wjpmr, 2025, 11(3), 137-142

SJIF Impact Factor: 6.842

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Case Study

ISSN 2455-3301

WJPMR

"MANAGEMENT OF BELL'S PALSY IN AYURVEDA: A CASE STUDY"

Dr. Stebin Anto*[1], Dr. Neelakanta J. Sajjanar[2] and Dr. Gopala Krishna G.[3]

[1]Final Year Post Graduate Scholar, Department of Postgraduate Studies in Kayachikitsa, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka.

[2]Professor, Department of Postgraduate Studies in Kayachikitsa, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka.

[3]Professor and HOD, Department of Postgraduate Studies in Kayachikitsa, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka.

***Corresponding Author: Dr. Stebin Anto**

Final Year Post Graduate Scholar, Department of Postgraduate Studies in Kayachikitsa, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka.

Article Received on 01/01/2025 **Article Revised on 20/01/2025** **Article Accepted on 09/02/2025**

ABSTRACT

Bell's palsy is characterized by the sudden onset of muscle weakness on one side of the face, resulting from inflammation or compression of the facial nerve, typically affecting only one side (unilateral). Bell's palsy can be correlated to *Ardita* mentioned in Ayurvedic classics. *Ardita* is included among *Vata vyadhi*. which produce symptoms like deviation of half of the face, Speech difficulty, deformities in the eyes, etc. Here we present a case study of a 42-year-old male patient reported in the outpatient department with weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva and slurred speech, inability to close the right upper eyelid, and right eye blurred vision. The case was clinically diagnosed as Bell's Palsy/*Ardita*. The patient was managed by the line of *Ardita chikitsa*, *Vatahara chikitsa* followed by *Brimhana* medicines and procedures. The case was assessed with the 'House and Breckmann' assessment scale. The result showed significant improvement in motor factions and symmetry of the face. This case report shows the potential of classical *Ardita* treatment in the management of Bell's palsy.

KEYWORDS: Ardita, Bell's palsy, Ksheera Dhooma, Nasya, Seka, Thalam.

INTRODUCTION

Ardita is included among *Vata vyadhi*. a group of disorders caused by vitiated *Vata*. It can arise from either *Avarana* (obstruction) or *Dhatukshaya* (tissue depletion). The contributing factors include speaking loudly, consuming hard foods, excessive laughter, carrying heavy loads on the head, and sleeping in uncomfortable positions. When *Vata* becomes aggravated, it leads to symptoms such as facial asymmetry, difficulty in speech, and deformities in the eyes, among others.[1]

Bell's palsy can be correlated to *Ardita*. Bell's palsy is characterized by the sudden weakness in the muscle of one half of the face due to the inflammation or compression of the facial nerve which is commonly unilateral. Bell's palsy is a Lower Motor Neuron (LMN) lesion. LMNs are found in the anterior grey column, the anterior nerve roots, or the cranial nerve nuclei within the brainstem. The condition often begins with pain near the stylomastoid foramen, where the facial nerve passes. This is followed by facial asymmetry, difficulty closing the eye on the affected side (often accompanied by Bell's phenomenon, where the eye rolls upward), loss of taste sensation on the anterior two-thirds of the tongue, drooling, and other symptoms.[2] The line of treatment for *Ardita* includes *Nasya*, *Moordha Taila*, *Srotra Akshi Tarpana*, and *Naadisweda*. *Vamana* and *Siravyadha* are advised in *Sopha* and *Daha*, *Raga* conditions respectively.[3]

Patient Information

Presenting Complaints

A 42-year-old male patient, came to OPD, with a chief complaint of weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva and slurred speech, inability to close the right upper eyelid and right eye blurred vision for 16 days.

History of Present Illness

16 days ago, the patient was asymptomatic. Suddenly, he developed weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva and slurred speech, and an inability to close the right upper eyelid, and right eye blurred vision.

He was immediately shifted to a nearby hospital. On monitoring vitals, Heart rate was 65 beats per minute, BP

was around 150/90mmHg, and GRBS was 126mg/dl. CT brain on 19/02/2022 had no evidence of ICH/Mass effect/Midline shift. Then Oral medicines were prescribed by a general physician and was referred to a neurologist, ophthalmologist, and physiotherapist opinion.

