

## Ayurvedic management of *ardita* with special reference to bell's palsy: a case study

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**Abstract:** Bell's palsy is a neurological disorder of VII<sup>th</sup> cranial nerve which leads to unilateral facial paralysis. Presentations of Bell's palsy can be appropriated with symptoms of *ardita* explained in ayurvedic literature. *Ardita* is explained as one among the *aseetivaatavikaaras*. We present a case of an 38 year old male who approached our OPD with a two months history of deviation of mouth to right side and incomplete closure of left eyelid. After relevant examinations and screening it was diagnosed as Bell's palsy. Treatment consists 28 days of inpatient therapy and 1 month of follow up. *Kaphaaavarana-haracikitsa* was the initial step, followed by *kevalavaata-haracikitsa*. Patient's condition was assessed by House-Brackmann's grading of facial nerve VII, which showed substantial improvement in the follow up after one month. This case study reveals how effectively *Ayurveda* can manage Bell's palsy.

**Key words:** Bell's palsy, *ardita*, *Cikitsa*, *aseetivaatavikaara*, House-Brackmann's grading.

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### Introduction

*Ardita* is a disease with functional disturbances affecting the *uttamanga* (head) and its cardinal feature is *mukhardha-vakrata* i.e. deviation of half of the face. It is one among the *aseetivaatavikaara*<sup>1</sup>. *Vaatadosha* primarily governs all bodily functions. When it is functioning normally, it performs actions like *cestaa-pravartana* (prompts all type of actions), *vaakpravartana* (prompts speech), *sarva-indriyaanam-udvyejaka*, *abhivodhaa* (coordinate all sense faculties and helps in enjoyment of their objects) etc<sup>2</sup>. When *vaata* gets aggravated it destroys these bodily functions resulting in diseases like *ardita*.

According to *Acaarya* Charaka and Vagbhata, *ardita* is due to vitiated *vaata* localized in half of the face with or without involvement of the body<sup>3,4</sup>. They differentiate *ardita* into two distinct conditions: one involving solely the *mukhardhabhaaga* while the other involves *mukhardhabhaga* along with half of the body. Vagbhata gives the synonym '*ekaayaama*' for *ardita* and states that sometimes pain occurs in the half or lower region of the

body<sup>4</sup>. Aacarya Susruta opines that face is only affected<sup>5</sup>. Madhavakara, Arunadatta, Bhavamishra and Sharngadhara have followed Susruta.

The most typical appearance of LMN facial palsy i.e. Bell's palsy can be appropriated with the presentations of *ardita* explained in classics. It is characterised by temporary facial paralysis due to VII<sup>th</sup> cranial nerve (facial nerve) dysfunction that results in inability to control facial muscles on the affected side. The annual incidence of this idiopathic disorder is ~25 per 100,000 annually, or about 1 in 60 persons in a lifetime<sup>6</sup>.

This case report serves as a novel evidence of Ayurvedic management of *ardita* with special reference to Bell's palsy.

### **Patient information**

A 38 years old male, came to OPD with the complaints of deviation of mouth to right side and incomplete closure of left eyelid for 2 months. As per the patient he was apparently normal 2 months back, one day he developed mild pain over left periorbital area and left ear. The symptom developed in the afternoon and got increased by evening. By the time he noticed deviation of mouth towards right side and difficulty in closing the left eye. Later he found difficulty in talking, chewing food and holding water over left side of mouth. So, he consulted allopathic physician and was referred to neurosurgeon. He took medications for 10 days, did physiotherapy and speech therapy for 15 days. After that difficulty in talking and holding water over left side of mouth got subsided. But the deviation of mouth towards right side and difficulty in closing left eye continued. So he came for Ayurvedic management.

**History of past illness:** He had Covid – 19 one year back.

**Family history:** No relevant family history.

**Personal history:** Basically Indian, he worked for 4 years as a driver in United Arab Emirates. Now he is farmer for more than 6 years (used to engage in rubber tapping in morning hours). He follows a mixed diet, mostly vegetarian and has a preference for sweet dishes. Habit of consuming 2 pegs of liquor weekly. No history of smoking or any other habits.

