Teaching Video Neuroimages: Hereditary Hyperekplexia Mimicking Tonic Seizures in an Infant

Author(s):
Derek G. Neupert, M.D.¹; Kevin M. Rathke, M.D.²; Mohamad A. Mikati, M.D.²

Equal Author Contributions:
These authors contributed equally to this work.

Neurology® Published Ahead of Print articles have been peer reviewed and accepted for publication. This manuscript will be published in its final form after copyediting, page composition, and review of proofs. Errors that could affect the content may be corrected during these processes.
Abstract:
Hereditary hyperekplexia is a rare neurological disorder characterized by an exaggerated startle response with profound muscle stiffness. Given the nature of the spells, this condition is often misdiagnosed as epilepsy. Mutations in glycine receptors and transporters are the primary cause of this syndrome. We present an example of stimulus induced hyperekplexia captured on video EEG in a 7-week-old girl with compound heterozygous variants in the presynaptic glycine transporter gene SLC6A5.

Case Summary:
7-week-old full term girl with history of motor delay was referred for presumed daily tonic seizures since day 2 of life. Events were refractory to levetiracetam and phenobarbital. Family reported that episodes are triggered by tactile stimulation and resolve once the patient is held. We suspected hereditary hyperekplexia. On video EEG, four typical events were captured without epileptiform correlate (Video). She was transitioned to clonazepam with remarkable improvement. Genetic testing confirmed the diagnosis (compound heterozygous in the glycine transporter gene SLC6A5). Both variants have been reported previously in patients with hereditary hyperekplexia (pathologic variant: c.679+1G>T, IVS3+1G>T; and likely pathologic variant: c.1640T>C, p.F547S).
Video 1 Legend:
Video EEG of stimulus induced hyperekplexia event triggered by touching patient’s abdomen. Clinical episode is observed as sustained full body tonic stiffening and bilateral limb extension. Event resolves once baby is held. No epileptiform correlate is observed on video EEG, only muscle artifact.

Video 1-http://links.lww.com/WNL/B476
Teaching Slides-http://links.lww.com/WNL/B477
References:


Teaching Video Neuroimages: Hereditary Hyperekplexia Mimicking Tonic Seizures in an Infant
Derek G. Neupert, Kevin M. Rathke and Mohamad A. Mikati
Neurology published online July 15, 2021
DOI 10.1212/WNL.0000000000012538

This information is current as of July 15, 2021