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Management of Bells Palsy with Polyherbal Medicine and *Panchkarma* Therapy: A Case Report

Dipankar Digambar G. and Sonawane Komal Popat*

Department of Kayachikitsa, Dr. D.Y. Patil College of Ayurved and Research Centre, D.Y. Patil Vidyapeeth (Deemed to be University), Pimpri, Pune 411018, Maharashtra, India

**Corresponding Author*

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Abstract: According to modern science lower motor neuron lesion of the facial nerve causes Bell's palsy, which is correlated with *Ardita* in Ayurveda science. This condition is characterizes by the sudden paralysis of the face muscles and functional impairment. Ayurveda provides a thorough management strategy that addresses the root cause of the *Vata dosha* imbalance associated with *Ardita*. This article presented a case study of successful management of *Ardita* case with the help of Ayurvedic interventions. A 16-year-old boy with acute-onset left-sided facial paralysis, eyelid droop, trouble chewing and speaking, diagnosed as case of *Ardita*. Internal drugs (*Ashwagandha*, *Shatavari*, *Ekangveer Rasa* and *Sarak Vati*, etc.) along with *Panchakarma* therapies (*Nasya*, *Abhyanga*, *Nadi Sweda* and *Shiro Abhyanga*) were utilized as treatment regimen. The study observed improvement in ocular functions, normalization in taste sensitivity and restoration of facial symmetry after the complete duration of therapy. After seven days, the House-Brackmann grade went from Grade IV to Grade II, and on Day 21, it was Grade I.

Keywords: Ayurveda, Ardita, Bell's Palsy, Vata Dosha, Facial Paralysis, Panchakarma

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Introduction

Ardita is a disorder that mainly affects one side of the face and is typified by the contracture or distortion of facial features such as the eyes, mouth and eyebrows. This condition may be arises with or without the involvement of rest of the body parts. Clinically, *Ardita* is very similar to facial palsy, which is a neurological disorder that affects the facial nerve, the seventh cranial nerve. This nerve controls the movements of the muscles of the face, the anterior two-thirds of the tongue's taste perception, and the lacrimal and salivary gland secretions. Temporary lack of voluntary control over the affected side of the face muscles is a result of facial palsy (Victor and Martin, 1994;

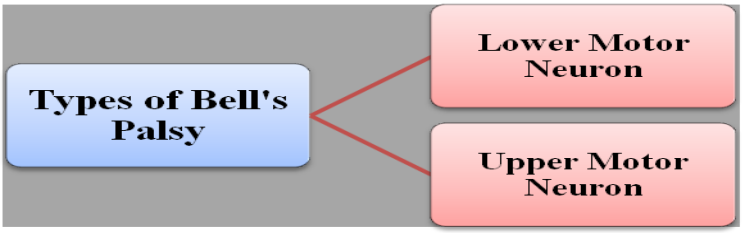

Fig. 1: Types of Bell's Palsy.

Kaviraj, 2016; Kashinath *et al*., 2018a; Yadav *et al*., 2022).

Symptoms may include twitching, eyelid drooping, taste abnormalities, trouble shutting the eye and pain near the ear, etc. The root cause is frequently still idiopathic; however stress, age and injury can be considered responsible factors along with genetic predisposition. Facial palsy is divided into two categories as depicted in Figure 1, based on the site of nerve damage; lower motor neuron (LMN) and upper motor neuron (UMN). Lower motor neuron lesions affect both the upper and lower quadrants of the same side, upper motor neuron lesions often affect the bottom half of the face on the opposite side (Prescott, 1988; Victor and Martin, 1994).

According to Ayurveda one half of the body is said to malfunction when the *Vata dosha* is aggravated. Muscular contractures result from this imbalance because it causes the blood and tissues in that area to dry out and become impaired. This can lead to the distortion of facial features such as the lips, jaw, eyes and eyebrows. Excessive salivation, incomplete eye closure and meal deviation during mastication, etc. are some of the symptoms that patients may encounter. Additionally, the tongue may be impacted, which could cause issues with chewing and articulation. Considering severity of disease present case report demonstrated successful role of Ayurvedic interventions in a case of *Ardita* (Prescott, 1988; Kaviraj, 2016; Kashinath *et al*., 2018b).

