Teaching NeuroImage: Pseudo–Figure-of-4 Sign

Chethan K. Rao, DO, MS, and William O. Tatum, DO

Neurology® 2022;98:e326–e327. doi:10.1212/WNL.00000000000013003

Correspondence

Dr. Tatum
tatum.william@mayo.edu

Figure 1 Semiology During Video-EEG Supporting Seizure Onset in the Left Hemisphere

Pseudo-figure-of-4 sign with right arm extended and left arm flexed to reproduce a falsely lateralizing number “4” from left elbow flexion contracture in a patient with focal epilepsy and recurrent focal to bilateral tonic-clonic seizures.

Case Summary

A 37-year-old right-handed man with spastic quadriparetic cerebral palsy, congenital hydrocephalus, and anxiety was admitted for seizure characterization with video-EEG monitoring. Neurologic examination demonstrated marked upper extremity spasticity and left elbow flexion contracture. Three habitual focal to bilateral tonic-clonic seizures (Figure 1) were recorded on EEG (Figure 2).

Although the figure-of-4 sign in focal to bilateral tonic-clonic seizures is strongly lateralizing contralateral to the tonically extended arm,^{1,2} our patient’s left arm spasticity restricted extension, leading to a falsely lateralizing figure-of-4 sign. Semiology remains a cornerstone for clinical decision-making, although it requires individualization for comorbid physical disabilities.

Study Funding

The authors report no targeted funding.

Disclosure

C. K. Rao reports no disclosures relevant to the manuscript; W. O. Tatum reports no disclosures relevant to the manuscript. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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From the Department of Child and Adolescent Neurology (C.K.R.), Mayo Clinic College of Medicine and Health Sciences and Department of Neurology (W.O.T.), Mayo Clinic College of Medicine and Health Sciences, Jacksonville, FL.

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Figure 2 Interictal and Ictal EEG Supporting Right Temporal Lobe Epilepsy

EEG demonstrating (A) right temporal ictal rhythmic theta. Onset was obscured by movement and myogenic artifact and (B) interictal right midtemporal sharp waves.

Appendix Authors

Name	Location	Contribution
Chethan K. Rao, DO, MS	Mayo Clinic, Jacksonville, FL	Drafting of the manuscript, acquisition of data, manuscript preparation, and literature review
William O. Tatum, DO	Mayo Clinic, Jacksonville, FL	Study concept and design, acquisition of data, and critical revision of the manuscript for important intellectual content

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Neurology 2022;98:e326-e327 Published Online before print October 21, 2021

DOI 10.1212/WNL.0000000000013003

This information is current as of October 21, 2021

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