

A Case Report on Right Lower Motor Neuron Seventh Cranial Nerve Palsy

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ABSTRACT

Idiopathic facial nerve paralysis or Bell's palsy is a non-progressive neurological disorder that leads to temporary facial paralysis involving the damage or trauma to the seventh cranial nerve. It can occur due to the exposure to herpes zoster virus or/and immune disorders. Both left and right side may get equally affected and can be complete or partial. Symptoms include poor eyelid closure, dry eyes, alteration of taste, ear pain and increased sensitivity to sound, hemi facial spasm, mass movement contraction and gustatory lacrimation. Treatment with glucocorticoids increases the chance of complete recovery of facial function. Bell's palsy may leave the surface of the eye exposed, so early eye protection with lubricants and patches are needed to prevent the long-term complications. This case discusses Bell's palsy in a 59-year-old female patient referred to neurology department with the symptoms of facial deviation on right side, onset of blurred vision and difficulty in walking/unsteadiness while walking. She had a history of type II diabetes mellitus and dyslipidemia. MRI showed no acute infarct and no obvious abnormality in the brain parenchyma thus ruling out the chance of posterior circulation stroke. The symptoms showed by the patient were classical to Bell's palsy thus confirming the same as diagnosis. She was discharged with oral steroid, eye protectants, vitamin and an antiplatelet.

Key words: Bell's palsy, Idiopathic facial nerve, Hemi facial spasm, Gustatory lacrimation, Electromagnetic Resonance Imaging, Corticosteroid drug.

INTRODUCTION

Bell's palsy is defined as a neuropathy involving the seventh cranial nerve, also known as the facial nerve palsy with unknown etiology.¹ This condition was first described by Dr. Charles Bell in 1821 by connecting the symptoms to facial nerve involvement.² It is mostly caused by herpes viruses, an infective agent producing inflammation and swelling of the nerve with consequent blockage of the neural activity.³ The chance of developing Bell's palsy is more common in people with diabetes mellitus and pregnant women.⁴ The people who are more prone to this condition are those aged between 15 to 45 years.⁵ It begins with facial muscle weakness and progresses from hours to days. The clinical presentation of this disease includes poor eyelid closure, dry eyes, alteration of taste, ear pain, increased sensitivity to sound, hemi facial spasms, mass movement contractions and recover without interference within

two to three weeks and completely recover within three to six months.⁶ Bell's palsy is usually diagnosed on the basis of symptoms and physical examination. The clinicians may recommend other tests including EMG (Electromyography) and MRI (Magnetic Resonance Imaging) or CT scan (Computerized Tomography) many of the prescribers may suggest to take oral steroids and antiviral therapy within 72 h of symptom onset.⁷

Case Presentation

A 59-year-old female with a medical history of type II diabetes mellitus referred to our neurology department with facial deviation on right side since morning, onset of blurred vision, rightward deviation of the angle of mouth on smiling, facial muscle weakness and difficulty in walking. On examination, she

DOI: 10.5530/ijopp.12.2.32

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was conscious and oriented and her blood pressure was found to be 180/100mmHg. Brain MRI avert posterior circulation stroke. Based on the clinical presentation, the patient was diagnosed with right lower motor neuron seventh cranial nerve palsy and started on a course of omnacortil 40mg once daily at the first day and the dose was tapered slowly to 5mg once daily as maintenance dose. Refresh liquigel eye drops, lubrilac eye ointment and eye pad over right eye at bed time were used for eye protection and to avoid long-term complications. The patient was continued with tablet Gluconorm M 80mg and injection human mixtard at the dose of 20-0-10U, to control the blood glucose level and capsule Vibrania were given for the regrowth of the damaged nerves. The patient was taking tablet Ecosprin AV 75mg once daily for the prophylaxis of posterior circulation stroke. Upon discharge, she was advised to continue the following drugs along with physiotherapy exercise and warm water compression. She was scheduled for a follow-up after 10 days from the date of discharge.

DISCUSSION

Bell's palsy is an enervative condition in which the patient health is demolished by emotional and psychological effect of facial disfiguration and usually they withdraw from the society. It is diagnosed by careful examination of case history, evaluation of clinical signs and symptoms of the patient.⁸ Treatment of Bell's palsy is uncertain, based on the variation in patient recovery. Treatment with corticosteroids with or without antiviral agents and vitamin B tablet are preferred in these patients. Physical therapies such as facial exercises, acupuncture, relaxation, electrical stimulation has also been used as an alternative therapy.⁹ Electro diagnostic testing done within 14 days of onset may provide prognostic information. Along with this test, nerve excitability test, trigeminal blink reflex test and Gadolinium contrast Magnetic Resonance (MRI) were also done.¹⁰ In this case, the patient was administered with omnacortil tablet to bring down the swelling of the nerves and improves the disease condition. Eye drops, eye ointment and eye patches are used to prevent the corneal abrasions. Here, the patient presented with low prevalence of posterior circulation stroke. Upon discharge, she was instructed to continue the same drugs given during the admission along with physiotherapy exercise and warm water compression.

CONCLUSION

Bell's palsy was diagnosed based on the signs and symptoms and patient responded satisfactorily to corticosteroid drug. Appropriate tests were carried to rule

out the posterior circulation stroke. This condition can be managed with regular medications, physiotherapy and facial massage. During follow-up, patient was conscious and showed improvement in her signs and symptoms like facial deviation and difficulty in walking etc and same treatment was continued.

ACKNOWLEDGEMENT

We express our sincere gratitude to Dr. Zachariah Thomas and Dr. Remya Prakash for guiding us and for supporting our work.

CONFLICT OF INTEREST

No potential conflicts of interest with respect to the publication of this article.

ABBREVIATIONS

LMN: Lower Motor Neuron; **CN:** Cranial Nerve; **MRI:** Magnetic Resonance Imaging; **CT:** Computerized Tomography.

SUMMARY

Bell's palsy is a temporary facial paralysis with unknown etiology. The symptoms can range from mild to severe. It can be managed by treating with corticosteroid drug and through physical activity.

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