

AN AYURVEDIC MANAGEMENT OF ARDITA W.S.R TO PEDIATRIC BELL'S PALSY: A CASE STUDY

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ABSTRACT

Ardita is the *Vatavyadhi* which leads to distortion of face. It can be correlated to Bell's palsy due to similar clinical manifestations. Facial nerve dysfunction can seriously influence a patient's perspective of life as face is considered as organ of emotion. Here is uncommon case of 6 years girl complaints of right-side deviated mouth, chewing difficulty on left side, unable to close left eye with improper blinking and slurred speech for 1 month and diagnosed clinically as Bell's palsy. In Contemporary medicine, management includes steroids, anti-inflammatory and antiviral drugs which has limited outcomes and minimal adverse effects.

Present study reveals that *Ardita* was managed better with ayurvedic therapeutic procedures like *Mukhaabhyanga*, *Swedana*, *Nasya*, *Shirobasti*, *Gandoosha* and internal medicines like *Dhanadhanayanadi Kashaya*, *Dhanwantaram101*, *Balarishta* and *Brihathvatachintamani gold* with the total duration of 45 days. Ayurvedic treatment has been proved to be beneficial in the management of *Ardita* in children.

Key words: *Ardita*, Bell's palsy, *Vatavyadhi*, Children

INTRODUCTION

Vata is responsible for controlling the central nervous system functions in normal condition and is the only *Dosha* which is responsible for vitiation of other two *Doshas* as well as *Dhatus* and *Malas* when vitiated. It is also said that *Pitta* and *Kapha* are disabled (*Pangu*) without the involvement of *Vata*. So *Vata* is the prime factor in causing diseases. As per all *Acharyas*, the primary cause of *Ardita* is *Vata Dosha*. The aggravated *Vata* localizes in *Shiras*, *Nasa*, *Oshta*, *Chibuka*, *Lalata* & *Akshi* and develops pain these areas and causes *Ardita*, which is characterized by *Ardha Mukha Vavrata*, *Vaksangha*, *Netra Vavrata* etc¹. This disease has been enlisted amongst the 80 types of *Vataja Nanatmaja Vikaras*. When *Vata* is in equilibrium state, it carries out the functions like *Chestapravartana*, *Vakpravartana*, *Manaspraneta*, *Sarvairindriyanam Udhyojaka*, *Sarvairindriyanam Abhivodha* etc. When *Vata* is aggravated, it destroys the function of the *Indriyas*². In the similar manner, the vitiated *Vata* causes the disease *Ardita* which leads to the symptoms like *Ardhamukhajihmata*, *Nasa Bhru Akshi Lalata Hanu Vavrata* etc. As per *Charaka* and *Vagbhata*, *Ardita* is localized in half of the face with or without the involvement of body and as per *Sushruta*, *Ardita* is localized in half of the face only which is considered for the present study.

Ardita as mentioned in ayurvedic texts have very close resemblance with Bell's palsy in modern texts. Bell's palsy is a form of facial paralysis resulting from a dysfunction of the seventh cranial nerve (the facial nerve) results in the inability to control facial muscles on the affected side. It is also known as acute peripheral facial palsy. Though the exact cause is unknown but occurs when the lower motor neuron lesion of facial nerve that controls the facial muscle is swollen, inflamed or compressed resulting temporary or permanent facial weakness or paralysis. Symptoms of Bell's palsy can vary from person to person and range in severity from mild weakness to total paralysis. In most cases, weakness is temporary. It can occur at any age and sex but the incidence ranges from 6.1 to 18.8 cases per 1, 00,000 children per year

which shows the rare incidence of disease in pediatrics³.

Allopathic treatment prescribes steroids, NSAIDs and sometimes anti-viral therapy⁴ which in turn may cause adverse effects. The ayurvedic management includes principles same as *Vatavyadhi Chikitsa* and specially *Shirobasti*, *Nasya*, *Dhumapana*, *Snehana*, *Nadisweda* etc⁵, which is safe and effective.

Case Report- A girl of 6 years visited to Kayachikitsa OPD of KVGAMC, Sullia with the complaints of deviation of mouth towards right side, unable to close the left eye, and slurred speech for 1 month. She consulted a nearby hospital and diagnosed clinically as Bell's palsy. She had a history of excessive exposure to cold wind while travelling in bus before the manifestation due to which she developed pain in left ear for which she took medication. After 3 days in the morning, she had sudden onset of deviation of mouth towards right side, unable to close the left eye, slurred speech, difficulty in chewing the food in left jaw, loss of sensation in left side of face. There was no family history and other previous illness history. According to the patient's previous prescriptions, the management started with steroids for 1 week with physiotherapy, but the patient did not get relief, therefore consulted our hospital for further management.

