

Effect of Integrated Yoga and Naturopathy therapies in the Management of Bell's palsy – A Case Report

Indira Devi S¹, Prashanth S², Krithika C³

¹Reader, H.O.D. ²Assistant medical officer/Lecturer Grade 2, Department of Yoga Philosophy,
³PG Scholar, Department of Acupuncture and Energy medicine,
Govt. Yoga and Naturopathy Medical College, Chennai, Tamil Nadu, India

ABSTRACT:

Bell's palsy is a type of facial paralysis that is unilateral in 70% of cases. Here, we report a case of unilateral facial nerve palsy, which was diagnosed as Bell's palsy and showed a good response to yoga and naturopathy interventions. A 31-year-old man with Bell's palsy on the right side with an unknown etiology was admitted to integrated yoga and naturopathy management in our hospital for 3 weeks. The facial grading system (FGS) for facial movement and the facial disability index (FDI) scale for facial disability was assessed before and after the intervention. After 3 weeks of yoga and naturopathy interventions, patients showed positive improvement in FGS composite score from Grade VI (FGS score 46) to Grade I (FGS score 4). FDI score also showed notable improvement in physical function (from 50 to 95), Social/Well-being subscale (from 75 to 100) after the intervention. The findings of the present study suggest integrated yoga and naturopathy interventions for the effective management of facial movements and facial disability in bell's palsy.

KEYWORDS: Bell's palsy, Disability. Naturopathy, Yoga.

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*Corresponding Author:

Dr. Indira Devi S

Reader, H.O.D., Department of Yoga Philosophy,
Govt. Yoga and Naturopathy medical college, Chennai
Tamil Nadu, India.

E-mail indirabarani.lokshitha@gmail.com

INTRODUCTION:

Bell's palsy is an acute ipsilateral facial nerve paralysis with an unknown etiology that can result in weakness of the muscles of facial expression.^[1] Facial palsy is caused by a disruption in the nerve pathway at any of the facial nerve segments ^[2] and most commonly occurs between the ages of 15 and 60 years, with 15 to 44-year-olds experiencing the highest incidence ^[3]. Its onset is sudden, with facial muscle weakness progressing over hours to days.

Although the etiology is unknown, the Herpes simplex virus (HSV) is commonly implicated in causing bell's palsy by causing acute inflammation and edema of the facial nerve, thereby entrapment of the nerve in the bony canal, which leads to compression and ischemia. This leads to neuropraxia or degeneration of the facial nerve ^[4]. Yoga and Naturopathy is a drugless system of medicine that is effective in the management of various diseases, which is safe and reported to have no adverse effects.

Therefore, this case report aimed to examine the effect of integrated yoga and naturopathy in the management of bell's palsy.

CASE REPORT:

A 31-year-old man who was diagnosed with unilateral Bell's palsy on the right side came to our In-Patient department on November 24, 2021. The patient reported that his facial paralysis had happened suddenly on November 16, 2021, while he got up from bed in the early morning. He had the complaint of dry eyes for a week, he consulted with a neurologist and ophthalmologist and they prescribed lubrex carboxy-methylcellulose eye drops six times a day. The etiology was unknown, and it was associated with pain over the left shoulder. His resting facial posture revealed severe asymmetry with a right-sided droop. Voluntary movement of the right-sided facial musculature was barely visible, whereas the uninvolved left-sided facial musculature was clearly intact. Due to unsatisfactory results, he visited the integrated yoga & Naturopathy department. Written informed consent was obtained from the patient after a verbal explanation of the interventions.

