



## Case Report

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(ISSN Online:2229-3566, ISSN Print:2277-4343)



### AYURVEDIC APPROACH TO TREAT CHRONIC RESIDUAL BELL'S Palsy IN CHILDREN: A CASE REPORT

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Received on: 10/04/23 Accepted on: 13/05/23

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DOI: 10.7897/2277-4343.140375

#### ABSTRACT

**Introduction:** Bell's palsy is the most common type of unilateral facial paralysis (60%-75%). The etiopathogenesis of Bell's palsy is uncertain. The clinical features include acute onset of unilateral facial paralysis, poor eyelid closure, posterior auricular pain, numbness of cheeks, and deviation of the angle of the mouth towards the unaffected side. Bell's palsy can be understood as Ardita in Ayurveda. Acharya Sushruta has included bala as a susceptible group while describing the vishesha nidanas of Ardita. **Aims and Ideas:** To study the effect of a framed Ayurvedic treatment protocol in managing chronic residual Bell's palsy in children. **Methods:** The present case was a chronic right-sided residual Bell's palsy with a history of 12 years and was approached through the line of management of Ardita mentioned in Bruhatrayees and Yogamrutam for 12 days. The treatment was started with takra dhara to give mrdu rookshana. Takra dhara mukha abhyanga and ksheera dhoomam were administered, followed by marsha nasyam. Two specific treatments mentioned in Yogamrutam was adopted in this case, i.e., panasa patra swedam and navaneeta shiro talam. The treatment was ended with shashtika shala pinda swedana to mukha. **Results and Discussions:** The facial asymmetry was reduced by 60% at the end of the treatment. Watering of the right was subsided entirely, and there was complete effortless closure of the right eye after treatment. Pain, twitching and numbness on the right half of the face were utterly absent. The House and Brackmann grade was reduced from Grade III to Grade II after 12 days of treatment.

**Keywords:** Ardita, Baala, Bell's palsy, Yogamrutam

#### INTRODUCTION

Bell's palsy is a self-limiting rapid onset idiopathic facial palsy. The condition is non-life threatening with a good prognosis. It is a type of lower motor neuron facial palsy. It is the most common type of unilateral facial paralysis (60%-75%). The etiopathogenesis of Bell's palsy is uncertain. The incidence is 2.7 per 100,000 under the age of 10 years. The prevalence rate varies from 10 to 30 per 100,000 population.<sup>1</sup> A viral illness often precedes it. The clinical features of Bell's palsy include acute onset of unilateral facial paralysis, poor eyelid closure, posterior auricular pain, numbness of cheeks, and deviation of the angle of the mouth towards the unaffected side. Facial paralysis can be complete or partial. Partial paralysis can progress over 1 to 7 days to complete paralysis. 30% of patients have additional involvement of other cranial nerves (V, IX or XII).<sup>2</sup>

Bell's palsy can be understood as Ardita in Ayurveda. Acharya Sushruta mentioned bala as a vulnerable group for the manifestation of Ardita along with vrudha, garbhini and sootika in Ardita nidana. The symptoms of Ardita, like vakri bhavathi vaktra ardham, aavila netrata twak swap toda vepathu ekasya akshnoho nimeelanam etc. are also observed in Bell's palsy. Bell's palsy in children can be effectively managed by adopting Ardita chikitsa (treatment) after analysing the hetu (cause), sthana (site of pathology) and lakshana (signs and symptoms).<sup>3</sup>

The study is carried out as per the International Conference of Harmonization – Good Clinical Practises Guidelines (ICH-GCP).

#### Case Report

A 12-year-old boy was brought by his parents to the Bala roga OPD of Sri Jayendra Saraswathi Ayurveda College & Hospital, Nazarethpettai, Chennai, Tamil Nadu, on 28.03.23 with complaints of facial asymmetry, deviation of angle of mouth to the left side, watering of the right eye, incomplete closure of right eye, pain over the right half of the face, twitching of muscles of the right half of the forehead, drooling of saliva and liquid contents while eating food, numbness over the right half of the face since 11 years 8 months.

The patient was the first-born baby to non-consanguineous parents through the C-section in the 9<sup>th</sup> month of pregnancy to oligohydramnios and malpresentation of the foetus. At four and half months of age (during August 2011), he got affected with rapid onset of high-grade fever with chills immediately followed by the deviation of the angle of the mouth towards the left side. The child was immediately taken to an allopathic hospital and was started on IV fluids and antibiotics. CT scan showed features suggestive of right-side otitis media with mastoiditis and meningitis. LP was done, suggestive of Pyogenic meningitis. Further MRI showed right otomastoiditis erosion of the right petrous temporal bone with abnormal leptomeningeal enhancement along the right posterior temporal lobe suggestive of meningitis and features of enhancing inflammatory mass encasing the right 7<sup>th</sup>, 8<sup>th</sup> nerve complex. Again after 11 years, another MRI brain with intravenous contrast was advised, and results showed no significant abnormality in the intracranium.

