EUROPEAN JOURNAL OF BIOMEDICAL AND PHARMACEUTICAL SCIENCES
http://www.ejbps.com

ISSN 2349-8870
Volume: 10
Issue: 1
97-100
Year: 2023

DISCREPANCY AMONG BELL'S PALSY VERSUS FACIAL PARALYSIS

Bhavadharini P.[1]*, Arul Mozhi C.[2] and Bargavi E.[3]

Student, Doctor of Pharmacy, Arulmigu Kalasalingam College of Pharmacy, Krishnan Koil, Virudhunagar-626126.

***Corresponding Author: Bhavadharini P.**
Student, Doctor of Pharmacy, Arulmigu Kalasalingam College of Pharmacy, Krishnan Koil, Virudhunagar- 626126.

Article Received on 25/10/2022 **Article Revised on 15/11/2022** **Article Accepted on 05/12/2022**

ABSTRACT
Bell's palsy, a medical condition involving the dysfunction of facial nerve (VII cranial nerve).Facial paralysis, a physically similar condition may be happened as a result of nerve damage or compression that can occurred because of either traumas or diseases such as stroke, brain tumor, or also due to Bell's palsy. The clinical manifestation may either be varied or similar, but the existing condition may requisite a separate pattern of assessment and treatment. Though experiencing paralysis symptoms may be due to Bell's palsy, facial paralysis is contrasting. The treatment mainly focussed on Bell's palsy is steroid and anti- viral therapy whereas contra indicated to facial paralysis. This article explains about an immense variation between these criteria and their effective management.

KEYWORDS: Bells palsy, Facial paralysis, Cranial nerve VII, Clinical presentation and steroid therapy.

I. INTRODUCTION
The term Bell's palsy is a peripheral palsy of an unexplained weakness all over the facial muscles, mainly occurred as a result of the dysfunction of VII cranial nerve. Affected cases develop unilateral facial palsy over one to three days with face involvement and no other neurologic abnormalities. The existing condition may not correlate with facial paralysis which is the main impact of stroke. Lower motor neuron lesion associated with Bell's palsy; while an higher motor neurone lesion is related to a cerebrovascular accident. Facial paralysis is one of the not unusual trouble main to facial deformation and it is a disfiguring disease that has a **vast effect at the affected person as it effects with already the lack of facial expression**; it is maximum usually because of a benign self-limiting inflammatory situation called Bell`s palsy (BP). Facial nerve palsy and Bell`s palsy are most of the main reasons of facial paralysis symptoms. They arise for special motives and may cause everlasting or **transient facial paralysis.** Losing movement with inside the facial muscle tissues may be devastating. This could produce difficult for humans in smiling or make different facial expressions. It also can bring about anxiety, depression, and different mental health disorders.

II. Pathogenesis of Facial nerve dysfunction: Cranial nerve VII, otherwise known as **t**he facial nerve. It arises from the brainstem, **via** openings with inside the skull, to the face and tongue. It sends **information** among the brain and the muscle groups utilized in facial expressions inclusive of (**smiling and frowning- shrinkening of face**), a few muscle groups inside the jaw, and the remaining muscle groups of a small bone present in the center ear. The facial nerve has branches during each aspects of the face and controls many muscle groups, along with the ones in the brow, eyelid, cheek, and lips. Patients coping with Bell`s palsy could experience edema of the facial nerve, meant to be **VII Cranial nerve swelling.** This prevents the nerve from sending accurate alerts (signals) to the brain and facial muscles, resulting in paralysis. Bell's palsy, the most familiar form of facial paralysis, behaves similarly. It is mainly caused by inflammation of this cranial nerve likely related to reactivation of a virus known to cause cold sores (Herpes simplex virus). Damage to this nerve results in weakness or paralysis of all over those muscle groups. . Facial paralysis patients cannot circulate a few or all the muscle groups at the affected aspect (side) in their face and it is the way which you cannot use the muscle groups at all. This can results in a disproportionate face, together with different disabilities that make swallowing, speaking, and chewing process so difficult. Bell's palsy may be prominent from different reasons of facial paralysis with the aid of using **rapid onset over several hours** and **absence of trauma. The etiopathogenesis involved in facial paralysis mainly occurs as a result of risk of a known condition termed as Bell's palsy.**

