

# Bilateral Facial Nerve Palsy: A Rare Presentation

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## ABSTRACT

**Introduction-** Bilateral facial paralysis is a rare condition. It may manifest either simultaneous or alternating form and it represents the .3-2% patients of all cases of facial nerve palsy. Majority of these cases have some underlying medical condition. Bell's palsy accounts for only 23% of bilateral facial paralysis.

**Case report-**A young male patient of 18 yrs presented in ENT OPD with history of difficulty in chewing, impaired facial movements, incomplete eye closure bilaterally. Haematology, serum biochemistry, chest x-ray, MRI brain were normal.

**Discussion-** There may be some serious underlying disease responsible for bilateral facial nerve palsy. However etiology may be congenital, traumatic, infectious, neurological, metabolic, neoplastic, toxic, vascular, and idiopathic. A complete head neck and neurological examination should be done.

**Conclusion-** Bilateral facial palsy is a rare condition and it may present as alternative or simultaneous bilaterally. Careful history and detailed examination is to be done. It's very important to consider all the possible differential diagnosis, to perform relevant lab. And radiological Investigations to reach up to the underlying etiology. However prognosis is good.

**Keywords:** Bilateral facial paralysis, Bell's palsy, facial palsy.

## INTRODUCTION

Unilateral facial nerve palsy is a common neurological condition with an incident of 25 cases per 100,000 populations and it mimics stroke. 70% of these cases are idiopathic also known as Bell's palsy.<sup>[1]</sup> Bilateral facial paralysis is a rare condition. It may manifest either simultaneous or alternating form and it occurs in .3-2% patients of all cases of facial nerve palsy. The differential diagnosis of bilateral facial paralysis includes congenital, traumatic, neurologic, infectious, metabolic, neoplastic, toxic, iatrogenic and idiopathic etiologies. Incidence is 1 in 50,00,000 population.<sup>[2,3]</sup> Majority of these cases have some underlying medical condition. Unlike the unilateral presentation, it is seldom secondary to Bell's palsy. Adour found only 3 bilateral cases in a consecutive series of 1,000 patients with Bell's palsy.<sup>[4]</sup>

Simultaneous onset is defined as the involvement of the opposite side within 30 days of the onset of the first side. We are presenting young male patient of age 18 yrs as a case of bilateral facial nerve palsy with simultaneous appearance.

## CASE REPORT

An 18 yrs old male patient presented in ENT OPD with history of difficulty in chewing and inability to closure of bilateral eyes with full effort from five days. No history of pyrexia, trauma to head, headache, nausea, vomiting, impaired vision was positive. No history of ear discharge, tinnitus, giddiness. No history blood transfusion, or sexual promiscuity.

On examination the patient was in no distress. His temperature was 98.61F, pulse 80 bpm, respiratory rate 16/min, and blood pressure 114/76 mm Hg. The head,

eyes, ears, nose, and throat were all normal. The neck was supple, with a midline trachea. There was no thyromegaly, parotid gland enlargement, lymphadenopathy, or mucosal rugosities. Auscultation of the heart and lungs was normal. The abdomen was soft and nontender, without organomegaly, bowel sounds were normal. Local examination was suggestive of bilateral facial nerve palsy (lower motor neuron type). Mild slurring of speech was positive. Other cranial nerves were within normal limits. Power was normal in all limbs, deep tendon reflexes were present, sensory

examination was within normal limits. No cerebellar signs were positive.

Chest X-ray and spinal X-rays were reported to be normal. Patient refused lumbar puncture and CSF examination. Serum biochemistry was unremarkable. Serological tests for various agents, including thyroid peroxidase antibodies, antinuclear antibody, anti neutrophil cytoplasmic antibody, syphilis antibody, lyme (Borrelia) IgM, were all negative. MRI brain was normal. Diagnosis of Fig 1-3 On presentation, grade-4 bilateral facial nerve palsy 'house brackmen classification.'



Fig-1



Fig-2



Fig-3

Fig-4 to 6, grade-2 bilateral facial nerve palsy 'house brackmen classification' 3 weeks after initial presentation.



Fig-4



Fig-5



Fig-6

Bilateral facial nerve palsy with idiopathic etiology or Bell's palsy was considered. Patient was put on oral steroids

and was kept on follow up. After one week there was improvement in symptoms of epiphora and slurring of speech. On

examination he was able to close his bilateral eyes with effort. After three weeks there was significant improvement in symptoms and patient was able to close his eyes without effort.

## DISCUSSION

The etiology of facial palsy includes many conditions such as congenital, traumatic, infectious, neurological, metabolic, neoplastic, toxic, vascular, and idiopathic. However, unilateral facial palsy is mostly idiopathic. In a review of reported cases over a period of 10 years, Teller and Murphy<sup>[3]</sup> show that Lyme disease is responsible for 36% of the cases for facial diplegia. Guillain-Barre syndrome (5%), trauma (4%), sarcoidosis (0.9%), and AIDS (0.9%) are the major underlying causes. Multiple idiopathic cranial neuropathies, meningitis (neoplastic or infectious), brain stem encephalitis, benign intracranial hypertension, leukemia, Melkersson-Rosenthal syndrome (a rare neurological disorder characterized by facial palsy, granulomatous cheilitis, and fissured tongue), diabetes mellitus, , syphilis, infectious mononucleosis, malformations as Mobius Syndrome, vasculitis, or bilateral neurofibromas are other conditions which need to be excluded. The possibility of intrapontine and prepontine tumor should also be considered<sup>[2,5,6]</sup>. Thus, it should be carefully investigated before establishing the diagnosis of Bell's idiopathic palsy<sup>[7]</sup>.

Careful history taking is the most important tool to find out the etiology of bilateral facial nerve palsy. The history should include time sequence of onset, prior history of facial paralysis, recent viral or upper respiratory tract infection, recent camping or hiking, otological symptoms, change in taste, facial numbness, vesicles, or recent immunization.

The first priority in the workup is to rule out a life-threatening disease such as leukemia or Guillain-Barre syndrome. If these are suspected, the patient should be admitted to the hospital for close observation. The physical examination

should be complete with emphasis on the neurological and head and neck portions of the patient. Workup should include complete blood count, fluorescent treponemal antibody test, HIV test, fasting glucose, erythrocyte sedimentation rate, Lyme titer, and antinuclear antibody level measurement. Lumbar puncture after a CT scan and also special facial nerve function tests could be performed. Magnetic resonance imaging is useful in the demonstration of seventh cranial nerve lesions, tumor cell infiltration, and widening of the internal acoustic canal. Also, the areas that are most important to visualize are the central nervous system, skull base, meninges, and cerebellopontine angle, which are best imaged by enhanced MRI. In our case the etiology can not be ruled out, hence Bell's palsy was kept as possible diagnosis and was put on antivirals and steroids. Patient responded well to the treatment and was clinically free from symptoms within 6-7 weeks.

## CONCLUSION

Bilateral facial palsy is a rare condition and it may present as alternative or simultaneous form. While idiopathic facial paralysis is the most common diagnosis, a comprehensive evaluation must be completed prior to this diagnosis in patients with bilateral facial paralysis. Careful history and detailed examination is to be done. However prognosis is good.

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