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## An unusual presentation of Facial paralysis: A case report

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### Abstract

Facial paralysis is a neuropathy of the peripheral seventh cranial nerve, usually resulting from traumatic, compressive, infective, inflammatory or metabolic abnormalities. However, in many cases no etiology is identified and the eventual diagnosis is idiopathic. Here, we present one such case of a patient of facial paralysis with slight slurred pronunciation during any recitation, heaviness of the right side of the face and the flu-like symptoms about 1-2 weeks ago.

**Keywords:** Facial paralysis.

### Introduction

Facial paralysis is a clinical condition which is named after Dr. Charles Bell, who, in 1821, described complete facial paralysis after injury of the stylomastoid foramen<sup>[1]</sup>. Facial paralysis can be defined as acute peripheral facial nerve palsy usually of unknown cause<sup>[2]</sup>. It is typically unilateral and can be complete or partial<sup>[3]</sup>. Although there is agreement on the definition, there is no consensus regarding the etiology, diagnostic approach or management of this enigmatic condition<sup>[4]</sup>. Facial palsy is generally a unilateral disease, affecting both sides of the face equally. Acute inflammation and edema of the facial nerve are thought to lead to entrapment of the nerve in the bony canal (especially in the labyrinthine segment), which leads to compression and ischemia<sup>[5, 6, 7]</sup>. An inflammatory process surrounds the nerve fibers. Many viruses, such as HIV,<sup>[8]</sup> Epstein-Barr virus<sup>[9]</sup> and hepatitis B virus<sup>[10]</sup> have been suspected in initiating this inflammation, but herpes simplex virus (HSV) is the most frequently implicated<sup>[11, 12]</sup>. Patients generally experience rapid onset of unilateral facial palsy and often describe numbness or stiffness, although no actual sensory loss occurs<sup>[5, 7]</sup>. Affected patients are usually unable to close their eyes. Facial appearance becomes asymmetric, and saliva dribbles down the angle of the mouth. Depending on the site of the lesion, some patients may complain of noise intolerance or loss of taste sensation<sup>[1, 5]</sup>. Treatment of facial palsy is controversial, because as many as two-thirds of patients recover spontaneously. Corticosteroids alone or associated with antiviral agents have been recommended<sup>[7]</sup>. Adour<sup>[13, 14]</sup> reported that patients with facial palsy treated with acyclovir and prednisone experience a more favorable recovery and less neural degeneration than patients treated with placebo plus prednisone. The favorable response to the treatment of facial palsy with acyclovir-prednisone supports the theory that reactivated HSV causes neuritis.

A case of facial paralysis in a young patient with unusual complain was present in this article.

### Case report

A 25-year-old patient reported to the department of Oral and Maxillofacial Surgery of Sapporo Dental College and Hospital, Dhaka complaining of slight slurred pronunciation during any recitation, heaviness of the right side of the face. He denied any numbness, tingling, or weakness in his extremities. He denied recent cold sores, ear discharge, or recent trauma; however, he noted flu-like symptoms about 1-2 weeks ago. He also denied any changes in hearing or ear pain. The patient noted no previous medical history. He denied any prior surgeries. He is a smoker but denied alcohol or illicit drug use.

On exam, the patient was in no acute distress and in no obvious discomfort. His speech was slightly slurred. His skin was warm and dry with no apparent rashes or lesions. He demonstrated an inability to close his eyelid and to wrinkle his forehead. He was also unable to

whistle properly. No ulcerations were noted in his ears. The remainder of his exam including a thorough neurologic exam was unremarkable. All diagnostic tests were essentially normal, including orthopantomogram and labs.

Based on the clinical examination, the patient was diagnosed with unilateral (right sided) facial nerve paralysis.