III. Clinical presentation: Almost, all of the clinical manifestations of both the facial paralysis and Bell's

palsy can exist in the same manner. While the major presence of variation among those is their **duration and severity.** Bell palsy is a prognosis of exclusion. Clinical capabilities of the disease that could assist to differentiate it from different reasons of facial paralysis consist of the sudden onset of unilateral facial paralysis and the absence of signs and symptoms of CNS, ear, and cerebellopontine perspective disease. Cerebellopontine angle (CPA) is a triangular area located inside the posterior cranial fossa and it is bounded through the tentorium, an extension of dura mater superiorly, brainstem poster medially and petrous, a part of temporal bone poster laterally. In another case, Facial paralysis occurs while one may be not able to move the muscles of the face on one or each facets. It takes place because of nerve damage and this is visible due to congenital (present at birth) conditions, trauma, or diseases, consisting of stroke, mind tumor, or Bell`s palsy. It produces facial asymmetry. This trouble has a tendency to effect one or each facets of the face, and difficulty with speaking, blinking, swallowing saliva, eating, communicating through natural facial expressions. One with Bell`s palsy will observe an unexpected weakness with the muscular tissues on one side of the face. The weakness may be transient and improves over weeks and it makes half of one`s face seem to droop. Smiles are one-sided, or even the attention receives affected. This circumstance can appear because of infection of the facial nerve possibly associated with the reactivation of a deadly disease recognized to produce drastic bloodless sores (Herpes simplex virus). This circumstance can strike at any age. The signs of this circumstance are rapid onset of slight weak spot to general paralysis on one aspect of the face, facial droop, and drooling, extended sensitivity to sound at the affected area / region headache, and lack of taste. Hence, there may be an inconvenience in figuring out the method of treatment.

- **Diagnostic differences:** The largest distinction among facial paralysis and Bell`s palsy lies in how the situations are diagnosed. When an affected person is recognized with facial paralysis, a purpose for the paralysis may be identified. In this instance, facial paralysis may be related to a **tumor, infection, or nerve damage.** In circumstance of Bell`s palsy, the disease can appear without any reason. This may be, for the reason that it may be difficult for an affected person to decide the best line drugs and its action to relieve their Bell`s palsy symptoms. CT experiment and MRI may be carried out in case of facial paralysis or Bell`s palsy signs. These assessments discover the foundation purpose of a patient`s signs. and, electromyography or electroneurography (ENoG) can be needed for the ones sufferers coping with excessive signs of facial paralysis or Bell`s palsy. There's no specific test for Bell's palsy. Your health care provider will look at your face and ask you to move your facial muscles by closing your eyes, lifting your brow, showing your teeth and lowering, among other movements.

- **Blood tests**: There is no any specific blood test for Bell's palsy. But blood tests can be used to rule out certain bacterial and other infections. There`s no unique check for Bell's palsy. Your health care provider will study your face and ask you to move your facial muscle mass via way of means of closing your eyes, lifting your brow, displaying your tooth and frowning, amongst different movements. Other situations — including a stroke, infections, inflammatory situations and tumors — can reason facial muscle weakness that mimics Bell's palsy. If the reason of your signs is not clear, your health care provider may also endorse different exams, including: **Electromyography (EMG**). This check can affirm the presence of nerve harm and decide its severity. An EMG measures the electric hobby of a muscle in reaction to stimulation. It additionally measures the character and speed of the conduction of electrical impulses alongside a nerve. **Imaging scans** such as Magnetic resonance imaging (MRI) or computed tomography (CT) can be needed now and again to rule out different feasible sources of stress at the facial nerve, including a tumor or cranium fracture. Blood exams. There is no blood check for Bell's palsy. But blood exams may be used to rule out Lyme disease and different infections.