Materials and Methods

Case Study:

A 16-year-old male patient was admitted to the IPD of Dr. D. Y. Patil College of Ayurved and Research Centre, Pimpri, Pune, India. The patient was diagnosed with *Vata Avrita Vata* (*Ardita Vata*/ Facial Palsy) and presented with complaints of sudden onset of weakness or paralysis on one side of the face. He reported deviation of the mouth, drooping of the eyelid and corner of the mouth, loss of forehead wrinkling on the affected side, drooling of saliva, difficulty in speaking and loss of taste sensation.

History:

There was no past history of similar episodes, no history of trauma, fall and no significant family history of related neurological conditions. His appetite and thirst were reduced, and he follows a vegetarian diet. His sleep was disturbed, and he reported no addictions.

Investigations:

Various investigations were conducted for motor examination of facial nerve (VII Cranial Nerve) and associated cranial nerves, along with sensory and special functional tests. The findings of these tests are depicted in Tables 1-3.

Diagnosis based on investigations:

All of the diagnostic results suggest a left-sided lower motor neuron (LMN) facial nerve (VII cranial nerve) palsy that involves several facial nerve branches and is most similar to Bell's palsy. The inability to raise the left eyebrow and incomplete eye closure in the motor examination (Table 1) reveal dysfunction in the temporal and zygomatic branches, indicating weakness in the upper facial muscles, a characteristic of LMN-type facial palsy (as opposed to upper motor neuron

Table 1: Motor Examination of Facial Nerve (VII Cranial Nerve)

Region	Branch Involved	Findings
Upper Face Motor Function	Temporal and Zygomatic Branches	✓ Forehead wrinkling present ✓ Incomplete eye closure ✓ Inability to raise left eyebrow properly
Mid-Face Motor Function	Buccal Branch	✓ Smile deviated to the right (left-sided weakness) ✓ Inability to blow cheeks ✓ Unable to whistle
Lower Face Motor Function	Marginal Mandibular Branch	✓ Asymmetry observed while pursing lips or puckering
Cervical Function	Cervical Branch	✓ Inability to tighten skin of the neck or depress mandible

Table 2: Examination of associated cranial nerves

Cranial Nerve	Function Tested	Findings
CN V (Trigeminal)	Corneal reflex (afferent limb)	Absent
CN VIII (Vestibulocochlear)	Hearing	Mild hearing loss
CN IX, X, XI, XII	Motor and sensory functions	No abnormalities detected

Table 3: Sensory and Special Functional Tests

Test	Findings
Taste Sensation	Not tested with sweet, salty, or sour substances
Hyperacusis	Reduced sound tolerance on affected (left) side
Lacrimation Test	Tear secretion absent on the affected side

lesions which typically spare the forehead due to bilateral cortical innervation). The inability to puff cheeks, whistle, and smile to the right, which highlights weakness in the mid-face muscles, are signs of buccal branch involvement. Asymmetry while puckering the lips indicates marginal mandibular branch dysfunction, whereas the inability to tighten neck skin or depress the mandible suggests cervical branch involvement (Prescott, 1988; Victor and Martin, 1994).

Additional analysis (Table 2) reveals absent corneal reflex, suggesting a damaged facial efferent limb or sensory or reflex arc disruption involving the trigeminal nerve (CN V) afferent limb. Mild hearing loss and hyperacusis on the afflicted side point to either proximity-related irritation of the vestibulocochlear nerve (CN VIII), which runs alongside CN VII in the internal auditory meatus, or partial involvement of the nerve to stapedius (a branch of CN VII). Taste sensation was not examined, although if the chorda tympani branch is impacted, it usually would be reduced in the anterior two-thirds of the tongue. The greater petrosal nerve, another branch of CN-VII, is implicated when there is no lacrimation on the left side.

These results collectively lend credence to the diagnosis of left-sided facial nerve palsy of peripheral origin, which is most likely located at or close to the stylomastoid foramen and may involve several branches and neighboring cranial nerves as a result of inflammation, compression, or viral etiology (Prescott, 1988).

