



# Unexplained Headache In A Pediatric Patient: Medically Challenging Cases

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## INTRODUCTION

- **Headache** is among the most common neurological disorders with similar differential diagnosis in **adults** as well as in **pediatric population**, with **migraines** being the most common primary headache encountered.
- The **recognition and differentiating** of the small number of patients with life threatening headaches from the ones with benign primary headaches is fundamental
- We present a case in which migraine was part of the differential diagnosis, but the clinical evolution showed a more severe entity.

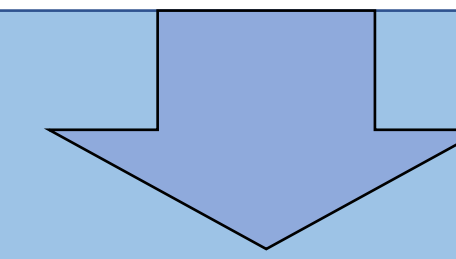
## MATERIALS AND METHODS

As this case report is **devoid of patient identifiable information**, it is exempt from IRB review requirements as per Cook County Health, Stroger Hospital's policy. The **informed consent was obtained from patient's parents** for submission of this case report.

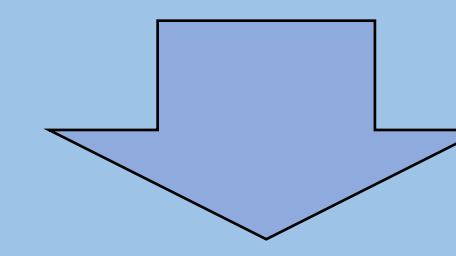
## CASE PRESENTATION

A 6-year-old male **with no PMH and no history of autoimmune**. Presented with one week of frontal **headache** associated with eye pain, photophobia, and fatigue.

- **Tested positive for strep** throat infection and was treated with Penicillin G.
- Symptoms has progressed in 10 days to unsteady gait, dysarthria, and diplopia.



- Afebrile, HDS, CBC with elevated WBC 29, CRP 5.4, and ESR 59
- **Initial MRI was negative**, LP with minimal leukocytosis 90 with normal protein, and glucose. Viral panel, Blood and CSF cultures, and PCR were negative.
- **2<sup>nd</sup> MRI was done in 4 days and showed nonspecific findings** consistent with cerebellitis and subtle leptomeningeal enhancement.



While receiving IV antibiotics for suspected meningitis **neurological deficit has progressed**.

- **3<sup>rd</sup> MRI brain/spine showed extensive non-enhancing T2 hyperintensity** throughout right dentate nucleus, bilateral superior cerebellar peduncles/dorsolateral midbrain, ventral medulla, thalamus, and corpus collosum.

After ruling out other potential causes, the diagnosis of acute demyelinating encephalomyelitis (ADEM) was suspected.

**The patient responded to steroids with no residual deficits.**

## DISCUSSION

**ADEM is a demyelinating disease** of the central nervous system, characterized with headache, non-specific symptoms and acute or subacute encephalopathy with polyfocal neurological deficits.

ADEM is consider **after excluding other causes** of multifocal neurologic deficits.

**MRI with demyelinating lesions** will further support the diagnosis.

**Often misdiagnosed** patients generally appear less ill and do not have neurologic deficits, leading to misdiagnosis.

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