



Case Study

MANAGEMENT OF *ARDITA* (BELL'S PALSY) THROUGH AYURVEDIC APPROACH

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ABSTRACT

Bell's palsy is the most common form of unilateral isolated lower motor neuron type of facial palsy. This is an idiopathic condition with abrupt onset leading to weakness of one-half of the face. The present case report is on the effectiveness of *Nasya Karma* and *Shirodhara* procedures in Bell's palsy. A 35-year-old female patient visited the OPD with complaints of deviation of the mouth, improper closure of eyes, and dribbling of saliva for four days. She was diagnosed with Bell's palsy. Bell's palsy can be correlated with *Ardita* based on clinical features. The patient was hospitalized and managed with *Sthanik Snehana* (localized oleation /massage therapy), *Sthanik Swedana* (localized steam), *Nasya Karma* (medicine administered through nasal route), and *Shirodhara* (medicated decoction/oil pouring over the forehead) along with oral Ayurvedic formulations. She got noteworthy relief in all features in two weeks. The collected data emphasize the potential of Ayurvedic interventions in Bell's palsy (*Ardita*).


INTRODUCTION

Bell's palsy is idiopathic lower motor neuron facial paralysis, is characterized by sudden onset of complete or partial paralysis of the unilateral facial muscles. The incidence rate is approximately 15 to 20 per 100,000 yearly.^[1] Recurrence rate is 8% to 12%.^[2] Facial palsy occurs at any age, irrespective of gender. There is facial asymmetry, deviation of the mouth, drooping of eyelids, improper eye closure of the affected side (on attempting closure, eyeball rolls upward - Bell's phenomenon), difficulty in chewing, drooling of saliva. Taste sensation may be affected unilaterally on the same side.^[3] There may be inflammation of the facial nerve of an infectious or immune origin. Diagnosis is made on clinical grounds. Approximately 80% of patients recover within a few weeks or months.^[4] Steroids are the main drugs for treatment.

On the basis of features, this can be correlated with *Ardita*. *Ardita* is described as one of 80 *Nanatmaja Vyadhis* of *Vata*.^[5] It is also considered a *Shiro Roga* since *Shira* is the *Adhithana* in this disease. In *Charaka Samhita*, it has been mentioned that symptoms are localized in half of the face with or without the involvement of the body^[6], while in *Sushruta Samhita* it is described that only the face is affected^[7]. Only specific group of patients get afflicted by *Ardita* following *Rakta Kshaya*. *Nidana* are excessive laughing, speaking loudly, chewing hard food, yawning, sneezing, carrying a heavy weight on the head, sudden movement of head and neck, exposure to cold or wind, etc. In addition to this excessive loss of blood during pregnancy and the postpartum period, in children, old age, and emaciated patients. This leads to the vitiation of *Vata* and the manifestation of *Ardita*. In *Charaka Samhita*, *Brihana* therapy is indicated. *Nasya Karma*, *Moordha Taila*, *Tarpana Kriya*, *Nadi Sweda*, and *Upanaha Sweda* are mentioned in the *Chikitsa Sutra* of *Ardita*.^[9]

Case report

A 35-year-old young female visited OPD in our hospital with complaints of numbness on the left side of her face, difficulty in proper closure of left eye, dribbling of saliva through her mouth, and difficulty in chewing food for 3 days. According to the patient, she

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was asymptomatic 3 days back then suddenly on waking up in the morning she noticed a deviation of her face towards her right side and was unable to close her left eye completely. There was dribbling of saliva from the left angle of the mouth with mild slurring of speech. She also experienced difficulty in chewing food. There was no history of diabetes mellitus, hypertension, thyroid dysfunction, recent trauma, surgical intervention, or blood transfusion. Her menstrual history revealed a regular cycle with 28-30 days intervals and 4-5 days of duration with her LMP 10 days back. Her appetite was good and is vegetarian in dietary habits. Her thirst was normal, bowel habits were regular with the incomplete evacuation of stool. Family history and drug history were not significant. She is a homemaker and does farming in the kitchen garden along with household chores.

Clinical Findings

Ashtavidha Pariksha

Nadi- Vata-Kaphaj

Mala- Koshthbadhta (incomplete evacuation)

Mutra- Samanya

Sparsha- Samsheetoshna

Drika- Samanya

Jihwa- Niraam

Shabda- Aspashtha (mild slurring)

Akriti - Madhyama

At the time of presentation, the patient's pulse rate was 84 beats/min (regular), blood pressure was 124/80 mmHg, Respiratory rate was 18/min, Temperature was 97.8°F and oxygen saturation was 98% at room air. No signs and symptoms of any systemic illness were found on systemic examination. Central Nervous System Examination revealed-

- **Higher Motor Functions** – She was fully conscious and well-oriented to time, place, and person. Her recent and remote memory was intact. Hallucination and delusion were absent and mild slurring of speech was present.