## Clinical findings

**Table 1**  
**General examination**

Build & nourishment	Moderately built & well nourished
VITALS	
Pulse rate	70 /min
Heart rate	70 /min
Respiratory rate	20/ min
Blood pressure	118/ 72 mmHg
Temperature	96.2°F

**Table 2**  
**Physical examination**

Pallor, icterus, cyanosis, clubbing & lymphadenopathy	Absent
Head & neck	<ul style="list-style-type: none"><li>• Normocephalic.</li><li>• Angle of mouth slightly deviated towards right side.</li><li>• Obliteration of left nasolabial fold.</li><li>• Trachea centrally placed.</li></ul>
Thorax, abdomen, upper limbs, lower limbs & spine	No abnormalities detected

**Systemic examination:** There were no significant abnormalities found in the cardiovascular, respiratory, musculoskeletal, and integumentary systems.

**Table 3**  
**Central nervous system examination**

Higher mental functions	Intact
Cranial nerve examination	All cranial nerves are intact except facial nerve
Motor system examination	Muscle bulk, muscle tone, muscle power, reflex (superficial and deep), gait & coordination are normal
Sensory system examination	Superficial deep and accompanied sensations are intact
Involuntary movements	Absent

**Table 4**  
**Facial nerve examination**

<b>Inspection</b>	
Blinking of eyes	Absent on left eye
Sagging of eyelids	Absent (B/L)
Nasolabial fold	Obliterated on left side
Angle of mouth	Slightly deviated towards Rt side
Bells sign	Present on left eye
<b>Tests</b>	
Test for frontal belly of Occipitofrontalis muscle	Wrinkling of forehead on left side absent
Test for orbicularis oculi	Right eye – Able to close eye tightly. Left eye – unable to close (Bells sign – positive)
Test for elevator angularisoris	Angle of the mouth is deviated to right side
Test for orbicularis oris	He can't whistle due to left side weakness
Test for buccinator muscle	On palpation weakness over left side
Test for platysma muscle contraction	On palpation weakness over left side
Test for platysma muscle contraction	Weakness over left side
<b>Sensory part</b>	
Taste sensation	Intact on anterior 2/3 <sup>rd</sup> of tongue
Glabellar tap	Normal adaptive response in right eye and absent on left eye
Corneal reflex	Right eye – intact. Left eye – impaired (absence of blinking)

**Table 5**  
**Time line**

Sl. No	Complaints/Events	Duration/Date
1.	Deviation of mouth to right side	08 – 01 – 2023
2.	Incomplete closure of left eyelid	08 – 01 – 2023
3.	Difficulty in talking, chewing food and holding water over left side of mouth	09 – 01 – 2023
4.	First OPD visit	20 – 03 – 2023
5.	Admitted to hospital as inpatient	30 – 03 – 2023

### Investigations done:

Blood routine, CBC, RFT, LFT and Lipid profile values are within normal limit.

### Diagnostic assessment

After pertinent clinical examinations it was diagnosed as Bell's palsy.

### Therapeutic intervention

After considering the *sampraapti*, a comprehensive course of treatment for the present case was planned. First *langhana*, *rookshana* and *teekshna*, *ushnaguna dravyas* are administered in order to remove the *kaphaavarana*. After *kaphaavarana-haracikitsa*, *kevalavaata-haracikitsa* was adopted by doing *snehana*, *swedana* and *brmhana karmas*. *Vyadhpradhanika samana dravyas* and *chikithsa* like *nasya* and *sirovasthi* was also done.

