critical care management of posterior reversible encephalopathy syndrome (PRES). *Med Sci Monit.* 2005;11:CR549-553.