So, for these complaints, initially, oral medications were advised for 21 days, and after that, the child got admitted to the Bala roga department of Sri Jayendra Saraswathi Ayurveda College and

Hospital on 18.04.23, and an Ayurvedic treatment protocol was framed and administered which gave a significant improvement in the signs and symptoms of the patient.

### Examination of the right facial nerve

Table 1: Motor function

Instruction to the patient	Muscle involved	Observation
The patient asked to wrinkle his forehead	Frontal belly of occipitofrontalis	Asymmetry – unable to wrinkle forehead on right side
The patient asked to close both the eyes	Orbicularis oculi	Unable to close the right completely – Bell Phenomenon positive
The patient asked to smile	Levator anguli oris, Zygomatic major, Zygomatic minor, Depressor anguli oris, Buccinator,	The angle of the mouth deviated to the left side
The patient asked to puff the cheeks against resistance	Orbicularis oris, buccinator	Unable to blow completely on the right side
The patient asked to clench	Platysma	Deviation of the angle of mouth to the left, absence of nasolabial fold on the right side

### Sensory function

- Loss of taste on the anterior 2/3<sup>rd</sup> of the tongue – Absent.
- Numbness on the right side of the face – Present.

- House and Brackman grading at the time of admission – Grade III.

**Diagnosis:** Arditā (right side) – right-sided chronic residual Bell's palsy

### MANAGEMENT

Table 2: Treatment and Observation

Date	Treatment	Observations
18.04.23 to 21-04.23	Takra dhara to head	Reduction in twitching over the right side.
18.04.23 to 25.04.23	Mukha abhyanga with Asana Bilwadi tailam Ksheera dhoomam with Dashamoola ksheera paka Shiro talam with Balamoola sukshma churnam + navaneetam	Watering of eyes reduced by 60%. Pain over the right side of the face completely subsided. Complete closure of right eye observed. The twitching of the right side completely subsided.
21.04.23 to 27.04.23	Marsha nasyam with Ksheerabala 101 drops Mukha abhyanga and ksheera dhoomam was continued as purva karma for nasyam Shiro talam was continued Panasa patra sweda	Watering of eyes reduced by 60%. Pain over the right side of the face completely subsided. Complete closure of right eye observed. The twitching of the right side completely subsided. Watering of right eye absent. Asymmetry reduced by 60% while clenching. No Asymmetry while smiling.
22.04.23 to 24.04.23	Shirodhara with Dhanwantaram tailam Shashtika shali pinda swedam with Dhanwantaram tailam	Asymmetry subsided by 60%. Effortless closing of both eyes. Drooling of saliva absent.
25.04.23 to 29.04.23	Shiropichu with Dhanwantaram tailam Shashtika shali pinda swedam was continued	Complete closure of the right eye. Absence of pain, twitching, numbness, drooling. Deviation of the angle of mouth reduced by 60%. The appearance of the nasolabial fold on the right half of the face.

### Shamana medicines -for internal and external use

During 1<sup>st</sup> OPD visit

1. Dhanadanayanadi kashayam + Dhanwantaram kashyam – 15 ml-0-15 ml with 45 ml boiled and cooled water before food.
2. Kaishora Guggulu – 1-0-1 with kashayam.
3. Dhanwantaram 101 avarthi – 2 drops for pratimarsha nasyam.
4. Ksheerabala tailam – for mukha abhyangam followed by bashpa swedam.

During IPD admission

1. Dashamoolarishtam + Abhayarishtam – 20 ml -0-20 ml A/F.
2. Capsule Palsi neuron – 1-0-1 A/F.
3. Dhanwantaram gutika – 1-0-1 B/F.

At the time of discharge

1. Chyavana prasham – 1 tsp-0-0 on an empty stomach.
2. Kalyanaka ghrita – 0-0-10 ml before food with ½ glass of warm water.
3. Capsule Ksheerabala 101 – 1-0-1 A/F.
4. Anu tailam –2 drops for pratimarsha nasyam in the evening.
5. Dhanwantaram tailam for mukha abhyangam.
6. Dashamoola kwatha churnam for preparation of ksheera pakam for ksheera dhoomam.



## RESULTS AND DISCUSSION

The outcome of the patient at the time of discharge:

1. Reduction in facial asymmetry by 60%.
2. Deviation of the angle of the mouth towards the left side reduced by 60%.
3. Watering of the right eye is absent.
4. Complete effort less closure of right eye observed.
5. Pain over the right side of the face, absent.
6. Twitching of facial muscles over the right side of the forehead, absent.
7. Drooling of saliva and liquid food contents, absent.
8. Numbness over the right half of the face is wholly reduced.
9. House and Brackmann grade – Grade II.

