

# Clinical isolated syndrome mimicking focal brainstem glioma in a child

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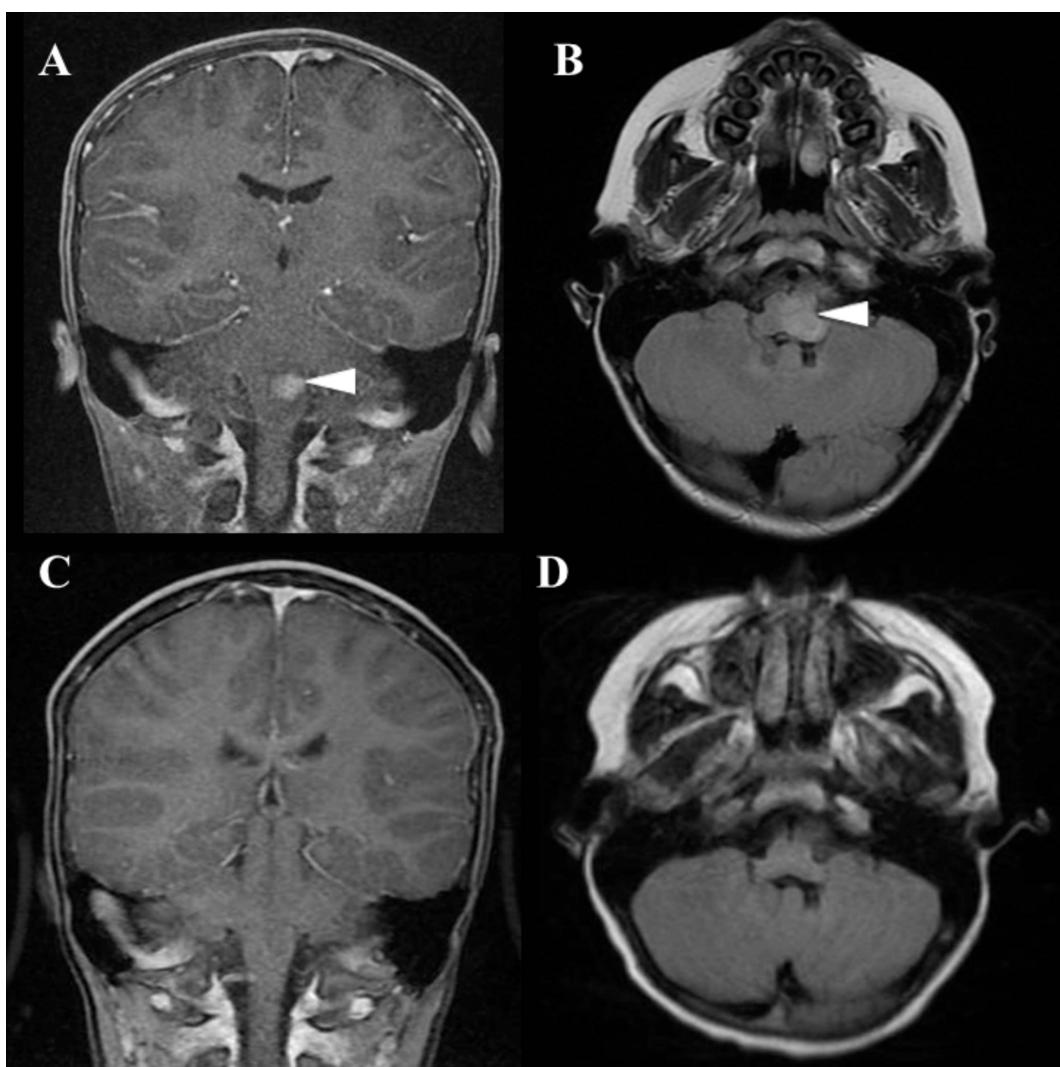
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## DESCRIPTION

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 contrast enhancing lesion in the left medulla that was T2 hyperintense 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,



**Figure 1** MRI at presentation (A and B) reveals a contrast-enhancing focal lesion in the medulla (A) that is hyperintense on axial fluid-attenuated inversion recovery sequence (B). MRI at 3 years postpresentation (C and D) demonstrates resolution of the lesion.



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**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.

postinfectious, vascular and neoplastic causes. Tuberculosis, syphilis and amoebic abscess have all been reported as mimicking focal brainstem glioma.<sup>1–3</sup> Diagnostic considerations for focal brainstem tumours in this age group would include low-grade glial tumours or rarely central nervous system lymphoma.

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

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