

Bell's Palsy: A Detail Study

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Abstract- Bell's palsy is an unexplained episode of facial muscle weakness or paralysis. It occurs suddenly and get worsens in 48 hours. This condition mainly occurs due to damage to the 7th cranial facial nerve. Pain usually occur on one side of the face or head. This is an acute idiopathic facial nerve paralysis of sudden onset with an annual incidence of 15–30 per 100,000 population. The main objective of studying of these disorder is to study the grade of the attack and the associated symptoms of Bell's palsy in a group of Sudanese patients. The study type is an analytical prospective-based study. These can occurs at any age mainly in pregnant women, and diabetic people, and also people having influenza, a cold, or another upper respiratory disease. Bell's palsy affects men and woman equally. It is less common before age 15 or after age 60.

Bell's palsy not considered permanent, but in rare cases this cannot be cured. At present there is no treatment for Bell's palsy but when this disease occurs its recovery can be start from two weeks to 6 months from the onset of the symptoms. Most people with Bell's palsy recover full facial strength and expression. In such condition taste sensation of patient disappears but it regains after treatment. Bell's palsy also called as Facial nerve paralysis. The motor function of the peripheral facial nerve controls the upper and lower facial muscles. As a result, the diagnosis of bells palsy requires special attention to forehead muscle strength.

Keywords- Bell's palsy, forehead muscle strength, disorder etc.

I. INTRODUCTION¹⁻¹⁰

Objectives of Studying Bell's palsy

The main objectives are as follows:

- (i) To determine the grade of the attack at onset and treats it.
- (ii) To identify the various associated symptoms and correct treatment.
- (iii) To identify the percentage of completely recovered and incompletely recovered patients and give proper treatment to every patients.

MAIN CAUSE OF Bell's palsy

The cause of Bell's palsy is not known but by recent studies it may be due to inflammation that is directed by the body's immune system against the nerve controlling movement of the face. Bell's palsy is sometimes associated with the following:

- Diabetes
- High blood pressure
- Injury
- Toxins
- Lyme disease
- Guillain-Barré syndrome
- Sarcoidosis
- Myasthenia gravis
- Multiple sclerosis
- Infection, especially following a viral infection with Herpes simplex virus (a virus that is related to the cause of the common "cold sores" of the mouth).
- Describe the etiology of Bell Palsy.
- Outline the risk factors such as diabetes, pregnancy, hypertension, and obesity as the common causes of Bell palsy.
- Identify the House-Brackmann Facial Nerve Grading System in the evaluation of Bell palsy.
- Summarize the importance of improving care coordination among the interprofessional team to manage incomplete eye closure, poor speech and poor aesthetics for the patients affected by Bell palsy.
- This is an idiopathic condition causing partial or complete weakness of one half of the face along with changes in taste, sensitivity to sound and alteration in lacrimation and salivation.

Main etiology of bells palsy:¹¹⁻²⁰

Bells palsy is by definition idiopathic in nature. Evidence of multiple studies shows that multiple potential clinical conditions and pathologies known to manifest, at least in part, with a period of unilateral facial paralysis. The literature has highlighted several viral illnesses such as herpes simplex virus, varicella-zoster virus, and Epstein-Barr virus. As per recent studies bells palsy occurs in 15 to 20 per 100,000 people. recurrence rate is 8% to 12%. Bells palsy mainly occurs due to compression of the seventh cranial nerve

at the geniculate ganglion. The first portion of the facial canal, the labyrinthine segment, is the narrowest and it is here that most cases of compression occur. Due to the narrow opening of the facial canal, inflammation causes compression and ischemia of the nerve. The most common finding is a unilateral facial weakness that includes the muscles of the forehead. In this disorder Weakness will be partial or complete to one-half of the face, resulting in weakness of the eyebrows, forehead, and angle of the mouth. Patients may present with an inability to close the affected eyelid or lip on the affected side.

II. SYMPTOMS OF BELLS PALSY:

The most common symptoms of bells palsy are as follows:-

- Disordered movement of the muscles that control facial expressions, such as smiling, squinting, blinking, or closing the eyelid
- Loss of feeling in the face
- Headache
- Tearing
- Drooling
- Loss of the sense of taste on the front two-thirds of the tongue
- Hypersensitivity to sound in the affected ear (hyperacusis)
- Inability to close the eye on the affected side of the face

The symptoms of Bell's palsy may look like other conditions or medical problems. Always see your healthcare provider for a diagnosis.

Partial or complete weakness of the forehead.²⁰⁻²⁸

This is mainly cause due to the difference in taste, sensitivity to sound, otalgia, and changes to tearing and salivation.