- Investigations Most instances of Bell`s Palsy may be identified clinically and no similarly investigations are required, except some other medical functions are present that recommend any other pathology. Serology for HSV-1 and VZV may be performed, but will not likely alter future control if detected.

- Important differential analysis for a facial palsy, other than Bell`s Palsy, include: UMN reasons, which includes a subdural hematoma, or a brain tumor. It will present with forehead sparing. LMN reasons are infective, which includes acute otitis media, cholesteatoma, viral infection (such as HSV-1, CMV, and EBV) Neoplasm (parotid malignancy), trauma or iatrogenic.

IV. Variations among management criteria: Facial paralysis, in maximum cases, has a tendency to be more permanent than Bell`s palsy as well. The signs of facial paralysis won`t always disappear on their very own and might enhance over time. So, facial paralysis patients who forgo remedy can experience facial paralysis signs that remaining a lifetime.

Comparatively, Bell`s palsy sufferers might also additionally regain facial feature at any time without surgical remedy. In maximum instances, the symptoms of Bell`s palsy subside on their personal without any permanent damage. However, if Bell`s palsy signs and symptoms persists for 3 months or longer, patients have to are trying to find out remedy. Therapy, in particular of Bell`s palsy, is controversial because of the shortage of large, randomized, and managed protocols. Main desires of remedy are to make faster healing, and also to recover

more complete, to prevent headaches and other complications, and to inhibit viral replication. Psychological guide is also essential. Patients require everyday follow-ups. Therapy of secondary facial nerve palsy objectives to pass over the precise motive of the palsy. Patients with Bell`s palsy have to be undergone a consultant and remedy have to begin as quickly after onset as possible. Treatment can be subdivided into acute measures and measures to deal with mild or intense sequelae.

Acute measures.

- Eye safety: It is one of the greatest issues with Bell`s palsy is the involvement of the attention if the lid fissure stays open. In this case, eye care specializes in the protection of the cornea from dehydration, drying, or abrasions because of inadequate lid closure or tearing. Eye ointment is proposed throughout day and night time supported via way of means of a bandage throughout the day or night time.

- Physiotherapy: There are most effective managed criteria which had to be the effectiveness of physical remedy for facial palsies. Patients with final signs and symptoms from Bell`s palsy seem to experience advantageous results from physiotherapy and training. Bell`s palsy neuromuscular retraining exercises had been powerful in enhancing facial movements.

- Acupuncture and moxibustion thought most effective confined experience has been mentioned with acupuncture for Bell`s palsy, numerous research offer increasing evidence for a useful impact of acupuncture and moxibustion as an adjunctive remedy of Bell`s palsy

Main therapy: Commonly used medicinal drugs to deal with Bell's palsy include.

- **Corticosteroids, inclusive of prednisone.** These are effective anti inflammatory agents. If they could lessen the swelling of the facial nerve, the nerve will match greater readily inside the bony surface that surrounds it. Corticosteroids may go first-rate if they are started inside several days of while your signs and symptoms commenced. Steroids started early enhance the chance of entire recovery.

- **Antiviral drugs**. The function of antiviral stays unsettled. Antiviral alone have proven no advantage as compared with placebo. Antiviral in addition to steroids may also advantage a few people with Bell's palsy, however that is still unproved. Despite this, an antiviral drug, together with valacyclovir (Valtrex) or acyclovir (Zovirax), is from time to time given in combination with prednisone in people with intense facial palsy.

In case of Facial paralysis, treatments may be mainly focused on correcting the damaged nerve, being involved.

Management of acute facial paralysis may involve primary facial nerve repair/grafting in cases of resection or transection of the facial nerve.

- Facial nerve decompression
- Facial nerve repair
- Nerve transfers and cross-facial nerve grafting
- Regional muscle transfer, etc..

