

CASE REPORT ON BELL'S PALSY

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Abstract: Bell's palsy is a supplemental paralysis of the facial nerve that results in muscle weakness on one side of the face. Affected cases develop unilateral facial palsy over one to three days with forehead involvement and no other neurologic abnormalities. Symptoms generally peak in the first week and also gradually resolve over three weeks to three months. Bell's paralysis is more common in cases with diabetes, and although it can affect persons of any age, prevalence peaks in the 40s. Bell's paralysis has been traditionally defined as idiopathic; still, one possible etiology is infection with herpes simplex contagion type 1. Laboratory evaluation, when indicated by history or threat factors, may include testing for diabetes mellitus and Lyme complaint. A common short-term complication of Bell's paralysis is deficient eyelid closure with attendant dry eye. A less common long-term complication is facial weakness with muscle contractures. Roughly 70 to 80 percent of cases will recover spontaneously; still, treatment with a seven-day course of acyclovir or valacyclovir and a tapering course of prednisone, initiated within three days of the onset of symptoms, is recommended to reduce the time to full recovery and increase the liability of complete rehabilitation.

Index Terms – Bell's Palsy, Risk-factors, Management.

I. INTRODUCTION

Bell's palsy is an idiopathic peripheral nerve palsy involving the facial nerve. It accounts for 60 to 75% of all cases of unilateral facial paralysis. The annual incidence is 15 to 30 cases per 100,000 people. The peak incidence occurs between the second and fourth decades (15 to 45 years). The median age at onset is 40 years, but the disease may occur at any age. Different studies have reported either a slight female preponderance or that women and men are equally affected. The facial nerve consists of a major motor component, which supplies all the muscles of facial expression, and a small sensory branch that carries taste sensation from the anterior two thirds of the tongue through the chorda tympani nerve. Parasympathetic fibres reach the lacrimal glands via the greater superficial petrosal nerve, and they reach the sublingual and submaxillary glands via the chorda tympani. Bell's palsy is diagnosed upon the abrupt onset of unilateral facial weakness or complete paralysis of all the muscles on one side of the face, dry eye, pain around the ear, an altered sense of taste, hyperacusis or decreased tearing. In patients with Bell's palsy, on attempted closure, the eye rolls upward. The disease usually progresses from the onset of symptoms to maximal weakness within three days. Brain magnetic resonance imaging (MRI) is not routinely indicated, but when it is performed, the most common abnormality observed is contrast enhancement of the distal intracranial and labyrinthine segments of the facial nerve. The geniculate ganglion may also be involved.

I. CASE REPORT

A 77-year-old female patient presented with complaints of involuntary movement of right upper limb and lower limb since 3 days, deviation of angle of mouth towards right side since 3 days and incomplete closure of right eye since 3 days. History of present illness involves tingling sensation and pain in right side of upper limb and lower limb since 15 days which increases when exposed to wind, weakness of right upper limb and lower limb since 4 years, chronic lacunar infarct and drooling of saliva. Patient was diagnosed as right hemiparesis with right chorea in 2019 and was on Rx, left 4 years. The patient was a known case of Diabetes mellitus since 4 years, Hypertension since 4 years, and thyroid since 8 years and was on medication Tab. Telma 80mg and Tab. Adglim M2. The physician suspected it as Bell's palsy with Systemic hypertension and type-2 diabetes mellitus.

The patient was started on treatment as outlined in Table No.2, which was continued for 4 days. On the 5th day, the patient's condition had improved.

Table No. 1: Vitals on examination.

Temperature	97.6 °F
Blood pressure	160 100 mmhg
Spo2	97% @RA
Pulse rate	94 bpm
RR	14 bpm

Table No. 2: Treatment provided during therapy:

Drug prescribed	Dose	Frequency	Route of administration
T. WYSOLONE	50mg 25 mg 10 mg 5 mg STOP	1-0-1 * 1 week 1-0-0 * 2 days 1-0-0 * 2 days 1-0-0 * 2 days	PO
T. ACYCLOVIR	400 mg	1-1-1-1-1	PO
T. CILNIDIPINE	10 mg	1-0-0	PO
T. ECOSPRIN-AV	75/20 mg	0-0-1	PO
Inj. INSUGEN R	40 IU/ml	1-1-1	S/C
ZYTEE GEL		1-1-1	L/A
Inj. PAN	40 mg	1-0-0	IV

Syp. MUCAINE GEL	10 ml	1-1-1	PO
T. TELMA	40 mg	1-0-0	PO
T. BECOSULES		0-1-0	PO
PHYSIOTHERAPY			
T. CITROK-P	500 mg	1-0-1	PO
T. BILO-G	120 mg	1-0-1	PO
CHLORHEXIDINE GARGLE		1-0-1	MOUTH WASH
B/E EYEMIST E/P		1-1-1-1-1	

DISCUSSION

- **Etiology:** The cause of classical Bell's paralysis remains unclear. One possible cause that has been suggested is that of a reactivated herpes simplex virus (HSV- 1) infection centered around the geniculate ganglion. Another possible contributor to the pathogenesis of Bell's paralysis implicates the part of a cell- intermediated vulnerable response against myelin, akin to a mono- neuropathic form of Guillain- Barre pattern (GBS). The substantiation for this stems from the circular laboratory finding of GBS similar as changes in supplemental blood chance of T and B lymphocytes, elevated chemokine attention and in- vitro reactivity to myelin protein (PIL) in blood samples taken from case with Bell's palsy⁽¹⁾.
- **Clinical Presentation:** Symptoms of Bell's palsy come on suddenly may include-
 - I. Facial droop and trouble making facial expressions, such as closing an eye or smiling.
 - II. Drooling.
 - III. Increased sensitivity to sound on the affected side.
 - IV. Loss of taste.
 - V. Headache.
 - VI. Changes in the amount of tears and saliva produced.
- **Diagnosis:** A patient with an acute onset of unilateral facial weakness most likely has Bell's palsy. A careful history of the onset and progress of paralysis is important because gradual onset of more than two weeks' duration is strongly suggestive of a mass lesion. The physical examination should include careful inspection of the ear canal, tympanic membrane, and oropharynx, as well as evaluation of peripheral nerve function in the extremities and palpitation of the parotid gland. In order to assess forehead involvement, physical examination should also include evaluation of cranial nerve function, including all facial muscles⁽²⁾.
- **Treatment:** Management of Bell's palsy aims to alleviate symptoms, prevent complications, and improve quality of life. The medications include corticosteroids like prednisone or prednisolone, and antiretrovirals like acyclovir or valacyclovir.
- **Complications:** Patient's with Bell's palsy may be unable to close the eye on the affected side, which can lead to irritation and corneal ulceration. The eye should be lubricated with artificial tears until the facial paralysis resolves. Permanent eyelid weakness may require tarsorrhaphy. Facial asymmetry and muscular contractures may require cosmetic surgical procedures or botox injections.

CONCLUSION:

The facial nerve has a predominant motor component which supplies all muscles concerned with unilateral facial expression. Anatomic knowledge is crucial for clinical localization. Bell's palsy accounts for around 72% of facial palsies. Other causes such as tumors and pontine infarcts can also present as facial palsy. Isolated dorsal infarct presenting as isolated facial palsy is very rare.

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