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Case Report

Bell's Palsy: A Case Report

Poluri Lakshmi Sasi[1], Kavya Padmaja Battula[2], Pravallika Kambham[3], Divya Sree Kandiri[4], M S Raju[5]

[1]Post Graduate Student, [5]Professor and Head, Department of Oral Medicine and Radiology, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India;
[2,3,4]Intern, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India

ABSTRACT:
Bell's palsy is an acute, idiopathic, unilateral facial nerve paralysis, characterized by the sudden onset of facial muscle weakness or paralysis on one side of the face. It is the most common cause of peripheral facial nerve palsy, affecting individuals of all ages and genders. While the exact etiology remains unclear, viral infections such as herpes simplex virus (HSV) are suspected to play a role in triggering inflammation and swelling of the facial nerve. Diagnosis is primarily clinical, based on the exclusion of other causes of facial paralysis. Most individuals experience spontaneous recovery, often within three weeks to six months, although some may have lingering symptoms or incomplete recovery. Treatments may include corticosteroids to reduce inflammation and antiviral agents in certain cases. Early intervention can improve outcomes, and eye care is critical in cases where eyelid function is impaired to prevent corneal damage. This case report details the treatment of a 34-year-old male patient with Bell's palsy.
Keywords: Bell's Palsy, Herpes Simplex Virus, Corticosteroids, Acyclovir, Prednisolone

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Corresponding author: Poluri Lakshmi Sasi, Post Graduate Student, Department of Oral Medicine and Radiology, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India

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INTRODUCTION

Bell's palsy is a sudden, temporary paralysis or weakness of the muscles on one side of the face due to inflammation or compression of the seventh cranial nerve, also known as the facial nerve. This condition was first described by the Scottish anatomist Sir Charles Bell in the 19th century and remains the most common cause of acute peripheral facial nerve paralysis. It affects individuals of all ages, though it most frequently occurs in people between the ages of 15 and 60, and it does not show a strong gender preference. The exact cause of Bell's palsy is still unknown, but it is widely believed to result from viral infections, particularly herpes simplex virus (HSV). Infections cause the facial nerve to become inflamed, swollen, or compressed as it passes through a narrow bony canal in the skull, leading to weakness or paralysis of the facial muscles. The condition usually presents itself suddenly, with symptoms ranging from mild facial drooping to complete paralysis on one side. Other symptoms may include loss of taste, hyperacusis (sensitivity to sound), and difficulty closing the eye on the affected side. Diagnosis of Bell's palsy is primarily clinical, involving the exclusion of other potential causes of facial paralysis such as stroke, Lyme disease, or tumors. Treatment often includes corticosteroids to reduce inflammation, and antiviral medications are sometimes prescribed if a viral cause is suspected. Most patients recover fully within three to six months, though a minority may experience lingering weakness or incomplete recovery. While Bell's palsy is generally a self-limiting condition, it can significantly impact facial expression and emotional well-being during its course, making timely diagnosis and treatment essential to improving recovery outcomes. Further research is ongoing to better understand the underlying mechanisms and to optimize treatment strategies.

CASE REPORT

A 34-year-old patient (figure 1) reported to the department of oral medicine and radiology with the chief complaint of discomfort while eating on left side

since one day. Patient gives history of mouth drawn towards right side during talking and chewing and while opening of mouth since 3 months. He also informed us regarding his left eye watering frequently and slight burning sensation of his left eye on touch of breeze and history of Tingling Sensation of his left side of his face. Patient has no medical history and no history of deleterious habits. On Extraoral Examination while mouth opening it is drawn towards right side, unable to smile on left side, response of left eye blinking is delayed compared to the right eye, unable to Whistle & blow his cheeks (Figure 2-4). Bell's Phenomenon is evident in this patient. Based on these features, the provisional diagnosis of bell's palsy is given. Initially Acyclovir 400mg twice daily for one week and Prednisolone 20mg twice daily for one week has been prescribed. After one week Patient came with10-20% of improvement as reported by the patient. Later Dexamethasone injections of 4mg intravenously have been to the patient for one week. These Dexamethasone injections has been given twice daily for one week. After using these medications patient has much improvement about 60-70%.