Later patient noticed the associated symptoms like headache, difficulty in chewing food and drinking water; dryness and watering of right eye; dryness of mouth and increased thirst, feeling of heat in the body (on & off), intolerance to loud noise and was on regular medications as prescribed from the general physician.

On consulting an ophthalmologist, for the complaint of inability to close the right upper eyelid and right eye blurred vision, Right eye conjunctival and corneal congestion was found with upper eyelid lag on examination, for which taping of right eyelid was advised, and eye drop was prescribed. On consulting a neurologist on the same day, oral medicines were prescribed and facial exercises were advised. Also underwent physiotherapy for a week after consulting a physiotherapist.

The patient completed the course of treatment for 10 days as advised and found improvement in speech and right eye vision, but other symptoms persisted. Thus, for the further management of the above condition he approached our hospital.

History of Past Illness
No significant past illness.

Treatment history
- Tab. Omnacortil 20 mg, 1-0-0 x 10 days
- Tab. Pan 40mg 1 OD B/F x 10 days
- Tab. Valacyclovir 1 gm 1 TID A/F x 5 days
- Tab. Neurokind OD 0-1-0 A/F x 15 days
- Refresh eye drops 1 drop thrice daily
- Undergone Physiotherapy for a week

Family History
No relevant family history contributes to the patient's current situation.

Clinical Findings
From the general examination, it was found that the patient was well-nourished and BMI is 23.6 kg/m^2. From *Dashavidhapariksha* it was found that *Jaranashakti*, *Abhyavaranashakti*, and *Vyayamashakti* were *Madhyama*.

The clinical investigation which was done on 25/02/2022 showed, HbA1C - 6.0 %, Mean plasma glucose was 125.5 mg/dl, and FBS (Fasting Blood Sugar) was 135mg/dl. CT brain done on 19/02/2022 revealed no evidence of ICH (Intra-Cranial Hemorrhage), mass effect, or midline shift.

CNS Examination
Consciousness - Fully conscious (Glasgow coma Scale=15/15; E4V5M6), **Orientation** - Oriented to time, place, and person, **Memory** (immediate, recent, remote) - Intact, **Appearance and general behavior** - Appearance - immaculate (tidy), Eye contact - good, General behavior - cooperative, **Motor activity** - Body posture - Normal Erect, Movement - Normal, Gait - Normal stance and swing phase, Facial expression - Dull, **Speech** -Quantity - relevant, Volume and tone - slightly mumbled words, **Mood and affect** - Emotional liabilities are absent, **Thought process and content** - Intact, **Hallucinations** (visual and Audial) - Absent, No Altered sensorium, **Insight and cognition** - Intact, **Judgement** - Intact.

Motor Functions
Gait was normal stance and swing phase, muscle power, tone, bulk of muscle, and range of movements were normal, and muscle flaccidity, involuntary movements, and muscle wasting were absent.

Sensory Functions
Spinothalamic Sensation - Pain (superficial & deep), temperature, and pressure were present, Post-Column Sensation - light touch and proprioception were present, Cortical Sensation - two-point discrimination present, Sterognosis and Graphasthesia were present.

Reflexes
Superficial Reflexes - Corneal, abdominal, and plantar reflexes were normal. Deep Tendon Reflexes - Biceps, triceps, brachioradialis, knee, and ankle reflexes were normal.

Coordination Tests
Romberg's sign was negative, finger nose test, knee heal test, disdiadokinasia, and tandem walking were possible.

