Teaching NeuroImage: CAR-T–Induced Nonconvulsive Status Epilepticus

Yvo Rodriguez, MD, Mohanad AlGaeed, MD, Katelyn Dolbec, MD, and Trudy Pang, MD

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Correspondence

Dr. Rodriguez
ivoro3010@gmail.com

Figure EEG Before and After Treatment

(A) EEG depicts nonconvulsive status epilepticus (NCSE) characterized by high voltage generalized spike/polyspike slow wave discharges at 2.5–3 Hz. (B) Resolution of NCSE pattern after administration of lorazepam, followed by levetiracetam.

A 79-year-old woman receiving chimeric antigen receptor T-cell (CAR-T) therapy for high-grade lymphoplasmacytic lymphoma developed worsening confusion over 3 days. She became nonverbal and unable to follow commands. MRI of the brain demonstrated global atrophy. EEG showed 2.5- to 3-Hz generalized spike and slow complexes, indicative of nonconvulsive status epilepticus (NCSE), which resolved with the administration of lorazepam (figure). IV levetiracetam load was

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From the Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA.

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administered for maintenance therapy. The patient was able to answer simple questions the next morning and returned to baseline 3 days later with optimization of antiseizure medications. CAR-T–induced neurotoxicity can present with multiple neurologic manifestations including sometimes intractable seizures.¹ It is imperative to consider CAR-T–induced NCSE as a complication that is potentially reversible.²

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Appendix Authors

Name	Location	Contribution
Yvo Rodriguez, MD	Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA	Drafting/revision of the manuscript for content, including medical writing for content, major role in the acquisition of data

Appendix (continued)

Name	Location	Contribution
Mohanad AlGaeed, MD	Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA	Drafting/revision of the manuscript for content, including medical writing for content, major role in the acquisition of data
Katelyn Dolbec, MD	Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA	Drafting/revision of the manuscript for content, including medical writing for content
Trudy Pang, MD	Department of Neurology, Beth Israel Deaconess Medical Center, Boston, MA	Drafting/revision of the manuscript for content, including medical writing for content

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