Physical Examination- Vitals were normal (Pulse-82 bpm, BP-100/70mmhg, RR-17 cycles/min, SpO₂-98%). Pallor, icterus, clubbing, cyanosis, oedema and lymphadenopathy were absent at the time of hospital visit. No signs and symptoms of any other systemic illness were found on systemic examination. Higher mental functions were intact except speech with dysarthria. Facial nerve examination showed drooping of left eyelid, deviation of mouth towards right side with absence of nasolabial fold on left side, inability to puff the cheek with air leakage on left side, asymmetrical smile, loss of taste sensation and unable to raise the left eyebrow with absent wrinkles (frowning) on left forehead indicating the affected motor and senso-

ry function of the facial nerve. All other cranial nerves were intact.

Assessment criteria:

Table 1: House Brackmann Facial Nerve Grading Scale⁶

Grade	Description	Characteristics
1	Normal	Normal facial function in all areas
2	Mild dysfunction	At rest: Normal symmetry and tone Forehead: Moderate to good function Eye: Complete closure with minimum effort Mouth: Slight asymmetry
3	Moderate dysfunction	At rest: Normal symmetry and tone Forehead: Slight to moderate movement Eye: Complete closure with effort Mouth: Slightly weak with maximum effort
4	Moderately severe dysfunction	At rest: Normal symmetry and tone Forehead: Obvious weakness or disfiguring asymmetry Eye: Incomplete closure Mouth: Asymmetric with maximum effort
5	Severe dysfunction	At rest: Asymmetry Forehead: Barely perceptible motion Eye: Barely perceptible eyelid movements Mouth: Slight movement
6	Total Paralysis	No movements, asymmetry

Assessment was done based on the basis of House-Brackmann Facial Nerve Grading Scale showed Bell's palsy with grade 5 as shown in Table 1.

Management:

External therapies: Ayurvedic therapeutic procedures like *Mukha Abhyanga* (face massage), *Swedana*

(fomentation), *Nasya* (instillation of medicine through nostrils), *Shirobasti* (retention of Lukewarm oil over scalp for over 30-45 minutes) and *Gandoosha* (Gargling) were performed as per classical method. Treatment was done as mentioned in table 2.

Table 2: Therapeutic Intervention:

Procedure	Medication	Dose	Duration
<i>Mukha Abhyanga</i>	<i>Ksheerabala Taila</i>	30ml	1 st to 15 th days (15 days)
<i>Swedana</i>	<i>Yashtimadhu Ksheeradhooma</i>	Q. S	1 st to 15 th days (15 days)
<i>Nasya</i>	<i>Gudanagara</i>	3 drops	1 st day (1 day)
<i>Nasya</i>	<i>Karpasasthyadi Taila</i>	5 drops in each nostril	2 nd to 15 th day (14 days)
<i>Shirobasti</i>	<i>Karpasasthyadi Taila</i>	Q. S	16 th to 22 nd day (7 days)
<i>Gandoosha</i>	<i>Vacha+ Yashtimadhu Kashaya</i>	5gms +Q. S	1 st to 15 th days (15 days)

Internal medication: Oral medicines were administered as mentioned in table 3.

Table 3: Oral Medication

Medicine	Dose	Time of administration	Duration
Dhanadhanayanadi Kashaya,	5ml Kashaya + 5ml Lukewarm water	Before breakfast and dinner	45 days
Dhanwantaram101	5 drops with Kashaya	Before breakfast and dinner	45 days
Balarishta	5ml	After breakfast and dinner	45 days
Brihathvatachintamani gold	½ tablet+ honey	After dinner	45 days