**Table 6**  
**Treatment plan**

Sl. No	Procedure	Medicine	Duration
1.	<i>Sthanikaudwartana</i>	Kolakulathadichurna	7 days
2.	<i>Sthanikaabhyangam</i> <i>Naadeesweda</i>	Karpasasthyaditailam <i>Vaca + Kushtakashaaya</i>	7 days
3.	<i>Ksheera-dhooma</i> <i>Nasyam</i>	Milk + <i>Balamoolakashaaya</i> Anutailam(10 drops)	7 days
4.	<i>Sirovasti</i>	Dhanwantaratailam	7 days

**Table 7**  
**Internal medication – *Samana Cikitsa***

Sl. No	Medicine	Dose & time of administration	Duration
1.	Gandharvahasthadi Kashaya	15 ml + 45 ml lukewarm water, before food, 6am.	28days
2.	Dhanadanayanadi Kashaaya	15 ml + 45 ml lukewarm water, before food, 6pm.	28 days
3.	Ekangaveerarasa	(1 – 1 – 1) in betel leaf juice, after food	28 days

## Follow up and outcome

Based on the subjective symptoms and House-Brackmann's grading of the facial nerve VII<sup>7</sup>, the condition was assessed before treatment, after 28 days of treatment and during first follow up after 1 month. Patient was advised to avoid *seetaahara* and *vihaara ati-vyayaama*, *ati-sevana* of *madhurarasa* and *pramitabhojana*, at the time of discharge.

**Table 8**  
**Assessment of Symptoms**

Parameter	Before treatment	After treatment	follow up
Movement of left side of face	only slight movement	Mouth and cheek movement possible with difficulty	Can move easily
Deviation of mouth towards right side.	Present	Slightly Present	Absent
Closing of left eye	Difficulty in close the eye completely. Severely wide palpebral fissure.	Can close the eyelids completely with more effort. Width of palpebral fissure is decreased significantly than before.	Can close the eye completely
Smiling sign for synkinesis	Present at all time	Present without upward movement of Rt. Angle of mouth	Absent
Wrinkling of forehead on left side	Absent	Slightly Present	Present
Nasolabial fold	Nasolabial fold not seen	Nasolabial fold seen while attempting to speak	Nasolabial fold present normally
Chewing	Difficulty in chewing solid food particles on left side	Can easily chew on left side	Can easily chew on left side
<b>House-Brackmann's grading</b>	Grade V (Severe)	Grade III (Moderate)	Grade I (Normal)

**Figure 1**  
**House-Brackmann's grading**



## Discussion

Before considering the therapeutic strategy, it is crucial to comprehend *nidaana* and *sampraapti* of each disease which vary in every cases since *sampraapti-vighatana* and *nidaana-parivarjana* are the main focuses of ayurvedic treatment.

In this condition the *aahaarajanidaanas* include *seta* & *sushkaaahaaraatiseva*, (*gunavissha*), *madhuraatiseva* (*rasa vissha*), *pramitabhajana* (*vidhivissha*) and *abhajana*; *vihaarajanidaanas* include *divaaswapna*, *atibhaara-haranam*, *praagvaatasevana* and *ativyaayama* and *maanasikanidaana* is *ati-cintaa*. By these *nidaanasaama* formation occur due to *jatharaagni-maandya* which in turns increases the *kaphadosha*. Thus increased *kapha* causes *aavaranato vaata* and results in *vaataprakopa*, which finally leads to *upaoshana* of

*siraasnaayu* in *uttmaanga*. So *sammoorchana* of vitiated *vaata* with the *dooshya* afflicts in the *mukha-ardhabhaga* and result in *ardita*.

*Ardita* can be correlated with Bell's palsy, here the facial nerve dysfunction leads to muscle paralysis with impairment of both sensory and motor functions. *Aayurveda* describes these functions are carried out by *vaatadosha*. Here *karma-haani* of both *jnaanedriya* (sensory functions) and *karmendriya* (motor functions) can be seen. These functions can be regained by normalising the aggravated *vaata*.