Cranial Nerve Examination
C1 - Olfactory nerve: Smell – intact. **C2 - Optic nerve:** Visual acuity and field - blurred vision, Right eye - 6/12, Left eye - 6/6, Light reflex - intact, pupils react normally to light in the left eye. Slightly sluggish pupillary reaction on the right eye, Ptosis – absent. **C3, C4, C6 - Oculomotor, Trochlear & Abducent nerve:** Eyeball movements - possible in all directions, Nystagmus – Absent, pupil position, size, shape, and symmetry - no abnormality detected.**C5 - Trigeminal nerve:** Facial sensation (touch, pain, pressure) - present, Corneal reflex - present, Muscles of mastication - Muscles on right side of face affected, Jaw jerk - Normal, Jaw movement against resistance decreased, Clenching of teeth possible with difficult. **C8 - Vestibulocochlear nerve**: Hearing – intact, Rhinne's test – AC> BC, Webers test – equal on both sides. **C9, C10 - Glossopharyngeal and Vagus nerve:** Position of uvula – central, Taste sensation – intact, Gag reflex – normal. **C11 - Accessory nerve:** Shrugging shoulder – possible, Neck movements - possible. **C12 - Hypoglossal nerve:** Tongue movements

– possible, protrusion of tongue - possible with deviation towards the left side.

Facial Examination and Facial Nerve Examination (C7)

Epiphora and Bell's phenomenon were present in the right eye. Deviation of the angle of the mouth towards the left, dribbling of saliva if food is masticated at the right side of the mouth, accumulation of food in the vestibule of the mouth, the nasolabial fold is absent at the right side, and inability to open the mouth widely.

Occipito frontalis - horizontal folds over the right side of the forehead absent, **Procerus** - vertical folds on the right side absent, **Orbicularis oculi** - inability to forcibly close or resist the opening of the eyelid at right eye, normal on the left eye, **Levator labii superior aleque nassi** - nasolabial folds on right side of face absent, **Orbicularis oris** - unable to whistle, **Platysma** - on clenching teeth, muscles are prominent only on the left side.

Timeline

A brief timeline of the occurrence of first symptoms, diagnosis, and commencement of *Ayurveda* management is indicated in Table 1.

Motor Examination

Table No. 1: Timeline of events.

Health Event	
Occurrence of first symptom	19/02/2022 (weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva and slurred speech, inability to close the right upper eyelid and right eye blurred vision)
Diagnosis of Bell's Palsy	19/02/2022 (Based on clinical findings by the general physician)
Physiotherapy	21/02/2022 (Facial exercises for 1 week)
First OPD consultation in Ayurveda Hospital	03/03/2022 (weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva and slurred speech, inability to close the right upper eyelid and right eye blurred vision)
Admission to Ayurveda Hospital	03/03/2022
Discharge from Ayurveda Hospital	28/03/2022
Follow-up - after 3 weeks	17/04/2022

Diagnostic focus and assessment

The diagnosis was based on clinical symptoms and the House and Breckmann assessment scale. The present case was assessed with the House and Breckmann assessment scale[4] and the grade was 4 (Moderately Severe).

Grade	Description	Measurement	Function %	Estimated function %
I	Normal	8/8	100	100
II	Slight	7/8	76–99	80
III	Moderate	5/8–6/8	51–75	60
IV	Moderately severe	3/8–4/8	26–50	40
V	Severe	1/8–2/8	1–25	20
VI	Total	0/8	0	0

Grade	Description	Characteristics
1	Normal	Normal facial function in all areas
2	Mild dysfunction	Gross: slight weakness noticeable on close inspection, may have very slight synkinesis At rest: normal symmetry and tone Motion: forehead—moderate to good function, eye—complete closure with minimum effort, mouth—slight asymmetry
3	Moderate dysfunction	Gross: obvious but not disfiguring difference between the two sides; contracture and/or hemifacial spasm At rest: normal asymmetry and tone Motion: forehead—slight to moderate movement. eye—complete closure with effort mouth—slightly weak with maximum effort
4	Moderately severe dysfunction	Gross: obvious weakness and/or disfiguring asymmetry At rest: normal asymmetry and tone Motion: forehead—none eye—incomplete closure mouth—asymmetric with maximum effort
5	Severe dysfunction	Gross: only barely perceptible motion At rest: asymmetry Motion: forehead—none eye—incomplete closure mouth—slight movement
6	Total paralysis	No movement

Therapeutic intervention

The patient received both medicinal and procedural therapies on the line of *Ardita chikitsa*. The details are mentioned in Table 2.

