

DOI: 10.21767/2386-5180.1000179

## Recovery in 61-Year-Old Male After Bell's Palsy: A Case Report

Seyed Farshad Heidari\*

Department of Emergency Medicine, Emam Khomeini Hospital, Medical Faculty, Mazandaran University of Medical Sciences, Sari, Iran.

\*Corresponding author: Seyed Farshad Heidari, Department of Emergency Medicine, Emam Khomeini Hospital, Medical Faculty, Mazandaran University of Medical Sciences, Sari, Iran. Tel: +981133355080; E-mail: s.f.heidari@gmail.com

Received: June 01, 2017; Accepted: June 27, 2017; Published: July 04, 2017

Citation: Heidari SF (2017) Recovery in 61-Year-Old Male After Bell's Palsy: A Case Report. Ann Clin Lab Res 5: 2

### Abstract

Peripheral facial nerve palsy is the most common cranial nerve motor neuropathy. In majority of the cases, the cause is idiopathic and improvement of facial muscle function begins within first 3 weeks after onset of disease. This report presents a case of 61-year-old male patient who recourse to the emergency department with facial pain and asymmetry followed by peripheral unilateral facial nerve paralysis that there was no obvious cause. The patient eventually was discharged from hospital with an outpatient therapy of corticosteroid for 3 weeks, the regular courses of physical rehabilitation for the facial muscles weakness and recommendation to return for follow up in the future. Finally, after 4 months of treatment, the patient's facial weakness disappeared thoroughly without complication. In most cases, Bell's palsy has a good prognosis and the patients will recover with outpatient therapy without complication.

**Keywords:** Peripheral; Facial nerve; Idiopathic; Steroid therapy; Good prognosis

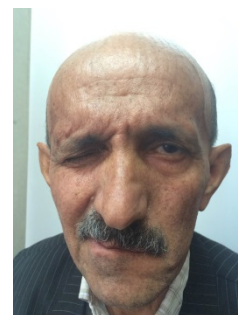
### Introduction

Bell's palsy is an acute ipsilateral facial nerve paralysis with unknown etiology, which can result in weakness of the muscles of facial expression [1]. Bell's palsy is the most common dysfunction affecting the facial nerves [2], that occurs in 11–40 cases per 100,000 populations annually. It affects people of all ages but, most commonly, individuals 15–50 years of age with equal sex prediction [3,4]. In majority of the cases, the cause is idiopathic and most patients improve completely with outpatient therapy in 3 weeks without complication [5,6].

### Case report

A 61-year-old man presented to the emergency department with a complaint of facial pain and asymmetry of left side of the face from 2-days ago. The patient was unable to close his left eye and did not complain from headache, vertigo, nausea and vomiting. There was no taste and hearing disorder. The patient also had not visual impairment and imbalances. The

occupation of patient was agriculture. Past medical history of patient was negative. He has not history of smoking or drinking alcohol. Drug history was negative. Vital sign was in normal range with blood pressure 100/60 mmHg, pulse rate 80 beats per minute, respiratory rate 16/min and temperature of 37.3°C. On physical examination, there was not the expression in the left half of the face, which represents the left side peripheral motor paralysis of the cranial 7th nerve (Bell's palsy). Sensory examination was normal. Other examinations were normal. The picture of patient shown in **Figure 1**. Laboratory investigations were in normal range with Hb (15.5 g/dL), renal function test (serum urea, 30 mg/L; serum creatinine, 1.3 mg/dL) and electrolytes (serum sodium, 138 meq/L; serum potassium, 4.5 meq/L). Various surveys have not shown a specific underlying cause. Methylprednisolone was prescribed for the patient for duration of 3 weeks. Also, the pack of the left eye and eye ointment of tetracycline 1% was prescribed for the patient to prevent damage to the eye. Also, the regular courses of physical rehabilitation were prescribed for the facial muscles weakness of patient. Then, the patient was discharged from hospital with recommendation for returning to follow up in the future. Eventually, after 4 months of treatment, the patient's facial weakness disappeared thoroughly without complication and prognosis was good.



**Figure 1** Picture of patient with Bell's palsy in the left side of the face. Note that the patient was unable to close his left eye. Also, there was not the expression in the left half of the face.

### Discussion

Facial nerve paralysis is the most common neurological disorders affecting cranial nerves. It results in a characteristic

facial distortion [7] that occurs to form of loss of facial expression. It is most commonly caused by a benign self-limiting inflammatory condition known as Bell's palsy [8]. Its onset is sudden, with facial muscle weakness progressing over hours to days [9]. Bell's palsy is an idiopathic acute peripheral nerve palsy involving the facial nerve, which supplies all the muscles of facial expression. The facial nerve also contains parasympathetic fibers to the lacrimal and salivary glands and sensory fibers supplying taste to the anterior two-thirds of the tongue [10]. Causes of unilateral peripheral facial nerve paralysis are various and include idiopathic, viral infection, vascular, autoimmune reactions, traumatic, surgical procedures and neoplastic [11,12]. Herpes viruses seemed to be the most possible infective agent [5,6]. Lower motor neurone (LMN) facial palsy is characterized by unilateral paralysis of all muscles of facial expression for both voluntary and emotional responses. The patient is not able to line up on forehead and to close the eye on that side. Tears tend to overflow on to the cheek, the corner of the mouth droops, and the nasolabial fold is obliterated. Saliva may dribble from the commissure. Food collects in the vestibule and plaque accumulates on the teeth on the affected side. Depending on the site of the lesion, other defects such as loss of taste or hyperacusis may be associated [13]. Full neurological examination is needed, looking particularly for signs suggesting a central lesion such as hemiparesis, tremor, and loss of balance, involvement of the 5th, 6th, or 7th cranial nerves.

Most patients with Bell's palsy regain normal function with or without medical therapy, often within 3 weeks. Therefore, medical interventions aim to promote the improvement process and minimize the risk of complications. Management includes eye protection, treatment with corticosteroids or anti-virals. Eye ointment is used to avoid trauma to and drying out of the cornea. Corticosteroids have long been used in Bell's palsy because of their powerful anti-inflammatory effect, and have been proven to be an effective treatment. Studies showed evidence for the presence of herpes simplex virus in some cases of bell's palsy [5,6], thus anti-viral agents were applied in some cases. Approximately 70% of all patients recover completely, and a higher percentage of improvement is achieved if corticosteroid therapy is prescribed [14,15]. Early physical rehabilitation is performed in severe grades of paresis [16]. Electrical nerve stimulation is a proposed method of accelerating recovery in patients through invoked muscle stimulation but, further studies will be required to assess clinical applicability [17,18].

In some cases, full recovery takes up to 9 months [2], but up to 30% are left with potentially disfiguring facial weakness, involuntary movements, and/or persistent lacrimation, requiring further interventions [19-21]. A delay in the diagnosis and administration of medications could play a role in residual weakness of the face and mouth, but other factors such as severity of the inflammation and compression of the facial nerve are equally significant. Age and the degree of facial paralysis are other reported prognostic factors, with younger patients and those with partial facial palsy gaining almost full

restoration [2]. Patients who exhibit signs of recovery within 21 days of symptoms onset, have a favorable prognosis [22].

In this case who was introduced, various studies have not shown a specific underlying cause (idiopathic). Eventually, after 4 months of treatment, the patient's facial weakness disappeared completely without complication and prognosis was good.

## Conclusion

Facial nerve paralysis is the most common cranial nerve motor neuropathy. In majority of the cases, improvement of facial muscle function begins within first 3 weeks after onset of disease. Bell's palsy usually has a good prognosis and patients will improve with outpatient therapy without conclusion.

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