Teaching NeuroImages:

Reversible splenic cytotoxic edema in acute mountain sickness

Chang Hun Bin, MD
Se-Jin Lee, MD, PhD

Address correspondence and
reprint requests to Dr. Se-Jin Lee,
Department of Neurology,
Yeungnam University College of
Medicine, 317-1, Daemyung 5
dong, Nam-gu, 705-717, Daegu,
Korea
sejinmayo@ynu.ac.kr

Figure Brain MRI scans

(A) Fluid-attenuated inversion recovery and (B) diffusion-weighted images reveal a lesion with high signal intensity in the splenium, and (C) an apparent diffusion coefficient map image shows restricted diffusion. (D-F) Follow-up MRI scans conducted 1 month later show resolution of the lesion.

A previously healthy 36-year-old woman developed a generalized tonic seizure. She had been in Tibet for 6 days at an altitude of 4,000 m and experienced mild symptoms of acute mountain sickness (AMS). The day after she came down, she developed a seizure. MRI showed cytotoxic edema in the splenium (figure), which disappeared 1 month later. High altitude cerebral edema is believed to be related mainly to vasogenic edema¹; however, there has been no report on MRI of AMS with cytotoxic edema. A recent study has reported MRI evidence of cytotoxic cerebral edema in AMS, which is concordant with our patient.²

AUTHOR CONTRIBUTIONS

Dr. Bin: drafting/revising the manuscript. Dr. Lee: drafting/revising the manuscript.

REFERENCES

1. Wong SH, Turner N, Birchall D, Walls TJ, English P, Schmid ML. Reversible abnormalities of DWI in high-altitude cerebral edema. *Neurology* 2004;62:335–336.
2. Kallenberg K, Bailey DM, Christ S, et al. Magnetic resonance imaging evidence of cytotoxic cerebral edema in acute mountain sickness. *J Cereb Blood Flow Metab* 2007; 27:1064–1071.

From the Department of Neurology, Yeungnam University College of Medicine, Daegu, Korea.

Disclosure: The authors report no disclosures.

Neurology[®]

Teaching *NeuroImages*: Reversible splenial cytotoxic edema in acute mountain sickness

Chang Hun Bin and Se-Jin Lee

Neurology 2011;77:e94

DOI 10.1212/WNL.0b013e318233b326

This information is current as of October 17, 2011

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/77/16/e94.full
References	This article cites 2 articles, 1 of which you can access for free at: http://n.neurology.org/content/77/16/e94.full#ref-list-1
Citations	This article has been cited by 1 HighWire-hosted articles: http://n.neurology.org/content/77/16/e94.full##otherarticles
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Clinical Neurology http://n.neurology.org/cgi/collection/all_clinical_neurology All Epilepsy/Seizures http://n.neurology.org/cgi/collection/all_epilepsy_seizures All Imaging http://n.neurology.org/cgi/collection/all_imaging MRI http://n.neurology.org/cgi/collection/mri
Errata	An erratum has been published regarding this article. Please see next page or: /content/78/3/226.full.pdf
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 Copyright © 2011 by AAN Enterprises, Inc.. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

with NPH will exhibit low verbal fluency, but gives a more specific example of category fluency. The number of animals named in a minute is an example of category fluency that would be a specific subset of verbal fluency. It is unclear whether all verbal fluency or only category fluency will be affected. Studies have revealed that whereas letter fluency is more often decreased in patients with frontal lobe dysfunction, a reduction in category fluency is more commonly associated with temporoparietal dysfunction.² In many degenerative conditions, depending on the disease, letter and category fluency may be affected differently. Thus, patients with AD often show a relatively greater impairment in category fluency^{3,4}; however, since NPH is often associated with frontal-subcortical dysfunction, the

letter fluency test may be a better screening test for hydrocephalus than category fluency.

Copyright © 2012 by AAN Enterprises, Inc.

1. Scharre D. Normal pressure hydrocephalus: measure twice, shunt once. *Neurology* 2011;77:1110–1111.
2. Baldo JV, Schwartz S, Wilkins D, Dronkers NF. Role of frontal versus temporal cortex in verbal fluency as revealed by voxel-based lesion symptom mapping. *Int Neuropsychol Soc* 2006;12:896–900.
3. Chertkow H, Bub D. Semantic memory loss in dementia of Alzheimer's type: what do various measures measure? *Brain* 1990;113(Pt 2):397–417.
4. Monsch AU, Bondi MW, Butters N, Salmon DP, Katzman R, Thal LJ. Comparisons of verbal fluency tasks in the detection of dementia of the Alzheimer type. *Arch Neurol* 1992;49:1253–1258.

CORRECTION

Teaching *NeuroImages*: Reversible splenial cytotoxic edema in acute mountain sickness

In the article “Reversible splenial cytotoxic edema in acute mountain sickness” by Chang Hun Bin and Se-Jin Lee (*Neurology*® 2011;77:e94), there is an error in the figure legend. The legend should begin: “(A) Diffusion-weighted images and (B) fluid-attenuated inversion recovery reveal” The authors regret the error.