Table No. 2: Admission (04/03/2022 – 10/03/2022).

Dates	Procedure	Medicine	Dosage	Duration	Observations
04/03/22 to 10/03/22	*Mukha Abhyanga* followed by *Ksheera Dhooma*	*Karpasasthyadi Taila, Bala Moola Kwatha Churna & Ksheera*	External application	07 days	A mild reduction of weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva, and slurred speech.
04/03/22 to 10/03/22	*Nasya*	*Karpasasthyadi Taila*	6 drops in each nostril	07 days	
05/03/22 to 09/03/22	*Shashtika Shali Pinda Sweda*	*Shashtika Shali & Ksheera*	External application	05 days	A mild reduction of weakness on the whole right side of the face, deviation of the mouth towards the left of the face with dribbling of saliva, and slurred speech.
05/03/22 to 09/03/22	*Thalam*	*Kachooradi choorna & Ksheerabala Taila*	External application	05 days	
05/03/22 to 09/03/22	*Netra Abhyanga*	*Ksheerabala Taila*	External application	05 days	Further reduction of the above symptoms and mild reduction in inability to close the right upper eyelid and right eye blurred vision.
05/03/22 to 09/03/22	*Aschothana*	*Ashwaganda Ghrita*	External application	05 days	
05/03/22 to 09/03/22	*Seka*	*Ksheerasaindava*	External application	05 days	

During Admission (04/03/2022 – 10/03/2022)

- Tablet Nurod 2-2-2 (After food)
- *Punarnavadi Guggulu* 1-1-1 (Before food)
- *Dhanadanayanadi Kashya* 10ml-10ml-10ml with 40 ml warm water (Before food)
- *Shirashoolari Vati* 2-2-2 (After food) **X 07 days**

Discharge medicines (11/03/2022 to 17/04/2022)

- Tablet Nurod 2-2-2 (After food)
- *Punarnavadi Guggulu* 1-1-1 (Before food)
- *Dhanadanayanadi Kashya* 10ml-10ml-10ml with 40 ml warm water (Before food)
- *Shirashoolari Vati* 2-2-2 (After food)
- *Ashwagandha Ghrita* 0-0-1 tsp (After Food)
- *Ashwaganda Ghrita* for *Aschothana*
- *Kachooradi choorna & Ksheerabala Taila* for *Thalam* **X 03 Weeks**

Follow-up and outcome

House and Breckmann assessment scale and examinations were assessed before treatment, after treatment, and during follow-up and improvement was observed in each parameter. Follow-up improvements in House and Breckmann assessment scale and examinations are summarised in Table 3.

Table No. 3: Follow-up and Outcome.

Features	Before Treatment (04/03/2022)	After Treatment (10/03/2022)	Follow Up After 3 Weeks (17/04/2022)
Asymmetry	Present	Present but improved	Absent
Blinking	Slow over the right side	Slow but improved	Normal
Nasolabial folds	Flatten over the right side	Equal	Normal
Corners of mouth	Drooping over the right side	Improvement in deviation angle	Normal
Raising both eyebrows	Asymmetry	Improvement in the right eye	Normal
Closing both eyes	Right eye not possible	Possible for both	Normal
Puff out cheeks	Unable to puff on right side	Able to puff but for a short time	Normal
Pursing the lips to show upper and lower teeth	Unable to move lips over right side	Could move but less retention time.	Normal
House Brackmann Grading Scale	4 (Moderately Severe Dysfunction)	2 (Slight Dysfunction)	1 (Normal)

DISCUSSION

In Bell's palsy, dysfunction of the facial nerve results in paralysis of the facial muscles, impairing both sensory and motor functions. In the case of *Ardita*, the *Vata dosha* is primarily vitiated. *Vata* governs all bodily activities, and restoring normal *Vata* balance is essential for properly functioning sensory and motor activities. Here we adopted the *Brimhana* (nourishing) type of treatment for correcting the vitiated *Vata* as per *Ayurveda* principles of treatment. It improves the motor function by stimulating and strengthening the facial nerves and muscles.