The present case of chronic residual right side Bell's palsy was diagnosed based on the radiological and clinical findings. As per the post-natal history, the cause, in this case, was right-sided otitis media with meningitis and mastoiditis, which occurred in the 5<sup>th</sup> month after birth. In Ayurveda, the condition can be diagnosed as Ardita Vata. Acharya Sushruta had mentioned bala as a susceptible group while describing the vishesha nidanas (specific causes) of Ardita Vata.<sup>4</sup> The symptoms of Bell's palsy can be correlated with the lakshanas mentioned in Ardita Vata by Acharya Sushruta and Vagbhata like vakri bhavathi vaktra ardhham (half sided facial deviation), aavila netrata (watering of eyes), twak swapa toda vepathu (numbness, pain and twitching of facial muscles), ekasya akshnoho nimeelanam (bell phenomenon) etc.<sup>3</sup> Few of the Skanda Graha lakshanas like eka nayana sravi (watering of one eye), vakra vaktrata (facial asymmetry) were also observed in the patient.<sup>5</sup> But Skanda Graha as a whole gave

the picture of an upper motor neuron pathology with facial paresis and hemiparesis or plegia. Even though the cause could be correlated with Skanda Graha, the sthana and most of the lakshanas (symptoms) were different from it. Hence the final diagnosis was Ardita Vata with prabala Vata and alpa Kapha in purana avastha. The chikitsa of Ardita Vata was adopted in this case. The treatment was started with mukha abhyanga (facial massage) and ksheera dhoomam (medicated milk fomentation) along with takra dhara to shiras (pouring of medicated buttermilk to head). Being a Vata vyadhi in purana avastha (chronic stage) focused mainly on Vata dosha dushti. Hence sthanika snehana and swedana (localised massage and fomentation) were administered as primary treatments. Abhyanga was done with Asana Bilwadi tailam, considering the role of Kapha as anubandha dosha, and indriyas were also affected in this case. Swedanam was done in the form of Dashamoola ksheera dhoomam, which gave the facial nerve an anti-inflammatory and nourishing effect. Takra dhara to head was done initially as a mild rukshanam before giving brumhanam, and takra is also ruksha and Vata Kapha hara in nature. It helped reduce the anubandha Kapha dosha and the entrapment of the facial nerve. Shiro talam was administered in the evening with Balamoola sookshma churnam and navaneetam (butter), which is mentioned as a chikitsa in Yogamrutam in the context of Ardita. Bala is brahmana and Vata hara. Navaneetam being the agrya oushadha for Ardita, synergises the action of Balamoolam.<sup>6</sup> The specific type of swedana modality mentioned in the textbook, Yogamrutam, i.e., panasa patra swedanam (fomentation using hot jackfruit leaf), was administered in this case.<sup>7</sup> Brumhana marsha nasya (medicated nasal drops) was administered with Ksheerabala 101. Navana is mentioned as one of the main treatment modalities for Ardita in Bruhatrayees. Considering the puranatwa and dosha predominance, Brumhana nasya was chosen in the present case. Ksheerabala is judiciously selected as it is brahmana balya and indriya prasadana. It also has action in siras. Shirodhara was done initially as a murdhini tailam, followed by shiro pichu due to the gunottara swabhava. Mrudhini tailam is among the chikitsa modality mentioned after navanam in the chikitsa sutra of Arditam. It helped in correcting the blood supply to the facial muscles, thereby improving the functions of the branches of the facial nerve, which reduced facial asymmetry. Sthanika shashtika shali pinda swedanam with Dhanwanataram tailam was administered to strengthen the muscle tone and improve the blood supply to the terminal branches of the facial nerve.

## CONCLUSION

Facial palsy in children can be understood as either Arditam or Skanda Graha. Bell's palsy, a lower motor neuron facial palsy, can be better understood under the spectrum of Ardita. However, a few symptoms of Bell's palsy can be observed in Skanda Graha. It cannot be correlated entirely with Skanda Graha as the clinical presentation of Skanda Graha looks like an upper motor neuron pathology. Ardita's management line was beneficial in this residual Bell's palsy case. In this case, the Ardita chikitsa mentioned in Bruhatrayees was incorporated along with the chikitsa mentioned in Yogamrutam. Panasa patra sweda, exclusively indicated in Ardita in the textbook Yogamrutam, was administered in the present case and found beneficial even in chronic Bell's palsy. There was a significant improvement in the signs and symptoms of the patient, who had a long history of 12 years with 12 days of Ayurvedic treatment.

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**Cite this article as:**

Anoop AS and Chitta Ranjan Das. Ayurvedic approach to treat chronic residual Bell's palsy in children: A Case Report. *Int. J. Res. Ayurveda Pharm.* 2023;14(3):18-21  
DOI: <http://dx.doi.org/10.7897/2277-4343.140375>

Source of support: Nil, Conflict of interest: None Declared

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