The treatment was decided on the basis of *sampraapti*. The symptoms indicated *kaphaavrta-vaata* especially *praana*, *udaana* and *vyaana*. Gandharvahasthadi kashaya was administered with an aim to correct *koshtaasritaagni* which will also aid in *deepana* and *aama-paacana*. Dhanadanayanadi kashaya was given as *vyaadhi-pratyaneekaoushadha*. *Teekshna* and *ushnadravyas* in these preparation reduce the *aavrtakaphadosha* and normalise the *gati* of *vaata*. This helps in reverting *aavaranasampraapti*. By virtue of the properties *suddhapaarada*, *suddhagandhaka*, *taamrabhasma*, *lohabhasma*, *abhrakabhasma* etc in *ekangavira rasa* help in reaching *sampraapti-sthaana* and thus help for faster recovery. Also it pacifies vitiated *kaphadosha* by *tikta*, *katu*, *kashaayarasa*, *laghu* and *rookshaguna*, *ushnaveerya* and *katuvipaaka*<sup>8</sup>.

In *aavarana-janyavaata-vyaadhi*, there is *sanga* to the *gati* of *vaayu* causing its *karmahaani*. It is necessary to remove *aavarana* as first line of treatment. In this case *kaphavrta-vaata* was removed by *sthaanikaudwarttana* with *kolakulathadi churna*. *Udwarttana* followed by *vaata-haranaadee-sweda* helps to stimulate nerve endings and open the micro channels. Here *naadee-sweda* is done by using water processed with *vaca* and *kushtha* that potentiate the effect of *sweda*, i.e. *laghu*, *teekshna*, *rookshagunas* of these drugs improve the *sweda-karma* and reduce the *kapha-anubandha*. *Sthaanikaabhyanga* followed by *sweda* relieves *sthabdhataa* by *ushna-guna* and *sthaanikasrotasuddhi* by *ushna* and *teekshanaguna*. Here *karpasastyadi taila* is used for *sthaanikaabhyanga*. The *dravadravya* used in this *taila* are *balya*, *brmhana* and *vaata-saamaka* while *kalka-dravya* are *vedana-aasthaapana*, *sotha-hara* and *vaata-naasaka*. Hence, *abhyanga* with this *taila* provides relief from the symptoms of vitiated *vaata* like *sankoca*, *vedanaa*, etc.<sup>9</sup>. After *sthaanikaabhyanga*, *ksheeradhooma* and *nasya* were done. The *nasyadravya* spreads into various *srotas* and brings out all the vitiated *doshas*. *Nasya-karma* with *vaataghna-sneha* not only resulted in the alleviation of *vaata* but also provided the nourishment to affected *indriya*. Here *anutaila* was used since it is *tridosha-*



*saamaka* and has *srotassodhana*. After *nasya*, *sirovasti* was done. *Sirovasti* is one among the *moordha-taila* and is a type of *baahyasnehana*. Dhanwantara taila was used for *sirovasti* with an intension to impart *brmhana* and *vaata-saamaka karma*.

*Cikitsaa* is the radical eradication of causative factors also<sup>10</sup>, therefore *pathya* and *apathy* were prescribed adequately both during and after the treatment for avoiding the recurrence.

### **Patient perspective**

The patient was satisfied with the treatment protocol and was really happy to see the reversal of symptoms. The patient claimed that he felt more comfortable in social situations. His quality of life was improved by the treatment.

### **Conclusion**

From the present case study the patient was evaluated according to the modern perspective, treatment was done only according to the ayurvedic principles and complete recovery was seen without any adverse effects. The treatment measures were mainly *kaphaavarana-hara* and *kevalavaata-haracikitsaa* that helped in *sampraapt-vighatana*. According to House-Brackmann's grading, subjective assessment was done. At the time of IP admission there was grade V (severe) which changed to grade III (moderate) after 28 days of treatment and after one month of follow-up, it became grade I (normal). With only a brief course of treatment, this patient experienced good results. So it is being shared with the ayurvedic community.

### **Declaration of patient consent**

The patient has given written consent for publication of this case study, along with permission to use the photos and other clinical data.

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