Probable Mode of Action of *Panchakarma* Therapies

Abhyanga promotes the dilation of the micro-blood vessels in the face, enhancing blood circulation to the area. This increased blood flow to the peripheral arterioles facilitates faster absorption of medications, leading to quicker improvements.

Mukha Abhyanga with *Karpasastyadi Taila* was done. *Karpasatyadi Taila* contains drugs which are *Teekshna*, and *Ushna Veerya*. It does *Vedanahara* (Analgesic), *Shothahara* (anti-inflammatory), and *Sarvanilapaha*,[5] and directly indicated in *Ardita*, nourishes the *Kapha* and provides strength to the facial muscles.

Netra Abhyanga with *Ksheerabala Taila* was done. It advances nerve recovery and offers strength to muscles due to the *Balya* (strengthening), and *Brimhana* (nourishing) properties of medications present in it.

In *Ksheera Dhooma* drugs include *Ksheera* (milk) and *Bala moola* (Sida cordifolia), both have *Snigdha* (unctuous) and *Guru Guna* (heaviness), which are opposite to that of *Vata*. *Bala moola* has the best *Vata shamaka* properties and by using *kwatha* (decoction) for *Swedana* (sudation). *Snigdha Guna* of *Ksheera* helps to relieve *Rooksha Guna* (dryness)of *Vata*. *Bashpa* (steam) of *Bala moola kwatha* and *Ksheera* probably absorbs from the buccal mucosa and nourishes and stimulates the local sensory nerve endings which include taste buds.

The same moist heat is indicated in Bell's palsy by modern medicine. This effect is ensured by the *Ksheera Dhooma* procedure. *Swedana* (sudation) done properly has the quality of exciting nerve center powerfully. It also increases the tactile sensibility. Primarily dilatation of capillary vessels is seen due to vasomotor nerve influence. *Swedana* (sudation) also has the quality of exciting and improving the energy of striated voluntary muscles. The same effect is also observed by doing *Ksheera Dhooma*. *Ksheera Dhooma* makes the vasodilatation that occurs due to vasoconstriction in paralysis.

Acharya Charaka as mentioned "*Nasa Hi Shiraso Dwaram*", hence medicine administered through the nose enters the deeper tissues of the brain and pacifies *Doshas* responsible for the disease. Bell's palsy involves disturbances in almost all the sense organs, the *Nasya Karma* with the *Nasya Dravya* medicine acts at *Sringataka marma* from where it spreads into various *Strotas* (vessels and nerves) and brings out all vitiated *doshas*. The drugs are administered by general blood circulation after absorption through the mucous membrane pool into the venous sinuses of the brain via inferior ophthalmic veins. There the absorption is directly into the cerebrospinal fluid. Nerve endings of olfactory and trigeminal nerve which are arranged in the peripheral surface of mucous membrane are stimulated by *Nasya karma* and impulses are transmitted to the central nervous system.[6] In this study, the drug used for *Nasya* is *Sneha Dravya*. *Sneha Dravya* is considered the best *Vatashamaka*. Here the *Sneha Dravya* used is *Karpasasthyadi Taila*.

Shashtika Shali Pinda Sweda was done as a *Brimhana* (nourishing) therapy. Massage, heat, and pressure during this procedure give nourishment to muscles and nerve endings of the face.

Moordhnitaila used was *Talam* with *Kachooradi choorna* and *Ksheerabalataila*, which have *Vatahara* properties, thereby improving the motor functions of the facial nerve.

Aschothana and *Seka* were done to improve the movement of the eyelid and to prevent exposure to keratitis. *Aschothana* with *Ashwaganda Ghrita* and *Seka* with *Ksheerasaindava* was performed. *Ghrita* has *Pitta Anilahara* properties and *Awaganda Ghrita* has *Vata*

hara guna so there is relief in the symptom of ptosis. *Ksheerasaindava* was used to prevent dry eye.