• Cranial Nerve Examination

- Facial nerve:** There was the loss of nasolabial fold on the left side, drooping of the angle of mouth on the left side, deviation of the mouth towards right side during clenching of teeth and while puffing out cheeks and leakage of air through the left angle of mouth while filling of air in the mouth. On eye closure, the left eyeball moved upwards and inwards when the patient attempted to close it along with incomplete closure of the eyelid. (Bell's phenomenon-positive). She was unable to raise an eyebrow on the left side. Forehead frowning revealed absent wrinkles on the forehead of the affected side, dribbling of saliva on the left angle of the mouth, and taste perception was moderately affected.
- Trigeminal nerve:** Clenching of jaw deviated to right side and sensation of temperature & touch over the left side of face decreased
- Optic nerve:** Pupils equal bilaterally and Round, regular, and reactive to light. The fundus of both eyes was within normal limits. Distant visual acuity and near vision acuity were 6/6 and N-6 respectively in both eyes.
- Trochlear nerve:** Corneal and conjunctival reflex was normal.
- Auditory nerve:** Rinnes test and Webers test were normal. PTA (Pure Tone Audiometry)- within normal limits.

Muscle power and tone in all limbs were also normal and equal bilaterally. Deep tendon reflexes and plantar reflexes were normal. The cerebellar examination was also normal.

Timeline of Management

The timeline of the occurrence of events of the present case study is represented in the Table No. 1. It represents all the symptoms along with the treatment taken by the patient and the results obtained.

Table 1: Timeline of Management

Day	Event
Day 1	<ul style="list-style-type: none"> • There is deviation of the face towards the right side, difficulty in proper closure of the left eye, and air blowing from the mouth, dribbling of saliva through mouth and difficulty in chewing food, mild slurred speech. • <i>Sthanik Snehana</i> with <i>Mahamasha Taila</i> followed by <i>Nadi Swedan</i>, <i>Marsha Nasya</i> with <i>Anu Taila</i>, and <i>Shirodhara</i> with <i>Dashmoola Kwatha</i> were prescribed. • <i>Ekanagveer Rasa</i> 125mg BD, <i>Brahmi vati</i> 500mg BD and <i>Triphala Churna</i> 5gm HS with lukewarm water.
Day 8	<ul style="list-style-type: none"> • Complete closure of the left eye. • Marked improvement in deviation of the mouth, air blowing and dribbling of saliva from the mouth, and chewing of food. • <i>Nasya</i> and <i>Shirodhara</i> and medications continued.
Day 14	<ul style="list-style-type: none"> • No deviation of mouth was present. Patient was facing no difficulty in chewing. • Nasolabial folds and wrinkles on the forehead on frowning were markedly present. • <i>Nasya</i> and <i>Shirodhara</i> procedures were stopped and medications continued for 15 days

Diagnostic Assessment

The diagnosis was made clinically based on signs and symptoms. All routine investigations including blood and urine were done which were within normal limits.

Therapeutic Intervention and Assessment

The patient was given treatment for 14 days. *Sthanik Snehana* was done with *Mahamasha Taila* followed by *Nadi Swedan*. *Marsha Nasya* with *Anu Taila* and *Shirodhara* with *Dashmoola Kwatha* was done for 14 days. Orally *Ekanerveer Rasa* 125mg BD, *Brahmi Vati* 500mg BD, and *Triphala Churna* 5gm HS with lukewarm water were given for 30 days. No complications were observed during and post treatment.

The assessment was done based on the facial nerve (House-Brackmann Facial Nerve Grading scale)^[10], trigeminal nerve, optic nerve, trochlear nerve, and auditory nerve examination.

Follow up and Outcomes

After completion of treatment, the following symptomatic changes in the patient were observed [Table no. 2] which indicates the patient got complete symptomatic relief in the closure of eyes. Marked improvement was seen in deviation of the mouth, slurred speech, and eating or drinking difficulty. There was a marked improvement in the House-Brackmann Facial Nerve Grading scale which was reduced from four to one.

Table 2: Neurological Examination Findings Before and After Treatment

Neurological examination	Before treatment	After treatment
Trigeminal nerve	Motor-Clenching of jaw- mouth deviated to the right side. Sensory-sensation of temperature and touch slightly affected.	Markedly improved
Facial nerve	Closure of eyes- incomplete closure of left eye (bell's phenomenon-positive). Widening of palpebral aperture- cornea and 1/3 rd of sclera upper sclera visible). Nasolabial fold – loss on left side. Frowning of eyebrows-Wrinkles on the forehead decreased on the left side of the forehead. Blowing of cheeks not proper (leakage of air through the mouth). Whistling not proper. Taste sensation- moderately affected.	Complete closure of the left eye. Slightly wide (whole cornea visible) Markedly present Proper blowing of cheeks without leakage. Whistling Normal
House-Brackmann facial nerve grading	4	1



Incomplete closure of left eyelid

Complete closure of left eyelid

Complete closure of left eyelid

Figure 1: Changes in the eye closure: Before treatment, on Day 8 and Day 14



Passing of air at time of Blowing

Control in air blowing

Normal

Figure 2- Changes in the air blowing capacity: Before treatment, on Day 8 and Day 14

DISCUSSION

The case in the present study was a middle-aged female without any co-morbidity and she was diagnosed clinically as a patient of *Ardita* (Facial Palsy). In *Ardita*, the vitiation of *Vata* and *Dhatukshaya* is responsible for its manifestation. Therefore *Brihana Chikitsa* is adopted here which alleviates *Vata Dosha* and provides nourishment to *Dhatu*.

