

Bilateral Bell's Palsy in a Pediatric Patient

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Bilateral facial nerve palsy (FNP) represents less than 2% of all cases of facial nerve palsies. <20% of bilateral FNPs are attributable to Bell's palsy (BP). Most patients with bilateral FNP have underlying medical conditions such as neurologic, neoplastic, traumatic, or metabolic disorders. The expansive differential diagnosis for FNP presents a diagnostic challenge for the clinician.

A 16-year-old male brought to the pediatric emergency department (ED) with bilateral facial paralysis. The patient reported a fever 2-3 days prior, during which he began to have difficulty with facial movements. He denied numbness, loss of sensation, or facial pain except when talking. He denied recent trauma, travel, allergen exposure, insect bites, or ill contacts. He denied history of STIs or exposure.

In the ED, he was afebrile with stable vital signs. Minimal movement of the right eyebrow was noted with no movement of the left eyebrow. The patient was able to close his eyes but not against resistance. When asked to smile, no facial movement was noted. Facial sensation, jaw and tongue muscles, extra-ocular eye movements, and hearing were all intact.

Once admitted, he received an extensive infectious workup including lab work, imaging, and lumbar puncture (LP). Significant labs included WBC 10.2 1000/uL, ESR 37 mm/hr, CRP 10.6 mg/L, IgE 827.3 IU/mL, IgA 407.3 mg/dL, EBV Ab IgG 117.0 U/mL, EBV Ab IgM <36 U/mL, EBV nuclear antigen Ab IgG >600.0 U/mL. MRI of the brain showed subtle bilateral enhancement along the pathway of the 7th nerve, representing an unusual Bell's palsy or other inflammatory changes. All other tests including respiratory viral panel, CMV, ANA, Lyme total antibody, GC, HSV, HIV, and N meningitis were unremarkable. Spinal fluid appeared hazy, showing WBC 95 /mm³, RBC 1460 /mm³, Lymphocytes 93%, Monocytes 6%, Glucose 61 mg/dL, and Protein 54.9 mg/dL, consistent with viral infection.

He was diagnosed with moderate to severe bilateral Bell's palsy at the nerve distal to the geniculate ganglion branch to the stapedius, secondary to prior or repeated EBV exposure or infection. Due to considerable paralysis, he was treated with two doses of 1-gram IV solumedrol and artificial tears. He was discharged 4 days later. One month later, he reported to neurology follow-up with return of motor function to the facial nerve. He did report facial neuralgia and was started on gabapentin 300 mg twice daily and encouraged to increase facial motor exercises.

This patient had a rare case of bilateral Bell's palsy likely secondary to post-viral infection, possibly related to EBV. This case presented a diagnostic dilemma and required an extensive neurological and infectious workup, although the definite etiology could not be ascertained.