ASSESSMENT CRITERIA:

The Facial Grading System [FGS]- It is a tool used in the clinical evaluation of facial nerve function. It scores range of movement of the facial muscles as a percentage - full range movement is scored as 100 percent. The FGS comprises three areas of evaluation. Evaluation of resting symmetry; degree of voluntary excursion of facial muscles; degree of synkinesis associated with specific voluntary movement. The regions of the face are evaluated separately, with

the use of five standard expressions: eyebrow raise, eye closure, open mouth smile, lip pucker, and snarl/show teeth. All the above items are evaluated on point scales, and a cumulative composite score is calculated. [5]

Facial Disability Index (FDI)- It is intended to provide for the patient's disability as well as related social and emotional well-being. The FDI consists of two subscales; physical function (items 1-5) and social wellbeing (items 6-10). The scores range from 0 (complete paralysis) to 100 (normal facial function). The FDI has been shown to be reliable and valid as a clinical instrument and has been shown to accurately demonstrate the relationship between impairments, disability, and psychosocial status. [6]

THERAPEUTIC INTERVENTION:

An Integrated Yoga and Naturopathy intervention has been given for a period of 3 weeks. The details of the yoga and Naturopathy intervention provided to the subject are given in Table 1 and 2.

RESULTS AND OUTCOME:

After 3 weeks of yoga and naturopathy intervention, the patients showed improvement in FGS composite score, FDI score, and its subscales. Added to this patient's physical function and social/well-being also improved (Table 3).

FOLLOWUP:

To further understand the long-term advantages of yoga and naturopathy interventions in Bell's palsy, we intend to continue monitoring the patient. After six months of monitoring, the patient reported no reoccurrence of symptoms.

Table 1: A detail of the Naturopathy intervention given to the subject

Name of the Therapy	Duration in mins	Frequency in 3 weeks
Hydrotherapy Alternate compress to the right side of the face A facial steam with peppermint oil Neutral water enema	5 min 10 min -	Every day Every day Once in a week
Massage Partial massage to face with lavender oil Partial massage to head and spine	10 min 10 min	Every day Thrice a week
Physiotherapy Facial exercises with Tongue involvement Temporomandibular joint exercise.	20 min 20 min	Every day Every day
Heliotherapy Sun bath with yellow glass exposure to head	15 min	Twice a week
Magneto therapy Magnetic lead- 4 (Right hand and Right foot)	5 min	Every day
Acupressure and Acupuncture Stomach meridian massage acupressure Acupressure to motor points of the face Acupuncture-Needling with electrical stimulation	Scalp 15 min 15 min 15 min 20 min	Thrice a week Every day Every day First 10days
Auriculo therapy Shenmen point, Zero-point, Sympathetic area, Face and brain area	20 min	Every alternate days

Table 2: Yoga intervention given to the subject:

Intervention details	Duration in minutes per day (60mins)
<u>Asana</u> Pawanamuktasana series-1 <u>Supine series:</u> Uttanpadasana, Pawanamuktasana, Setu bandhasana <u>Prone series:</u> Bhujangasana, Tiryeke bhujangasana, Ardha shalabasana <u>Sitting series:</u> Simhagarjasana, Marjariasana, Vyagrasana, Shasangasana <u>Standing series:</u> Tadasana, Tiryeke tadasana, Katichakrasana, Ardha katichakrasana	30mins

<u>Pranayama</u>	Surya bhedana pranayama, Nadi shodana pranayama, Brahmari pranayama, Sheetkari pranayama, sheethali pranayama, ujjayi pranayama	10 rounds of each pranayama - 20mins
<u>Mudras</u>	Kechari mudra, Kaki mudra, Shambhavi mudra, Shanmuki mudra	10mins
<u>Relaxation</u>	Deep relaxation technique and Yoga nidra (on alternate days)	10-15mins

Table: 3 Changes in the FGS and FDI score after the intervention

Variables	Before Treatment	After Treatment
FGS	46 (Grade-VI)	4 (Grade-I)
FDI (total)	125/200	195/200
Physical scale	50/100	95/100
Social well being	75/100	100/100

DISCUSSION:

From the results of the study, integrated yoga and naturopathy interventions showed considerable improvement in FGS and FDI scores in patients with Bell's palsy. This case also strengthens the rising body of scientific data supporting the use of yoga and naturopathy treatments for functional disability conditions like facial palsy. Previous research suggested that yoga and naturopathy are both safe and beneficial for peripheral nervous system disorders [7, 8] and for reducing oxidative stress. Acupuncture reduces pain and inflammation in the body through the release of endogenous opioids and serotonin.[9] Hydrotherapy and massage help in reducing pain, inflammation, stress, anxiety, and depression and in improving the quality of sleep and quality of life. Regular exercise in the form of yoga has been shown to improve both exogenous and endogenous antioxidant status in human studies. [10-11] The improvement in oxidative stress and the reduction in inflammation might pave the way for better healing and progress in overall health. Thus, a combination of these therapies might have significant improvement in the facial

grading system [FGS] and facial disability index (FDI) of Bell's palsy patients.

THE STRENGTH OF THE STUDY:

No adverse effects were reported by the subjects. It is feasible, and safe for the patient, and the patient was comfortable with the treatment.

LIMITATIONS OF THE STUDY:

The results may vary because of a single case study. Hence, further well-planned clinical studies are suggested with a large sample size to validate our results.

CONCLUSION:

The results suggest that yoga and naturopathy interventions are effective in patients with Bell's palsy and have notable changes in their facial movements and disability. However, further clinical studies are recommended to validate the results of the study.

DECLARATION OF PATIENT CONSENT:

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his

images and other clinical information to be reported in this journal. This patient understands that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

REFERENCES:

1. Gilden DH. Clinical practice: Bell's palsy. *N Engl J Med*. 2004;351: 1323-1331.
2. Vasconcelos BEC, Dias E, Dantas WRM, Barros ES, Monteiro G. Physical therapy in peripheral facial paralysis. *Brazilian J. of Otorhinolaryngology*, 2001; 7(1): 13-20.
3. Jennifer SB,, Jessie M, Van Swearingen: Physical Therapy for Facial Paralysis: A Tailored Treatment Approach, *PHYS THER*. 1999; 79:397-404.
4. Oker NJ. Bell palsy: a herpes simplex mononeuritis? *Arch Otolaryngol Head Neck Surg* 1998; 124(7):823-4.
5. Supasid Jirawatnotai, Pojanan Jomkoh, Tsz Yin Voravitvet, Wuttipong Tirakotai, Natthawut Somboonsap. Computerized Sunnybrook facial grading scale (SBface) application for facial paralysis evaluation. *Arch Plast Surg* 2021; 48:269-277
6. VanSwearingen JS, Brach JS. The facial disability index: 2. Reliability and validity of a disability assessment instrument for disorders of the facial neuromuscular system. *Physical Therapy* 1996; 76(12): 1288-1300.
7. Prabu T, Subramanian KK, Manavalan N, Venkateswaran ST, Maheshkumar K. An approach towards COVID-19 pandemic with Yoga and Naturopathy interventions-Tamilnadu model. *Clinical Epidemiology and Global Health*. 2021;1:12.
8. Venugopal V, Venkateswaran ST, Poornima R, Maheshkumar K. Recommendation of yoga and naturopathy intervention for the effective management of post covid syndrome. *Journal of Ayurveda and Integrative Medicine*. 2022;13(3):100617.
9. Patil S, Sen S, Bral M, Reddy S, Bradley KK, Cornett EM, Fox CJ, Kaye AD. The role of acupuncture in pain management. *Current pain and headache reports*. 2016;20(4):1-8.
10. Venugopal V, Geethanjali S, Poonguzhali S, Padmavathi R, Mahadevan S, Silambanan S, Maheshkumar K. Effect of yoga on oxidative stress in type 2 diabetes mellitus: a systematic review and meta-analysis. *Current Diabetes Reviews*. 2022;18(2):63-70.
11. Maheshkumar K, Dilara K, Ravishankar P, Julius A, Padmavathi R, Poonguzhali S, Venugopal V. Effect of six months pranayama training on stress-induced salivary cortisol response among adolescents-Randomized controlled study. *EXPLORE*. 2022;18(4):463-6.

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