Marsha Nasya was done with *Anu Taila* for 14 days and started from 6 drops in each nostril which was gradually increased to 12 drops in each nostril. In *Nasya*, medicated oil or powder is administered through the nostrils. It has been mentioned in *Ashtang Hridaya* that "*Nasa Hi Shirsodwaram*"^[11] so the drug administered through nostrils reaches *Shringataka Marma* and spreads throughout *Murdha* (head), *Netra* (eyes), *Shrotra* (ears) and *Kantha* (throat) through their *Siras* eliminates the morbid *Dosha* from *Urdhava Jatrugat Pradesh* and nourishes *Shira*.^[12] Before *Nasya*, *Abhyanga* with *Mahanarayan Taila* and *Nadi Swedana* were performed as *Purvakarma* which helped in facilitating drug absorption, elimination of *Dosha*, and improving circulation. Here the drug when being administered in head low position helps in retaining instilled medicine in the nasopharynx, thus increasing its contact timing with mucosa leading to proper absorption.^[13]

Anu Taila possess *Laghu-Teekshana Guna*, *Ushana Veerya* and *Katu Tikta Rasa*, *Katu Vipaka*. It possesses *Sukshama- Vyavayi Guna*, which facilitates *Srotoshodhana* and good spreading property. It also possesses anti-inflammatory and immunomodulation properties. Due to the virtue of its *Tikta-Katu- Madhura Rasa*, it promotes the nourishment of *Dhatu* which ultimately increases local immunity (mucosal health). This immunomodulatory property can help in reducing recurrent episodes.^[14]

Shirodhara was done with *Dashmoola Kwatha*. *Dashmoola* is also described as *Tridoshara*, *Vedanasthapana*, and *Shothahar*.^[15] *Shirodhara* is an Ayurvedic procedure widely used as rejuvenating therapy, where medicated oils or decoction are steadily poured from a certain height onto the forehead in a continuous stream (flow). It is mentioned as a *Bheda* of *Murdha Taila* in *Ashtang Hridaya*^[16]. This helps in mental relaxation by reducing stress and induces sleep, therefore, indicated in neurological and psychosomatic disorders. The *Sthana* of *Chitta (Mana)* is mentioned *Bhrumadhya* i.e., *Sthapani Marma* in *Bhela Samhita*.^[17] The site of *Sthapani Marma*, pituitary gland, and pineal gland exist at the same level. Thereby, the effect on the psychosomatic level may be due to the stimulation of *Sthapani Marma* and indirect stimulation of the pituitary gland.^[18]

The continuous flow of warm liquid on the forehead may cause mild vasodilatation. This improves the circulation in the blood supply of the brain. *Shirodhara* probably produces a constant pressure and vibration which is amplified by the hollow sinus present in the frontal bone. Vibrations are then transmitted inwards through the fluid medium of cerebrospinal fluid. Some Research articles have mentioned continuous pressure effect of *Dhara* modulates nerve stimulation and impulse conduction. Due to the stimulation of nerve endings of the autonomic nervous system, chemical substances such as acetylcholine is produced (inactive form). These are activated by a nerve impulse vibration produced due to the continuous flow of liquid over the forehead which may stimulate nerve endings. This leads to decreased activity of the central nervous system resulting in the tranquility of the mind and contributing to an anti-stress effect of *Shirodhara*.^[19]

Along with this orally *Ekanveer Rasa* was selected as it can pacify vitiated *Vata Dosha* because of its *Madhura Rasa*, *Snigdha Guna*, *Ushna Veerya*, and *Madhura Vipaka*. It pacifies vitiated *Kapha Dosha* by *Tikta-Katu-Kashaya Rasa*, *Laghu-Ruksha Guna*, *Ushna Veerya*, and *Katu Vipaka*. *Ekanveer Rasa* also eliminates *Srotorodha*, due to *Ama* and *Kapha* and minimizes nerve damage due to *Amapachana* and anti-inflammatory action. Due to its probable antioxidant property, oxidative stress is relieved caused by free radicals.^[20] *Brahmi Vati* is effective as a nervine tonic, anxiolytic and cognitive enhancer, therefore widely recommended in psychosomatic and stress disorders.^[21]

Patient Perspective

The patient and attendant were satisfied with the treatment. She was able to close her eyes and chew food properly. There was a sense of relief that facial disfigurement was corrected.

CONCLUSION

Based on the results, we can conclude that Ayurvedic interventions used in the present case have shown a significant effect on the patient. The results observed in this case are encouraging, and further clinical trials may be carried out for the management of facial palsy (*Ardita*).

Declaration of Patient Consent

Informed consent has been obtained by authors, where the patient/attendant has given consent for reporting the case clinical information along with the images in the journal for the knowledge purpose of medical faculty.

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