Teaching NeuroImage: Needle-like Occipital Spikes in Children With Visual Impairment

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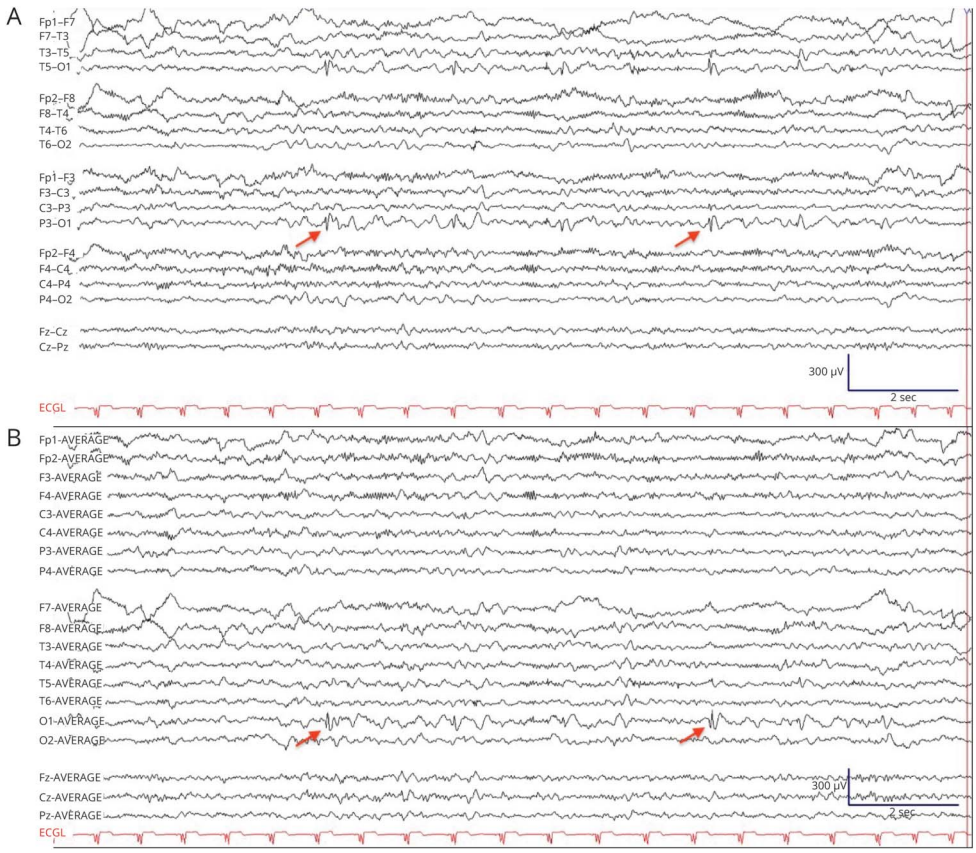
Figure Routine EEG



Sensitivity 15 µV/mm, low frequency 1 Hz, high frequency 70 Hz, notch on/60 Hz. Bipolar (A) and average reference (B) showing a run of 100–150 µV focal spike-and-wave discharges with a needle-like morphology in the left occipital region (red arrows)—maximal negativity at O1.

Case Description

We report an 8-year-old boy with bilateral optic nerve hypoplasia and cortical visual impairment with an *ASTN1* (OMIM#600904) variant. EEG was ordered for screening purposes because there was no history of seizures/epilepsy. EEG showed absence of posterior dominant rhythm and focal needle-like spike-and-wave discharges in the left occipital region (Figure). It is unclear whether the *ASTN1* mutation contributed to this patient's phenotype. EEGs of children with visual dysfunction commonly show absence of posterior dominant rhythm and may show occipital needle-like spikes, which are considered innocuous and unrelated to epilepsy thus a normal EEG variant, and may be due to functional deafferentation.[1,2]

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Teaching slides
links.lww.com/WNL/C236

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Appendix *(continued)*

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