V. REFERENCES

1. Salinas RA, Alvarez G, Daly F, Ferreira J. Corticosteroids for Bell's palsy (idiopathic facial paralysis). Cochrane Database of Systematic Reviews, 2010; 3.
2. Allen D, Dunn L. Acyclovir or valaciclovir for Bell's palsy (idiopathic facial paralysis). Cochrane Database of Systematic Reviews, 2004; 3.
3. Adour KK. Diagnosis and management of facial paralysis. New England Journal of Medicine, 1982 Aug 5; 307(6): 348-51.
4. Bleicher JN, Hamiel S, Gengler JS, Antimarino J. A survey of facial paralysis: etiology and incidence. Ear, nose & throat journal, 1996 Jun; 75(6): 355-8.
5. Gilden DH. Bell's palsy. New England Journal of Medicine, 2004 Sep 23; 351(13): 1323-31.
6. Kobata H, Kondo A, Iwasaki K. Cerebellopontine angle epidermoids presenting with cranial nerve hyperactive dysfunction: pathogenesis and long-term surgical results in 30 patients. Neurosurgery, 2002 Feb 1; 50(2): 276-86.
7. Kobata H, Kondo A, Iwasaki K, Nishioka T. Combined hyperactive dysfunction syndrome of the cranial nerves: trigeminal neuralgia, hemifacial spasm, and glossopharyngeal neuralgia: 11-year experience and review. Neurosurgery, 1998 Dec 1; 43(6): 1351-61.
8. Cook BR, Jannetta PJ. Tic convulsif: results in 11 cases treated with microvascular decompression of the fifth and seventh cranial nerves. Journal of neurosurgery, 1984 Nov 1; 61(5): 949-51.
9. Martin H, Helsper JT. Spontaneous return of function following surgical section of excision of the seventh cranial nerve in the surgery of parotid tumors. Annals of Surgery, 1957 Nov; 146(5): 715.
10. Jain V, Deshmukh A, Gollomp S. Bilateral facial paralysis. Journal of general internal medicine, 2006 Jul; 21(7): C7-10.
11. Terzis JK, Anesti K. Developmental facial paralysis: a review. Journal of Plastic, Reconstructive & Aesthetic Surgery, 2011 Oct 1; 64(10): 1318-33.
12. Owusu JA, Stewart CM, Boahene K. Facial nerve paralysis. Medical Clinics, 2018 Nov 1; 102(6): 1135-43.
13. Song MH, Kim J, Jeon JH, Cho CI, Yoo EH, Lee WS, Lee HK. Clinical significance of quantitative analysis of facial nerve enhancement on MRI in Bell's palsy. Acta oto-laryngologica, 2008 Jan 1; 128(11): 1259-65.
14. Katusic SK, Beard CM, Wiederholt WC, Bergstralh EJ, Kurland LT. Incidence, clinical features, and prognosis in Bell's palsy, Rochester, Minnesota,

