

Unilateral facial nerve palsy as an early presenting symptom of relapse in a paediatric patient with acute lymphoblastic leukaemia

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DESCRIPTION

Idiopathic unilateral facial nerve paralysis (Bell palsy) rarely occurs as a presenting symptom of childhood leukaemia, and published reports of Bell palsy as a symptom of leukaemic relapse are even fewer.^{1–3} These images show the MRI findings in this case of peripheral facial nerve palsy as an early presenting symptom of central nervous system (CNS) relapse.

This patient was diagnosed at 12 years of age with T-cell acute lymphoblastic leukaemia without CNS involvement. Five months into therapy, he developed vision loss in the left eye secondary to optic nerve leukaemic infiltration. Radiation therapy and intensification of his chemotherapy induced a durable radiographic response.

Sixteen months into therapy, the patient presented with a 1-day history of unilateral facial weakness. An MRI of the brain showed mild enhancement of portions of the right facial nerve, consistent with Bell palsy (figure 1). The patient received a 6-day course of prednisone and 1-week course of valacyclovir as empiric treatment.

One week later, the patient's facial nerve palsy had improved and he underwent a previously scheduled lumbar puncture with intrathecal chemotherapy. The CSF cell count showed only 1 WCC/ μ L and 1 RBC/ μ L, but the cerebrospinal fluid cytology was positive for lymphoblasts. He was diagnosed with CNS relapse. After 3 weeks of

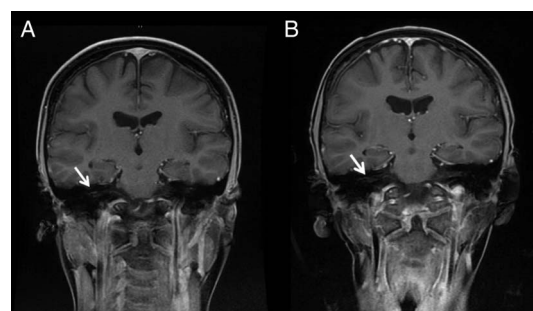


Figure 2 MRI postgadolinium coronal sequences demonstrating facial nerve enhancement (arrows) prior to chemotherapy (A) and that subsequently resolved following chemotherapy (B).

reinduction chemotherapy, the facial palsy resolved completely, and 3 months later, an MRI showed resolution of the facial nerve enhancement (figure 2). He subsequently underwent a haematopoietic stem cell transplant.

Learning points

- ▶ Unilateral facial nerve palsy can be a rare presenting symptom of leukaemic relapse.
- ▶ MRI findings consistent with idiopathic Bell palsy cannot exclude the diagnosis of leukaemic relapse.
- ▶ Although most cases of Bell palsy are idiopathic, the development of a focal neurological deficit in a patient with known leukaemia warrants rigorous investigation and close surveillance for possible central nervous system relapse.

Competing interests None declared.

Patient consent Obtained.

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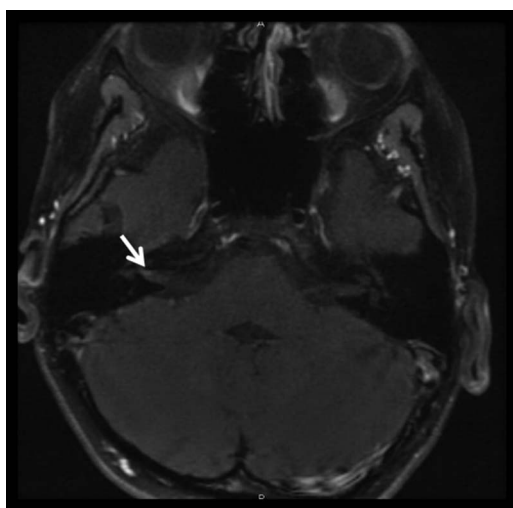


Figure 1 MRI postgadolinium T1-weighted axial sequence demonstrating enhancement of the proximal portion of the facial nerve (arrow).



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