Clinical isolated syndrome mimicking focal brainstem glioma in a child

Brandon C Gabel,1 Janet Yoon,2 John Ross Crawford1,2

1Department of Neurosurgery, University of California San Diego, San Diego, California, USA
2Department of Pediatrics, University of California San Diego, San Diego, California, USA

Correspondence to Dr John Ross Crawford, jrcrawford@ucsd.edu

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DESCRIPTION

A 5-year-old boy presented to our hospital with a 10-day history of progressive left-sided facial weakness, drooling and inability to swallow in the absence of a preceding febrile illness. Two weeks prior to presentation he had been camping with his family. Neurological examination revealed left facial palsy, left palatal weakness, depressed gag reflex and mild left-sided hypoglossal weakness. MRI of the brain demonstrated a focal T2 hyperintense lesion in the left medulla that was contrast enhancing without surrounding vasogenic oedema (figure 1A,B). Lumbar puncture revealed normal glucose, protein and no pleocytosis or abnormal cytology. A comprehensive laboratory and serological workup for infectious aetiologies was negative as was MRI of the spine. The child was placed on dexamethasone for 7 days with marked improvement in his symptoms and MRI. Given the clinical and radiographic improvement, a biopsy was not performed and clinical isolated syndrome was considered the most likely diagnosis.

At 3 years of follow-up his MRI shows no evidence of abnormality (figure 1C,D) and neurological examination reveals only mild left-sided palatal weakness.

The differential diagnosis of focal brainstem lesions of childhood includes infectious,
Clinical isolated syndrome and acute disseminated encephalomyelitis may be indistinguishable from neoplasm on MRI and should be considered in the differential diagnosis of focal brainstem lesions.

Clinical observation followed by a short interval MRI may be appropriate in certain clinical settings that would obviate the need for diagnostic biopsy in the absence of progression.

Our case highlights that clinical isolated syndrome may mimic a focal brainstem glioma obviating a biopsy in certain clinical situations.

**Learning points**

- Clinical isolated syndrome and acute disseminated encephalomyelitis may be indistinguishable from neoplasm on MRI and should be considered in the differential diagnosis of focal brainstem lesions.
- Clinical observation followed by a short interval MRI may be appropriate in certain clinical settings that would obviate the need for diagnostic biopsy in the absence of progression.

**REFERENCES**