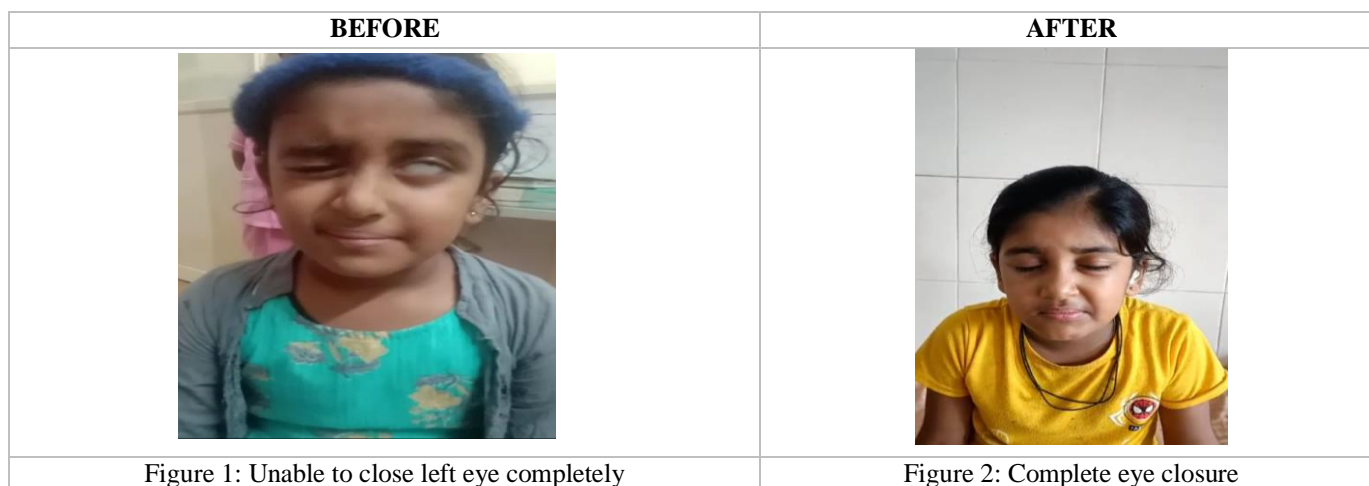
Observation and Results:



After the completion of 45 days of Ayurveda treatment including both external therapeutic procedures and internal medications, patient and patient’s mother noticed relief with appreciable changes. Marked improvement was seen in deviation of mouth, chewing difficulty, slurred speech and closing of left eye as shown in table 4. The patient got better relief in signs

and symptoms of *Ardita* after the completion of *Panchakarma* procedures like *Mukha Abhyanga*, *Swedana*, *Nasya*, *Shirobasti* and *Gandoosha* and *Shamanoushadhis* with significant improvement in motor function and asymmetry of face. The House and Brackmann facial nerve grading scale improved from grade 5 to grade 2 which showed the marked improvement as shown in table 4.

Table 4: Changes in neurological examinations before and after treatment

Neurological Examination	Before Treatment	After Treatment
Higher Mental Functions	Conscious, well oriented and Dysarthria present	Conscious, well oriented with negligible dysarthria.
Facial nerve	Drooping of left eyelid, unable to close left eye completely, deviation of mouth right side, nasolabial fold- absent on left side, blowing of cheek-not possible, raising of eyebrows- not possible on left, wrinkles over forehead- absent on left	No drooping, complete closure of eyes, no deviation of mouth- present, blowing of cheek- possible, raising of eyebrows- possible, wrinkles over forehead- equal on both sides, At rest- normal symmetry
House and Brackmann facial nerve grading scale	Grade 5	Grade 2



BEFORE	AFTER
	
<p>Figure 3: Deviation of mouth towards right side</p>	<p>Figure 4: No deviation of mouth</p>

DISCUSSION

Bell's palsy can be correlated with *Ardita Vata* in Ayurveda as compared with the signs and symptoms and needs proper administration of therapy to prevent irreversible changes. In Bell's palsy, facial nerve dysfunction leads to facial muscle palsy with impairment of both sensory and motor functions. In *Ardita*, the *Vata Dosha* is mainly vitiated, which is responsible for all activities in the body. So, the sensory and motor activities can be attained by the normalcy of *Vata*. In this study, *Brihmana Chikitsa* is adopted for correcting the vitiated *Vata* as per the principles of Classics. Of this, an improvement was seen in the motor function of the facial nerve. *Vatavyadhi Chikitsa*, especially *Shirobasti*, *Nasya*, *Dhumapana*, *Snehana*, *Nadisweda*, etc, is the line of management mentioned for *Ardita* in Ayurveda. In this case, the patient is given *Mukha Abhyanga* and *Swedana* before *Nasya* therapy. *Mukha Abhyanga* was done with *Ksheerabala Taila* followed by *Swedana* with *Yashtimadhu Ksheera Dhooma*. It dilates the micro-blood vessels of the face and enhances blood circulation to that area. The increased blood flow accelerates the fast absorption and results in fast improvement. Improved blood circulation to a particular region of the face results in the stimulation of nerve endings, nourishes the muscles of the face, and strengthens the muscles to work correctly.