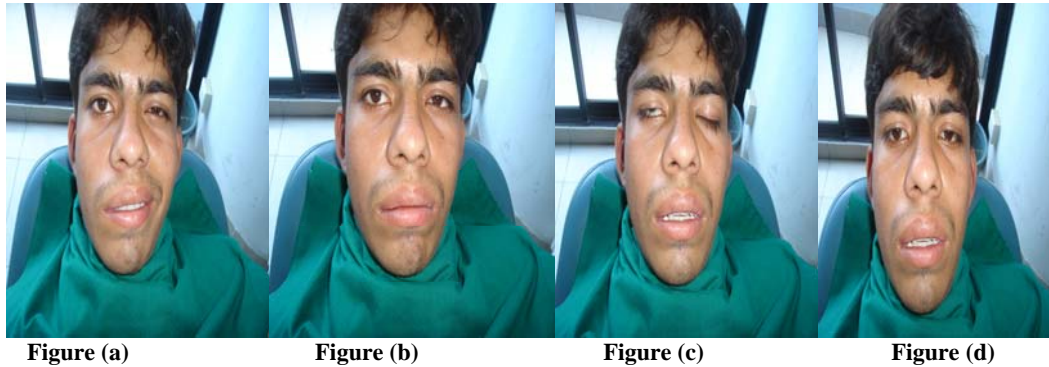
### Treatment

The aims of treatment in the acute phase of facial paralysis include strategies to speed recovery and to prevent corneal complications. Eye care includes eye patching and lubrication. Lubricating drops should be applied frequently during the day and an eye ointment should be used at night<sup>[5]</sup> Strategies to speed recovery include physical therapy, corticosteroids and

antiviral agents.

Accordingly Prednisolone 1mg/kg body weight per day for five days and acyclovir 800 mg per day in divided dose for one week were prescribed to speed recovery. Chloramphenicol eye drops and ointment was prescribed as eye lubricant and he was advised to use eye pad and glass to protect the cornea. The dose of Prednisolone was then tapered 10mg/day for a total treatment time of 15 days.

Significant improvement was noted fifteen days later and Vinpocetine 5mg twice daily for 10 days were prescribed to increase peripheral blood circulation for further development. The prognosis was drastic and complete recovery of all facial muscle function was achieved one month later.



**Fig 1:** Facial aspect of patient in case 1, showing facial paralysis on the right side. (a) Inability to smile. (b) Incomplete right eye closure. (c) No movement in the upper right eyebrow. (d) Absence of movement in the right portion of the labial orbicular muscle.



**Fig 2:** Facial aspect of patient in case 1 after recovery of facial movement. (a) Normal, symmetric smile. (b) Complete closure of the right eye. (c) Normal right eyebrow movement. (d) Normal movement of labial orbicular muscle

### Discussion

Much pathology can be included in the differential diagnosis of facial paralysis: unilateral central facial weakness, Ramsay Hunt syndrome, Lyme neuroborreliosis, tumours, diabetes mellitus, sarcoidosis, weight loss, visual changes, vertigo and weakness or numbness. No specific laboratory test confirms the diagnosis of facial paralysis, its assessment remains clinical. It is important to emphasize the fact that we followed this patient weekly and noted that he was recovering very well. Patients should be advised to use artificial tears to keep the eyes moist and prevent exposure keratitis. During the day, sunglasses are indicated, and dirty, noxious fumes should be avoided. During sleep, an ophthalmic ointment should be used<sup>[7]</sup>. Our patients enjoyed complete recovery after 4 weeks, but clinicians should be aware of possible morbidities. Treatment for Bell's palsy is etiology-driven if a specific case is identified. Most patients with Bell's palsy recover without treatment 71% achieve complete recovery, 84% achieve near normal function. Commonly employed, noncontroversial treatment modalities for facial paralysis include eye patching

and lubrication to protect the cornea from drying and abrasion secondary to poor lid closure and reduced tearing.

Controversy remains regarding the therapeutic effectiveness of steroids and acyclovir. According to the Cochrane Reviews, the available evidence from randomized controlled trials does not show significant benefit from treating facial paralysis with steroids alone. Upon completing their own systematic review, The American Academy of Neurology found insufficient evidence in class I studies to definitively establish the efficacy of steroid treatment. Nevertheless, based upon pooled results of class I and class II studies and a relatively benign side-effect profile, they concluded that steroids are safe and probably effective in improving facial functional outcomes in patients with Bell's palsy. Treatment with corticosteroids should begin within 5 days (earlier if possible) after the onset of palsy and should only be used in the first 7 days. Treatment with antiviral seems logical in Bell's palsy as the etiology is often viral. The American Academy of Neurology considers acyclovir safe and possibly effective in improving functional outcomes. However, a recent double-blind, placebo controlled,

randomized study demonstrated no evidence of a benefit of acyclovir given alone or an additional benefit of acyclovir in combination with Prednisolone <sup>[15]</sup>.

### Conclusion

In this case we have used Vinpocetine which is a peripheral vasodilator to increase the blood supply of the facial muscles of the affected side in order to achieve normal muscular function within a short period. Complete recovery was achieved in our case with the above mentioned treatment accordingly.

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