Figure 1: Showing Patient's Profile

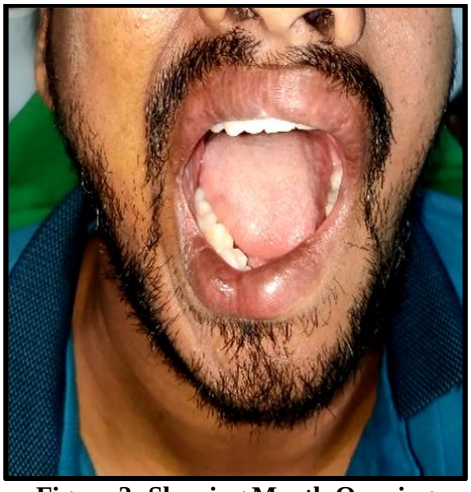

Figure 2: Showing Mouth Opening

Figure 3: Showing delay response of left eye blinking

Figure 4: Showing inability to smile

DISCUSSION

Bell's palsy is an acute, idiopathic facial nerve paralysis that remains a subject of much discussion due to its unclear etiology and variable recovery outcomes.The pathophysiology of Bell's palsy involves inflammation and demyelination of the facial nerve, leading to the sudden onset of unilateral facial weakness or paralysis. The paralysis can affect both the upper and lower facial muscles, which helps distinguish it from central causes like strokes, where the forehead muscles are often spared due to dual innervation.The diagnosis of Bell's palsy is clinical and primarily one of exclusion, which requires ruling out other causes of facial nerve palsy, such as stroke, tumors, Lyme disease, or Ramsay Hunt syndrome. This can be challenging, especially in patients with atypical presentations, bilateral involvement, or other neurological symptoms. One of the key difficulties in managing Bell's palsy is predicting outcomes. While most patients (around 70-80%) recover completely within 3-6 months, some experience persistent weakness or synkinesis (involuntary facial movements) due to aberrant nerve regeneration. Electrophysiological testing, such as electromyography (EMG) and nerve conduction studies can be used to predict recovery in cases of severe paralysis, though they are often reserved for later stages. Corticosteroids, specifically prednisolone, are widely accepted as the first-line treatment due to

their anti-inflammatory properties, which reduce nerve swelling and improve recovery outcomes. However, the role of antiviral agents, such as acyclovir or valacyclovir, remains controversial. While some studies suggest benefits in patients with severe paralysis or suspected viral etiology, others show little additional advantage when combined with steroids. Dexamethasone, a potent corticosteroid, is often utilized in the management of Bell's palsy due to its anti-inflammatory properties. The use of dexamethasone, particularly in the acute phase of Bell's palsy, aims to reduce facial nerve inflammation and improve recovery outcomes. Early treatment within 72 hours of symptom onset has been shown to maximize recovery chances, though delays beyond this period may still offer benefits. Other supportive treatments, including physical therapy, can help prevent muscle contractures and improve facial function during recovery. Despite being generally self-limiting, Bell's palsy can cause significant emotional distress and social stigma due to visible facial asymmetry. Persistent symptoms, especially incomplete eyelid closure, can lead to complications such as exposure keratitis and corneal ulcers, making protective eye care critical during recovery. Bell's palsy is diagnosed primarily through clinical evaluation, as there is no specific confirmatory test. However, to rule out other potential causes of facial paralysis, doctors may order various tests. Here's a breakdown of how Bell's palsy is typically confirmed. Neurological Exam: To rule out stroke or other neurological conditions causing facial paralysis.Blood Tests: These may be done to check for infections like Lyme disease or other systemic conditions.Imaging (CT or MRI): Used to rule out structural causes, such as tumors or strokes affecting the facial nerve.
6.

CONCLUSION

Proper follow-ups were scheduled to monitor the progress of the patient. While the prognosis of this condition is usually good, parents should still be advised to look out for any deterioration in the signs and symptoms. Dexamethasone is an essential component in the management of Bell's palsy, particularly for its ability to enhance recovery when administered promptly. Its use is supported by clinical evidence and guidelines, although careful consideration of the benefits versus potential side effects is crucial. Overall, early treatment with dexamethasone can significantly improve the prognosis for patients with Bell's palsy.

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