

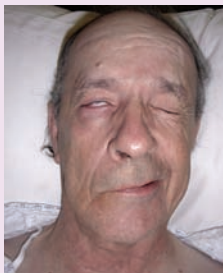


Facial Palsy: Is it serious?

Fiona Liston; and Constance LeBlanc, MD

Leo's presentation

- Leo, 55, presents to the ED with right-sided facial weakness and numbness.
- When he awoke the previous morning the right corner of his mouth appeared to droop. His symptoms progressed over the next 24 hours, with sagging of his right lower eyelid, drooling from the mouth and apparent numbness through his right cheek.
- On further questioning, he describes an aching pain behind his right ear that started two days ago and has persisted.
- He has not seen a doctor in years.



Physical Exam

- Leo is alert and orientated, although noticeably anxious.
- There is no fever, and vital signs are normal.
- There is evident facial asymmetry, with saliva collecting in the right side of the mouth. His right eye appears somewhat reddened.
- When asked, the patient can voluntarily raise both eyebrows.

Differential Diagnosis

- Ischemic or hemorrhagic stroke
- Bell's palsy
- Herpes simplex virus
- Herpes zoster (Ramsay-Hunt syndrome)
- Human immunodeficiency virus
- Parotid or cerebellopontine angle tumours
- Trauma (temporal bone fracture)
- Ear infection (otitis media)
- Lyme disease
- Diabetes mellitus
- Guillain-Barre syndrome

For more on Leo, turn to page 4.

Questions & Answers

1. What is important in the initial assessment of a patient with unilateral facial paralysis?

Determine whether the facial weakness is central or peripheral in nature. This can often be elicited by simple questioning and examination.

Due to bilateral innervation of the upper one-third of the face, this area is spared in central etiologies. With such a lesion a patient can raise both eyebrows, resulting in furrows on both sides of his forehead, and can close both eyes. In the case of peripheral etiologies, there is involvement of the entire face on the affected side. The patient will often be unable to close his eyes or raise his eyebrows, resulting in a smooth, unfurrowed forehead on the affected side. Some patients will appear to have been spared involvement of the upper face, retaining the ability to raise their eyebrows, but strength testing of the upper facial muscles (frontalis, corrugator and orbicularis) reveals an underlying weakness. Having the patient maintain a raised eyebrow against resistance can reveal a hidden upper-facial involvement, pointing to a less serious, peripheral etiology. The most common peripheral cause of unilateral facial paralysis is Bell's palsy.

2. What are the important questions to be asked in the history?

Determine the onset of paralysis. A slow, progressive onset is suggestive of a tumour, while an acute onset is typical of Bell's palsy. Other symptoms suggestive of a tumour include an associated tic or spasm and paralysis of isolated branches of the facial nerve. Symptoms that support a diagnosis of Bell's palsy include acute weakness of the entire half of the face, altered lacrimation and post-auricular pain. The diagnosis of Bell's palsy is one of exclusion, and the history focuses on ruling out other potential causes. Important focuses include recent infectious processes, a history of chronic disease (such as diabetes, hypothyroidism or hypertension), pregnancy, a history of tick bites and skin rashes.

3. What are the important aspects of the physical exam?

A thorough neurologic exam should be performed with particular attention to all the cranial nerves, upper cervical nerves and limb strength. Examine all branches of the facial nerve, as isolated branch involvement indicates neoplasm or trauma. Many patients presenting with Bell's palsy describe decreased sensation on the affected side, although formal testing reveals intact sensation. Because of their inability to close their eyes, patients are at risk of exposure keratitis and it is essential to assess lacrimation and corneal dryness. The ear canal should be examined for herpetic vesicles (Ramsey-Hunt syndrome), as well as for any signs of bacterial infection.

4. What are the important investigations?

Bell's palsy is a clinical diagnosis. However, some ancillary evaluations, such as Lyme and HIV serology, may be sought in patients at risk. CT or MRI imaging studies are required if there is a history of head trauma or any indications of a central etiology.

5. What is the appropriate management of this patient?

If the paralysis is determined to be peripheral, without any apparent cause, the diagnosis of Bell's palsy can be made. Treatment is a short course of prednisone, initiated as soon as possible to prevent nerve degeneration. Because Bell's

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Back to our patient

- Leo has impairment of all branches of his right facial nerve. The upper one-third of his face is not spared and strength testing of the upper facial muscles reveals significant weakness. The rest of the neurologic exam is completely normal.
- Bell's palsy is diagnosed. Leo is told to expect maximum weakness at 48 hours post onset and full recovery within several weeks.
- Leo is prescribed prednisone, 1 mg/kg/day, for seven days, and acyclovir, 1 g twice daily, for seven days. He is advised to purchase artificial tears and is given a lubricant for bedtime application.
- Leo is told to visit his family doctor if there is progression of his symptoms beyond three weeks, if any new atypical symptoms present or if there is absence of any improvement in three months.

palsy is believed to be associated with herpes simplex virus infection, an antiviral is also recommended.

Eye care is another essential element to the management of Bell's palsy. Patients should be given an ocular lubricant to prevent corneal drying at night, as well as artificial tears to be applied in the daytime.

Adequate followup with the family doctor is important. Although 85% of patients will achieve complete recovery within several weeks to months, a minority will require specialist referral to manage the potential sequelae. 

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