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Central nervous system lymphoma mimicking Bell palsy

As many as 94% of patients with incomplete Bell palsy may achieve complete remission

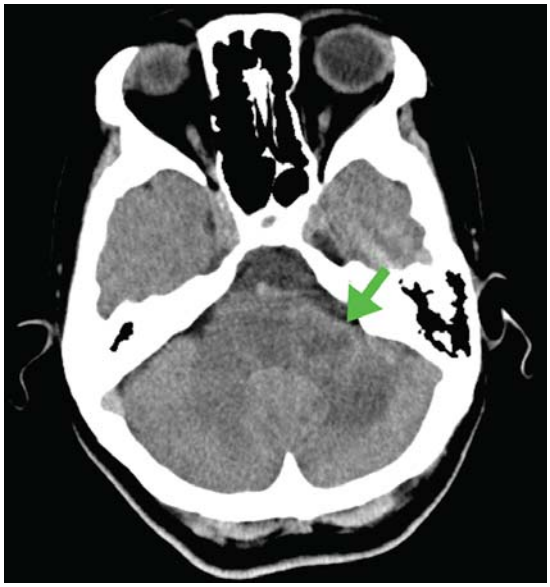

Figure 1. Computed tomography 2 months after the onset of symptoms showed a low-density lesion in the left middle cerebellar peduncle (arrow).

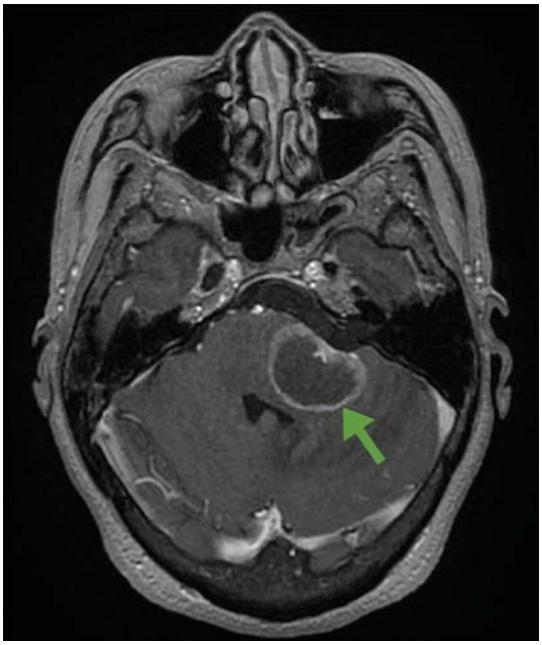

Figure 2. T2-weighted magnetic resonance imaging with contrast revealed a cystic enhancing lesion in the left middle cerebellar peduncle (arrow).

A 59-year-old woman presented with drooling out of the left side of her mouth and inability to close her left eye. She had no ear pain, hearing loss, or skin rash. The facial palsy affected all branches of the left facial nerve. This explained her inability to close her left eyelid and the generalized weakness of the left side of the face, including her forehead and angle of the mouth. No other signs of pontine dysfunction were noted.

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The symptoms had begun 2 months earlier, and computed tomography (CT) of the head performed at a nearby clinic 3 days after the onset of symptoms showed no abnormalities. She was given a diagnosis of incomplete Bell palsy and was prescribed prednisolone and valacyclovir. However, her symptoms had not improved after 2 months of treatment, and so she presented to our hospital.

Physical examination revealed moderate nerve dysfunction (House-Brackmann grade III, with grade I normal and grade VI total paralysis) and generalized weakness on the left side of her face including her forehead.[1] She

had no loss in facial sensation or hearing and no ataxia or ocular motility disorders.

CT revealed a low-density lesion in the pons (**Figure 1**), and T2-weighted magnetic resonance imaging with intravenous contrast revealed a high-intensity lesion in the left middle cerebellar peduncle (**Figure 2**). Laboratory testing was negative for human immunodeficiency virus antibodies.

Study of an excision biopsy of the lesion confirmed diffuse large B-cell lymphoma. Whole-body CT revealed no other lesions, leading to a diagnosis of primary diffuse large B-cell lymphoma. Although the patient's symptoms partially improved with dexamethasone and methotrexate, she died 4 months later.

BELL PALSY

Peripheral facial nerve palsy is classified either as Bell palsy, which is idiopathic, or as secondary facial nerve palsy. Because Bell palsy accounts for 60% to 70% of all cases,[2] treatment with oral steroids is indicated when no abnormal findings other than lateral peripheral facial nerve palsy are observed. Antiviral drugs may provide added benefit, although academic societies do not currently recommend combined therapy.[3] However, 85% of patients with Bell palsy improve within 3 weeks without treatment, and 94% of patients with incomplete Bell palsy—defined by normal to severe dysfunction, ie, not total paralysis, based on House-Brackmann score—eventually achieve complete remission.[2]

Therefore, although progression of symptoms or lack of improvement at 2 months does not rule out Bell palsy, it should prompt a detailed imaging evaluation to rule out an underlying condition such as tumor (in the pons, cerebellopontine angle, parotid gland, middle ear, or petrosal bone), infection (herpes simplex, varicella zoster, Ramsey-Hunt syndrome, or otitis media), trauma, or systemic disease (diabetes mellitus, multiple sclerosis, sarcoidosis, or systemic lupus erythematosus).[4]

According to a review of common causes of facial nerve palsy, the most common finding in 224 patients misdiagnosed with Bell palsy was tumor (38%).[5] This indicates the value of magnetic resonance imaging of the head rather than CT when secondary facial nerve palsy is suspected, as CT is not sensitive to brainstem lesions.

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