1968–1982. Annals of Neurology: Official Journal of the American Neurological Association and the Child Neurology Society, 1986 Nov; 20(5): 622-7.
15. Adour KK, Bell DN, Hilsinger RL. Herpes simplex virus in idiopathic facial paralysis (Bell palsy). Jama, 1975 Aug 11; 233(6): 527-30.
16. Katusic SK, Beard CM, Wiederholt WC, Bergstralh EJ, Kurland LT. Incidence, clinical features, and prognosis in Bell's palsy, Rochester, Minnesota, 1968–1982. Annals of Neurology: Official Journal of the American Neurological Association and the Child Neurology Society, 1986 Nov; 20(5): 622-7.
17. Finsterer J. Management of peripheral facial nerve palsy. European Archives of Oto-Rhino-Laryngology.
18. Jain V, Deshmukh A, Gollomp S. Bilateral facial paralysis. Journal of general internal medicine, 2006 Jul; 21(7): C7-10.
19. Westin LM, Zuker R. A new classification system for facial paralysis in the clinical setting. Journal of craniofacial surgery, 2003 Sep 1; 14(5): 672-9.
20. Musumeci EA, Maire R, Dulguerov P. Diagnosis and management of facial paralysis. Revue Medicale Suisse, 2006 Oct 1; 2(81): 2221-4.
21. Selesnick SH, Patwardhan A. Acute facial paralysis: evaluation and early management. American journal of otolaryngology, 1994 Nov 1; 15(6): 387-408.
22. Jackson CG, Glasscock III ME, Hughes G, Sismanis A. Facial paralysis of neoplastic origin: diagnosis and management. The Laryngoscope, 1980 Oct; 90(10): 1581-95.
23. Terzis JK, Anesti K. Developmental facial paralysis: a review. Journal of Plastic, Reconstructive & Aesthetic Surgery, 2011 Oct 1; 64(10): 1318-33.
24. Xiying Fu MD, Linda Tang MD, Can Wang MD, Ming Li MD, Huijie Wu MD, Jinyao Li MD, Qianqian Ma MD, Wei Yang MD. A network meta-analysis to compare the efficacy of steroid and antiviral medications for facial paralysis from Bells palsy. Pain Physician, 2018 Sep; 21: 559-69.
25. Mooney T. Diagnosis and management of patients with Bell's palsy. Nursing Standard, 2013 Dec 4; 28(14).
26. Heckmann JG, Urban PP, Pitz S, Guntinas-Lichius O. The diagnosis and treatment of idiopathic facial paresis (Bell's palsy). Deutsches Ärzteblatt International, 2019 Oct; 116(41): 692.
27. Ahmed A. When is facial paralysis Bell palsy? Current diagnosis and treatment. Cleve Clin J Med, 2005 May 1; 72(5): 398-401.
28. Tiemstra JD, Khatkhate N. Bell's palsy: diagnosis and management. American family physician, 2007 Oct 1; 76(7): 997-1002.
29. May M, Fria TJ, Blumenthal F, Curtin H. Facial paralysis in children: differential diagnosis. Otolaryngology--Head and Neck Surgery, 1981 Sep; 89(5): 841-8.
30. Holland NJ, Weiner GM. Recent developments in Bell's palsy. Bmj, 2004 Sep 2; 329(7465): 553-7.
31. Gagyor I, Madhok VB, Daly F, Sullivan F. Antiviral treatment for Bell's palsy (idiopathic facial paralysis). Cochrane Database of Systematic Reviews, 2019; 9.
32. Hato N, Yamada H, Kohno H, Matsumoto S, Honda N, Gyo K, Fukuda S, Furuta Y, Ohtani F, Aizawa H, Aoyagi M. Valacyclovir and prednisolone treatment for Bell's palsy: a multicenter, randomized, placebo-controlled study. Otology & neurotology, 2007 Apr 1; 28(3): 408-13.
33. Gilden DH. Bell's palsy. New England Journal of Medicine, 2004 Sep 23; 351(13): 1323-31.
34. Ghiora A, Winter ST. THE CONSERVATIVE TREATMENT OF BELLS PALSY: A REVIEW OF THE LITRATURE, 1939–1960. American Journal of Physical Medicine & Rehabilitation, 1962 Oct 1; 41(5): 213-27.
35. Gatidou AM, Kottaras A, Lytras D, Gatidou C, Iakovidis P, Kottaras I. Physiotherapy management of Bell's palsy-A review of evidenced based physiotherapy practice. Int J Adv Res Med, 2021; 3(1): 402-6.
36. Alakram P, Puckree T. Effects of electrical stimulation on house-brackmann scores in early bells palsy. Physiotherapy theory and practice, 2010 Jan 1; 26(3): 160-6.
37. RUBIN LR, Rubin LR. The anatomy of a smile: its importance in the treatment of facial paralysis. Plastic and reconstructive surgery, 1974 Apr 1; 53(4): 384-7.
38. Mehta RP. Surgical treatment of facial paralysis. Clinical and experimental otorhinolaryngology, 2009 Mar 26; 2(1): 1-5.