- **Mukha Abhyanga-** *Abhyanga* augments the release of endorphins⁷, which are pain-reducing neurotransmitters. *Ksheerabala Taila* suppresses nerve inflammation due to its *Sheeta* property and promotes nerve regeneration. *Mukha Abhyanga* with *Ksheerabala Taila* strengthens muscles due to its *Balya* and *Brimhana* property⁸.
- **Swedana with Yashtimadhu Ksheera Dhooma-** *Swedana* relieves *Sheeta Guna* of *Vata*.
 - *Yashtimadhu* mainly contains glycyrrhin, glycyrrhetic acid, etc which are anti-inflammatory in action and suppress the inflammation of nerve⁹. Due to its *Madhura Vipaka* and *Snigdha* properties, it alleviates the *Vata* and Strengthens the nerve and muscles of the face.
 - *Ksheera- Madhura Guna* of *Goksheera* is *Saptadhatu Vardhaka* and *Indriya Prasadaka*, which helps in *Dhatukashaya* and improves sensory function. Due to its *Snigdha* and *Guru Guna*, it will mitigate *Vata Dosha*.
- **Nasya Karma-** Medicated oil is administered through the nasal route and reaches up to *Shringataka Marma* (Vital point of junction of blood vessels and nerve endings in the head region), from where it spreads into various *Srotas* (channels/ blood vessels and nerves) It provides nourishment to the nervous system by diffusion, neural and vascular pathway hence improve the motor functions of facial nerve¹⁰. Here, *Gudana-*

gara Nasya was administered for one day to relieve *Avaranjanya Samprapti*, later, *Karpasasthyadi Taila* was issued, which is *Vatakaphahara* and *Brimhana Yoga*. The lipid contents of *Karpasasthyadi Taila* may pass through the blood-brain barrier easily, and some of its active principles reach the brain for stimulation and exert their *Vatagna* property¹¹.

- **Shirobasti-** *Shirobasti* leads to peripheral vasodilation and increases peripheral circulation, which nourishes the tissues and brings about regenerative changes. *Shirobasti* with *Karpasasthyadi Taila* has been reported to have an excellent result on such disorders as it strengthens the CNS, particularly brain tissue. It calms down the mind and the senses, which allows the body's natural healing mechanism to release stress from the nervous system by alleviating the *Vata Dosh*¹².
- **Gandoosha-** It increases the pressure in the mouth, stimulating the stretch reflex, i.e., the press receptors, stimulating the salivary nuclei in the brain stem. This results in increased activity of parasympathetic motor fibers of facial and glossopharyngeal nerves and increases the salivary output, further stimulated by the chemical constituents stimulating the oral chemical receptors. Hence, the *Gandoosha* maintains and cures the oral environment¹³. *Vacha* has *Vatahara*, *Medhya*, and *Vakprada Karma* and *Gandoosha* with *Vacha* mixed in *Yashmimadhu Kashaya* maintains the oral environment and improves the speech.
- **Oral medicine-**
 - *Dhanadanayanadi Kashaya* is having *Vatahara* action and is mainly indicated for *Ardita*.
 - *Dhanwantaram 101* is a concentrated extract of *Bala*, *Dashamoola*, *Triphala Vacha*, etc., acts as *Brimhana*, *balya*, and balances the *Vata*. It contains flavonoids that help to reduce the inflammatory changes in the concerned area¹⁴.
 - *Balarishta*- *Bala* in the *Balarishta* is likely to contain ephedrine, which acts as a CNS stimulant¹⁵.

- *Brihatvatachintamani* gold has properties of *Medhya*, *Rasayana*, *Lekhana*, *Balya*, and *Yogavahi*, which has the targeted effect for managing *Ardita Vata* under *Vataroga*.

Here, we adopted the *Brimhana* (nourishing) type of treatment for correcting the vitiated *Vata* as per Ayurvedic principles of treatment. *Snigdha*, *Guru guna*, *Ushna virya* and *Vata shamaka* properties helps to control the vitiated *Vata*. *Balya*, *Brimhaniya* properties of the drugs can nourish and increase the tone of facial muscle.

CONCLUSION

Ardita involves *Dhatukshayaja Samprapti* in its manifestation. *Acharyas* have indicated *Snehana*, *Swedana*, *Shirobasti* and *Navana Nasya* in its management. Hence *Mukha Abhyanga* with *Ksheerabala Taila*, *Swedana* with *Yashtimadhu Ksheeradhooma*, *Nasya* with *Karpasasthyadi Taila*, *Shirobasti* with *Karpasasthyadi Taila*, *Gandoosha* with *Vacha+ Yashtimadhu Kashaya* along with oral medicines like *Dhanadhanayanadi Kashaya*, *Dhanwantaram 101*, *Balarishta* and *Brihatvatachintamani* gold are highly effective in the treatment of Bell's palsy (*Ardita Vata*) in paediatrics with almost recovery.

Informed Consent:

We certify that we had obtained patient consent form, where the caretaker has given her consent reporting the case along with the images and other clinical information in the journal. The caretaker understands that her name and initials will not be published, and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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