Ocular features include

- Corneal exposure
- Lagophthalmos
- Brow droop
- Paralytic ectropion of the lower lid
- Upper eyelid retraction
- Decreased tear output
- Loss of nasolabial fold

Diagnosis of bells palsy:

There are mainly 3 tests for the treatment of bells palsy:

- Electromyography (EMG) to determine the extent of the nerve involvement.
- Blood tests to determine if another condition such as diabetes or Lyme disease is present.
- Magnetic resonance imaging (MRI) or computed tomography (CT) scan to determine if there is a structural cause for your symptoms.
- Electroneurography uses EMG to monitor the difference in potentials generated by the facial muscles on both sides.
- If hearing loss is suspected than auditory evoked potentials and audiography should be performed.
- There is a grading system for clinical evaluation of BP. The grading system ranges from mild to severe dysfunction.
- Other tests include testing for saliva flow, tear function, and nerve excitability.

III. TREATMENT OF BELLS PALSY:²⁸⁻⁴¹

One uniformly recommended treatment for Bell's palsy is protecting the eye from drying at night or while working at a computer. Eye care may include eye drops during the day, ointment at bedtime, or a moisture chamber at night. This helps protect the cornea from being scratched, which is crucial to the management of Bell's palsy.

Your healthcare provider will prescribe other treatment for your condition based on the severity of your symptoms and your health history. Other treatment options include:

- Steroids to reduce inflammation
- Antiviral medicine, such as acyclovir
- Analgesics or moist heat to relieve pain
- Physical therapy to stimulate the facial nerve

Some people may choose to use alternative therapies in the treatment of Bell's palsy, but there is no proof they make a difference in recovery. Such treatment may include:

- Relaxation
- Acupuncture
- Electrical stimulation
- Biofeedback training
- Vitamin therapy, including B12, B6, and the mineral zinc

Corticosteroids are the main treatment with a common regimen consisting of 60 mg to 80 mg a day for approximately 1 week. There is also some evidence stating corticosteroids and antivirals combined improved the outcome of BP compared with corticosteroids alone.

Differential Diagnosis

Causes of peripheral seventh nerve palsy such as Lyme disease and Ramsey Hunt syndrome should be excluded. Other less common causes of facial palsy include tuberculosis, HIV, trauma, sarcoidosis, vasculitis, and neoplasm. There is a reported 10.8% misdiagnosis rate from specialty referral centers. Also, if there are episodes of recurrence, clinicians should consider Melkersson-Rosenthal syndrome. This is a rare neurocutaneous syndrome with a recurrence of facial palsy, orofacial edema, and a fissured tongue. Melkersson-Rosenthal syndrome is more commonly diagnosed in females.

Complications of bells palsy:

Bell's palsy usually resolves in time and causes no long-term complications. However, during the illness most people with Bell's palsy are unable to close their eye on the affected side of their face. It is, therefore, important to protect the eye from drying at night or while working at a computer. Eye care may include eye drops during the day, ointment at bedtime, or a moisture chamber at night. This helps protect the cornea from being scratched.

- Corneal dryness leading to visual loss
- Permanent damage to the facial nerve
- Abnormal growth of nerve fibers

People who mainly treats bells palsy are as follows:

- Ophthalmologist
- Neurologist
- ENT surgeon

IV. IMPORTANT POINTS OF BELLS PALSY ARE:⁴²⁻⁴⁷

- Bell's palsy is an unexplained episode of facial muscle weakness or paralysis that usually resolves on its own and causes no complications.
- The cause of Bell's palsy is unknown but is thought to be caused by inflammation affecting the body's immune system. It is associated with other conditions such as diabetes.

- Symptoms of facial weakness or paralysis get worse over the first few days and start to improve in about 2 weeks.
- It can take 3 to 6 months to fully resolve.
- Medicine and eye care are important in treating Bell's palsy.

V. CONCLUSION

The symptoms of Bell's palsy vary from mild to severe. The aetiology is still unclear, but it is known that the symptoms are caused by swelling and inflammation of the facial nerve. Eye protection remains crucial in preventing long-term eye complications. Drug treatment is controversial, given that over 70% of patients will eventually recover normal facial function without treatment. Early treatment with prednisolone can hasten recovery and reduce long-term sequelae. Although the quality of evidence is low to moderate, there may be some benefit in adding antiviral drugs to prednisolone.¹² It is, however, important to discuss the harms and benefits with patients, given the potential adverse effects of prednisolone and antiviral drugs.

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