Conclusive Diagnostic Remarks:

Considering the symptoms and examinations, this

Table 4: House–Brackmann Facial Nerve Grading System

Grade	Description	Classification
1	Normal facial function in all regions	Normal
2	Slight weakness noticeable only on close observation; complete eye closure with minimal effort; mild smile asymmetry; minimal synkinesis/spasm	Mild Dysfunction
3	Visible but not disfiguring asymmetry; complete eye closure with effort; good forehead movement; notable synkinesis or mass movement	Moderate Dysfunction
4	Obvious facial asymmetry; incomplete eye and forehead movement; facial asymmetry at rest; significant synkinesis or hemifacial spasm	Moderately Severe Dysfunction
5	Barely perceptible movement; incomplete eye closure; no forehead movement; facial asymmetry at rest	Severe Dysfunction
6	Complete facial paralysis; no movement or tone; marked asymmetry at rest	Total Paralysis

Table 5: Oral Medications (Aushadhi Kalpa) used for Treating Present Case of Avrita Vata

S. No.	Oral Medications	Dosage & Time	*Anupana*	Duration
1	*Ashwagandha + Shatavari + Vidari + Brahmi + Yashtimadhu* (Churna)	3 gm of each, twice daily On an empty stomach	Lukewarm water	One Month
2	*Ekangveer Rasa*	Twice daily After Meal		
3	*Sarak Vati*	At bedtime		
4	*Ashwagandhadi Ghana Vati*	Twice daily After Meal		
5	*Parijatak Ghana Vati*	Twice daily After Meal		

condition was diagnosed as case of *Vata Avrita Vata* (*Ardita Vata*/Facial Palsy). Study was carried out by following the good clinical practice.

Assessment criteria:

- ✓ Assessment of Subjective Symptoms:
  - Mouth deviation
  - Dribbling of saliva (if present)
  - Speech difficulty
  - Lacrimation (continuous tearing)
  - Difficulty in chewing from the affected side
  - Taste sensation
- ✓ Assessment of House–Brackmann Facial Nerve Grading System:

This standardized grading system was used to assess the severity of facial nerve dysfunction as mentioned in Table 4.

Ayurvedic treatment protocol:

Internal drugs along with *Panchakarma* therapies were utilized as treatment regimens as depicted in Table 5 and 6, respectively.

Results

Clinical assessment was conducted to evaluate the condition of the facial nerve (VII Cranial Nerve). Evaluation included both subjective symptom analysis and grading based on the House–Brackmann Facial Nerve Grading System.

Subjective Symptoms before Treatment:

- Mouth deviation towards the right side
- Dribbling of saliva, particularly from the left side
- Loss of nasolabial fold on the affected side

Table 6: Panchakarma Therapies used for Treating Present Case of Avrita Vata

Procedure	Details
Nasya	✓ Oil Used: *Bala Taila* ✓ Dose: 5 drops in each nostril ✓ Frequency: Twice daily
Snehan & Swedana	✓ *Snehan*: *Bala Taila* applied over *Mukha Pradesh* ✓ *Swedana*: *Nadi Swedana* method
Shiro Abhyanga	✓ Oil Used: *Bala Taila* ✓ Frequency: Daily

Table 7: Comparison of Subjective Symptoms before and after Treatment

Parameter	Before Treatment	After Treatment
Deviation of mouth	Grade IV (Significant deviation)	Grade II (Mild deviation, improved symmetry)
Dribbling of saliva	Present	Absent
Nasolabial fold	Flattened/lost on left side	Normal
Speech (labial phonation)	Mild difficulty in pronunciation	Normal articulation
Lacrimation	Continuous tearing from left eye	Absent
Chewing	Difficulty on left side	Normal chewing restored
Taste sensation (anterior 2/3 tongue)	Altered	Normal

Table 8: House–Brackmann Facial Nerve Grading Score before and after Treatment

Side of Face	Before Treatment	After Treatment
Left Side	Grade IV – Moderate-severe dysfunction (asymmetry at rest, no forehead movement, incomplete eye closure)	Grade II – Mild dysfunction (slight asymmetry, good forehead movement, complete eye closure)
Right Side	Grade I – Normal facial function	Grade I – Normal facial function

- Slurred speech, especially during labial phonation
- Lacrimation (continuous tearing) from the left eye
- Difficulty in chewing from the left side
- Altered taste sensation over the anterior two-thirds of the tongue

These symptoms indicated a moderate to moderately severe facial nerve dysfunction, affecting both motor and sensory components of the left side of the face.

Follow-up Clinical Assessment (*Effect of Therapy*):

The patient showed notable clinical improvement in several areas after a month of Ayurvedic treatment. Comparison of assessment parameters (subjective symptoms and House–Brackmann Facial Nerve Grading Score) before and after treatment is presented in Tables 7 and 8. Improved facial symmetry resulted from a discernible improvement in strength on the afflicted side of the face and a decrease in mouth

deviation. Eyelid and mouth angle drooping were decreased, and a partial restoration of forehead wrinkles indicated frontalis muscle healing.

