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

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**Case Description**

We report an 8-year-old boy with bilateral optic nerve hypoplasia and cortical visual impairment with an ASTN1 (OMIM#600904) mutation. EEG was ordered for screening purposes as 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 1). 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]

Teaching Slides ---- http://links.lww.com/WNL/C236

**References**


**Figure legend**

**Figure 1**: Routine EEG. Sensitivity 15 μV/mm, LF 1 Hz, HF 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.
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