Probable Mode of Action of Internal Medicines

Tablet Nurod contains ingredients like *Brihat Vatachintamani Rasa* extract, *Tayodasanga Guggulu* extract, *Lashuna* (Allium sativum), *Eranda* (Ricinus communis), *Bala* (Sida cordifolia), *Kapikacchu* (Muccuna pruriens), *and Ashwagandha* (Withania somnifera). It has properties like anti-inflammatory, analgesic, immuno-modulator, and anti-oxidant effects, helps in nerve regeneration, and strengthens the facial nerve.

Dhanadanayanadi Kashya[7] is a drug of choice in *Ardita*, as it has properties like *Shothahara* (anti-inflammatory), *Shoolahara* (Analgesic), *Balya* (strengthening), *Brimhana* (nourishing). It Suppresses nerve inflammation and promotes nerve regeneration and gives strength to muscles.

Punarnavadi Guggulu[8] containing *Punarnava* (Boerhavia diffusa), *Devadaru* (Cedrus deodara), *Haritaki* (Terminalia chebula), *Guduchi* (Tinospora cordifolia), *Eranda Taila* (Ricinus communis) and *Guggulu* (Commiphora wightii) acts as an anti-inflammatory, immuno-modulator, and antioxidant.

Ashwagandha Ghrita[9] has effects on balancing *Tridosha*, especially *Vata Dosha* and it also acts as *Rasayana*. It reduces nerve inflammation, fosters nerve regeneration, and enhances muscle strength.

CONCLUSION

In this case study, it can be concluded that the treatment with *Ksheera Dhooma* and *Nasya Karma* protocol is effective in the management of *Ardita*. The treatment provided to the patient involved non-invasive and cost-effective procedures. The conservative management, utilizing Ayurvedic therapies along with oral medications, helped in relieving the symptoms of *Ardita*.

Patient perspective

The patient found the intervention to be helpful in managing the condition. Patient mentioned, "My symptoms have reduced drastically. I feel more comfortable with myself. I wish to continue Ayurveda therapy and I hope that it will help for my long-standing health problem."

ACKNOWLEDGEMENT

I acknowledge the support of colleagues, at Sri Sri College of Ayurvedic Science and Research, Bangalore.

Conflict of interest

None.

Patient consent

Written permission for publication of this case study had been obtained from the patient.

Source(s) of funding

None.

REFERENCES

1. Harisastri Paradakara, Ashtangahrdaya Nidana Sthana 15/32-35, Chaukhamba Orientalia, Varanasi, 2005; 533.
2. Adams, Raymond D., and Maurice Victor. Principles of neurology, McGraw-Hill, Health Professions Division, New York, 5th edition 1993; 1175-1177.
3. Ardita treatment Ah-Harisastri Paradakara, Ashtangahrdaya Chikitsa Sthana 21/43, Chaukhamba Orientalia, Varanasi, 2005; 725.
4. Mat Lazim N, Ismail H, Abdul Halim S, Nik Othman NA, Haron A. Comparison of 3 Grading Systems (House-Brackmann, Sunnybrook, Sydney) for the Assessment of Facial Nerve Paralysis and Prediction of Neural Recovery. Medeni Med J., 2023 Jun 20; 38(2): 111-119. doi: 10.4274/MMJ.galenos.2023.42383. PMID: 37338861; PMCID: PMC10284086.
5. K.Nishteshwar and R.Vidyanath, Sahasrayogam text with English translation, reprint – 2020, Taila prakarana, pg-118.
6. Tripathi Brahmanand, Ashtang Hrdayam, Sutra sathana, Chukhambha Sanskrit Pratisthana 2007 ch-16, shloka No.-26-28, page- 209.
7. Sahasrayogam, Edited and Translated by Dr. Ramnivas Sharma, Dr Surendra Sharma, Published by Chaukhamba Sanskrit Pratisthan, New Delhi, 31.
8. Vangasena, Vangasena samhitha, edited by Kaviraj Sri Shalligramjji Vaishya, Vatarakthaadhikara Adyyaya Shloka 117-121, Kamaraj Sri Krishnadasa Prakashsena Mumbai, 387.
9. Upadhyay PS, Komal S. Ashwagandha ghrita in bal karshya (childhood undernutrition). Int J Health Sci Res., 2019; 9(7): 267-271.