Additionally, the patient's control over oral secretions improved, as evidenced by a noticeable decrease in drooling. The perception of taste showed partial to complete restoration, and speech became more distinct, especially during labial phonation. Eye closure considerably improved, and lagophthalmos decreased. Bell's phenomenon was still there, although it was not as intense. All things considered, these modifications showed a significant improvement in facial symmetry and motor control.

Discussion

In *Vata Vyadhi* therapy procedure, *Acharya Charaka* explicitly identified *Nasya Karma* as a crucial line of treatment for *Ardita*. *Nasya* is considered the best treatment method for head and neck conditions in the classics of Ayurveda. The medicine administered through the nose travels to the *Shringataka Marma*, a crucial junction in the cerebral cavity. The medication then spreads to the brain and other channel openings (*Sira-mukhas*), such as the *Kantha*, *Karna* and *Netra*. In the end, the drug might have worked by removing the vitiated *Doshas* from the supra-clavicular area (Gupt, 2016a; Shashtri, 2016; Kasinath *et al.*, 2018b).

The patient also received *Sthanik Abhyanga* and *Swedana*; *Nadi Swedana* was used after *Abhyanga*. These treatments increase local blood circulation and encourage microcapillary vasodilation. Better blood flow promotes tissue permeability, which speeds up the drug's absorption through the nose and aids in the restoration of neuromuscular function and facial muscle nourishment.

Ashwagandha, *Shatavari*, *Vidari*, *Brahmi* and *Yashtimadhu* herbs together promote nerve regeneration; lessen neuromuscular fatigue and boosts *Majja Dhatu*. *Shatavari* and *Vidari* promote tissue regeneration, while *Ashwagandha* gives vigor and lessens stress-induced *Vata* aggravation. *Yashtimadhu* relieves nerve discomfort, whereas *Brahmi* enhances cognitive function and coordination (Gupt, 2016a; Shashtri, 2016; Kasinath *et al.*, 2018c).

Ekangveer Rasa works particularly well for localized *Vata* illnesses like *Ardita*; it eases face weakness and stiffness, encourages nerve conduction. By enhancing nerve impulse transmission and lowering pain, *Sarak Vati*, with its *Vata-Kapha hara* and anti-inflammatory qualities, treats the underlying pathology of *Ardita*. *Ashwagandhadi Ghana Vati* functions as a general tonic, balances *Vata* and fortifies the nervous system. With its *Shothahara* and *Vedanasthapaka* properties *Parijatak Ghana Vati*, helps to lessen the inflammation and rigidity of the muscles that are frequently observed in *Ardita*.

These formulations work together to improve neuromuscular function, regulate *Vata* and promote faster and fuller recovery from facial palsy. The drugs' analgesic, anti-inflammatory, and *Vatahara* properties help to relives symptoms of *Ardita*. The House-Brackmann grading score, facial motor skills and subjective symptoms were significantly improved with the recommended treatment (Gupt, 2016b; Shashtri, 2016; Kashinath *et al.*, 2018c).

Conclusion

The present case study illustrates how a 16-year-old male patient with *Ardita Vata* was successfully treated with Ayurveda. The patient demonstrated significant clinical improvement in a little amount of time with no side effects or recurrence after following a carefully thought-out regimen that included internal herbal formulations with targeted *Panchakarma* therapies like *Nasya* and *Swedana*. The House-Brackmann grading system objective assessment showed a significant improvement, going from Grade IV to Grade I in just 21 days. This demonstrates the efficacy of conventional Ayurvedic methods in the management of neuro-muscular conditions such as *Ardita*, providing a comprehensive, secure and efficient therapeutic option. However, in order to

statistically validate these results and create uniform treatment guidelines, more extensive clinical research with bigger sample numbers is recommended.

Ethical Statement

The authors confirm that all ethical issues have been dealt with the research ethics guidelines provided by the Department of Kayachikitsa, Dr. D.Y. Patil College of Ayurved and Research Centre, D.Y. Patil Vidyapeeth (Deemed to be University), Pimpri, Pune, Maharashtra, India.

Author Contributions

Each author has contributed equally to the study's planning, analysis, writing, and editing. All authors have read and agreed to the published version of the manuscript.

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Conflict of Interest

The authors declare no conflicts of interest.

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