

Case Report

Bilateral facial nerve palsy: challenges in diagnosis

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ABSTRACT

Bilateral facial palsy is a rare condition accounting for less than 2% of all cases of facial nerve palsy. Most of the patients develop bilateral facial nerve palsy secondary to underlying medical condition, which can be neurologic, infectious, traumatic, neoplastic or metabolic disorder. Clinicians should be careful enough to face the diagnostic dilemma and to rule out wide range of differential diagnosis in these cases, some of which can be potentially fatal. Treatment should be initiated according to the diagnosis. We are reporting a case of 26 year old man who presented to our ENT OPD with bilateral facial nerve palsy. The condition could not be attributed to any particular aetiology hence presented a diagnostic dilemma. We endorse the practice of considering wide range of differential diagnosis in all case of bilateral facial nerve palsy. These patients should undergo prompt laboratory and radiological investigations and gruelling evaluation of underlying cause for further specific management.

Keywords: Bilateral facial nerve palsy, Bell's palsy

INTRODUCTION

Facial palsy is a common condition encountered in Otolaryngology clinics worldwide, but a person presenting with bilateral facial paralysis puts the clinician in a dilemma over the possible diagnosis as the differential diagnosis has a wide range of possibilities.

Unilateral facial palsy has an incidence of 25/1 lakh population while bilateral facial palsy accounts for only 2% of all facial palsy cases (incidence of 1/5 million population).^{1,2} These patients may have serious underlying medical disorders, so they have to be admitted for proper evaluation and treatment.

Thereby we report a case of 25 year old male who presented to the ENT out patient department of Shaheed Hasan Khan Mewati –Government Medical College Nalhar with bilateral facial palsy. The patient developed sudden bilateral facial palsy 2 days before presenting to

our OPD. We are here discussing the steps of evaluation and possible differential diagnosis.

CASE REPORT

A 25 year old labourer presented to the ENT Department with complaint of sudden onset of facial droop, inability to close both eyes and drooling of saliva or fluid from both angles of mouth. The patient noticed the condition 2 days back after waking up in the morning, he consulted a local practitioner and received symptomatic medication but the condition worsened. There was history of preceding fever 2 days before the onset of this condition for which patient took Paracetamol and the fever subsided. The patient denied any dizziness, tinnitus, headache, vomiting and visual disturbance. There was no history of smoking, alcohol intake, drug abuse, blood transfusion or sexual promiscuity. He denied any history of trauma or travelling abroad in last few years. The examination of patient revealed bilateral facial (lower motor neuron) palsy. Patient had noticeable slurring of

speech. No other cranial nerve involvement was elicited and no focal neurological deficit was found. Other motor and sensory examinations were normal. In view of rarity of the condition and the possibility of it being associated with serious underlying medical conditions, the patient was admitted in ENT ward for further investigations and treatment. All routine biochemical, microbiological and radiological investigations were done, patient had normal liver and renal function tests, thyroid profile was normal, all haematological tests came out normal. Chest X Ray and X ray spine were also normal. CT scan of brain revealed no obvious abnormality, serological tests were performed. In serology ASO titre, RA factor, anti HIV antibody, anti-neutrophil cytoplasmic antibodies, anti-nuclear antibodies, syphilis antibody, Epstein- Barr virus capsid antigen IgM Antibody, Lyme IgM tests were all found to be negative. C- reactive protein slightly raised MRI of brain too didn't reveal any positive finding.



Figure 1: Appearance of patient at rest.



Figure 2: Patient has no eye closure despite full effort and no facial asymmetry or deviation of angle of mouth seen due to bilateral facial Nerve paralysis.

There was no blurring of vision and no history of muscle fatigue. The patient was started on oral Acyclovir and Prednisolone. Ophthalmologist advised him moisturizing eye drops and eye ointment with eye padding during night to avoid exposure keratitis. For first 3 days there was no improvement in the condition with facial palsy being grade 5th House Brackmann.

There after patient started improving and on 10th day of admission patient had complete closure of eyes and restored facial movements. Patient was put on tapering dose of Prednisolone and was discharged on 17th day of admission. There is no recurrence of the condition since the in 1 year follow up period.

DISCUSSION

Most cases of bilateral facial nerve palsy have underlying medical conditions. It is of paramount importance to look for the etiological factor rather than declaring it idiopathic as further management depends on diagnosis and the

Bilateral facial nerve palsy presents a great challenge for the clinician to rule out a long list of etiological possibilities, some important ones are Guillain-Barre Syndrome (GBS), multiple idiopathic cranial neuropathies, Lyme disease, sarcoidosis, meningitis, brainstem encephalitis, benign intracranial hypertension, leukemia, Melkersson- Rosenthal syndrome (a neurological disorder with facial palsy, granulomatous cheilitis and fissured tongue), diabetes mellitus, human immuno-deficiency virus infection, syphilis, infectious mononucleosis, vasculitis, bilateral neurofibromas, Mobius syndrome, intraorpreontine tumours and finally if no factor is identified, it can be diagnosed as Bell's idiopathic palsy.³⁻⁵

Initially to rule out various possibilities a detailed history was taken and a proper clinical examination was done, there after patient was subjected to some routine and some specific investigations. Chest x ray and CT scan ruled out sarcoidosis as there was no hilar lymphadenopathy, random blood sugar test ruled out Diabetes mellitus.⁶⁻⁹ GBS was ruled out on the basis of history and clinical examination as there was no history of peripheral weakness or areflexia. Although Lyme disease is considered to be the most common infective cause for bilateral facial nerve palsy in America but it is non endemic in Haryana where this case presented, still considering the recently published case series report of 5 cases of Lyme disease in Haryana, we got the serological tests done to rule out this disease as well.¹⁰

Paul bunnel test turned out negative for Infectious mononucleosis, the patient had negative Epstein Barr virus capsid antigen (VCA) IgM antibody test, as well as negative VCA IgG antibody test. Although acute EBV infection is rare cause of bilateral facial nerve palsy but this FNP maybe The initial manifestation of Non

Hodgkin's Lymphoma (NHL), which would result if EBV induced B Lymphocyte-proliferation is uncontrolled.^{11,12}

CT and MRI of the brain excluded the possibility of traumatic skull fractures, cerebello-pontine-angle tumours or any neoplasm compressing the seventh cranial nerve. MRI is no doubt superior to CT brain for evaluation of each segment of facial nerve. Even in cases of Bell's palsy contrast Enhanced MRI may detect a positive radiographic change, hence MRI of brain is the modality of choice for radiological evaluation of facial nerve palsy.^{13,14}

Diagnosing the cause of bilateral facial nerve palsy is thus not an easy task. A clinician has to keep in mind the various possibilities because the treatment and prognosis depends upon the cause of the palsy. Our case of bilateral facial nerve palsy presented a diagnostic dilemma and we were notable to sort out the definite aetiology.

CONCLUSION

In comparison to unilateral facial nerve palsy the bilateral facial nerve palsy is a rare morbidity with a broad spectrum of differential diagnosis. While unilateral facial palsy is usually idiopathic or post viral infection, the bilateral facial palsy needs to be considered for a wide range of etiological factors. So we recommend that patients with bilateral facial palsy should be subjected to thorough assessment by gruelling history taking, all routine and specific laboratory and radiological investigations to find the cause so that the patient can be managed accordingly.

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