Ictal multicomponent agraphia in left temporal lobe epilepsy

Carol Ulloa, MD, Gloria Ortiz-Guerrero, MD, Caleb Pearson, PhD, John Leever, MD, Patrick Landazuri, MD, and Utku Uysal, MD

Neurology® 2020;94:42-43. doi:10.1212/WNL.00000000000008705

Correspondence

Dr. Ulloa
culloa@kumc.edu

Figure 1 Illustration

According to the patient, "Couldn't think of letters to write—just shapes to start."

A 58-year-old woman with a clinical diagnosis of temporal lobe epilepsy characterized by episodes of disorientation and derealization followed by aphasia tried to write sentences during a seizure. Instead, she drew random figures (figure 1). External standard MRI was reported normal; however, a nonenhancing left amygdala lesion was identified on our 3T epilepsy protocol MRI (figure 2). This drawing emphasizes ictal multicomponent agraphia characterized by impaired allographic storage with expected accompanying aphasia.¹ Although symbolic graphic language is impaired, non-language-based symbolic graphic production remains intact. This suggests posterior temporal/temporo-parietal junction involvement during seizure spread.²

From the Departments of Neurology (C.U., G.O.-G., C.P., P.L., U.U.) and Radiology (J.L.), University of Kansas Medical Center, Kansas City.

Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Figure 2 MRI

Coronal T2 (A) and fluid-attenuated inversion recovery (FLAIR) (B) MRI. Ovoid lesion with FLAIR hyperintense rim in left amygdala. Characteristics are typical of dysembryoplastic neuroepithelial tumor, a cystic “bubbly” intracortical tumor that often involves the temporal lobe. Ganglioglioma also commonly arises in the temporal lobes but may exhibit enhancement and calcification.

Study funding

No targeted funding reported.

Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

Appendix Authors

Name	Location	Role	Contribution
Carol Ulloa, MD	University of Kansas Medical Center	Author	Conceptualized the manuscript, treating physician, prepared the manuscript
Gloria Ortiz-Guerrero, MD	University of Kansas Medical Center	Author	Assisted in writing the manuscript, technical editing of the images
Caleb Pearson, PhD	University of Kansas Medical Center	Author	Analyzed the functional anatomy related to the patient's drawing, edited the illustration legend

Appendix (continued)

Name	Location	Role	Contribution
John Leever, MD	University of Kansas Medical Center	Author	Interpreted the MRI, edited the figure legend
Patrick Landazuri, MD	University of Kansas Medical Center	Author	Revised the manuscript for intellectual content
Utku Uysal, MD	University of Kansas Medical Center	Author	Revised the manuscript for intellectual content

References

1. Heilman KM, Valenstein E. Clinical Neuropsychology, 5th ed. New York: Oxford University Press; 2011.
2. Baldo JV, Kacirik N, Ludy C, et al. Voxel-based lesion analysis of brain regions underlying reading and writing. *Neuropsychologia* 2018;115:51–59.

Share Your Artistic Expressions in *Neurology* ‘Visions’

AAN members are urged to submit medically or scientifically related artistic images, such as photographs, photomicrographs, and paintings, to the “Visions” section of *Neurology*®. These images are creative in nature, rather than the medically instructive images published in the NeuroImages section. The image or series of up to six images may be black and white or color and must fit into one published journal page. Accompanying description should be 100 words or less; the title should be a maximum of 96 characters including spaces and punctuation.

Please access the Author Center at NPub.org/authors for full submission information.

Neurology®

Ictal multicomponent agraphia in left temporal lobe epilepsy

Carol Ulloa, Gloria Ortiz-Guerrero, Caleb Pearson, et al.

Neurology 2020;94;42-43

DOI 10.1212/WNL.00000000000008705

This information is current as of December 30, 2019

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/94/1/42.full
References	This article cites 1 articles, 0 of which you can access for free at: http://n.neurology.org/content/94/1/42.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Epilepsy/Seizures http://n.neurology.org/cgi/collection/all_epilepsy_seizures Epilepsy semiology http://n.neurology.org/cgi/collection/epilepsy_semiology Epileptogenic zone http://n.neurology.org/cgi/collection/epileptogenic_zone
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 © 2019 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.