IAMJ

INTERNATIONAL AYURVEDIC MEDICAL JOURNAL

Case Report ISSN: 2320-5091 Impact Factor: 6.719

MANAGEMENT OF BELL'S PALSY - A CASE REPORT

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https://doi.org/10.46607/iamj3512032024

(Published Online: March 2024)

Open Access

Article Received: 07/02/2024 - **Peer Reviewed:** 04/03/2024 - **Accepted for Publication:** 11/03/2024.

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ABSTRACT

Bell's palsy is a disease affecting one side of the facial muscles abruptly due to compression or inflammation of the facial nerve. This case study explores the clinical presentation and Ayurvedic management of a 52-year-old female patient presenting with symptoms consistent with Bell's palsy, termed as *Sopha/Kapha Anubanda Arddita* in Ayurveda. The patient exhibited sudden onset facial deviation, speech difficulty, and other associated symptoms. The diagnosis was primarily clinical, supported by classical symptoms of *Ardita* and Bell's palsy. Treatment involved a combination of *Kaphahara/Sophahara* medications followed by *Vatahara* medicines, alongside specific therapeutic procedures tailored to address the underlying *doshic* imbalances. Critical interventions included the administration of *Amrutotharam Kashayam*, topical applications of *Lepana*, and *Nasya* with *Ksheerabala Taila 101 Avartti*, among others. The patient showed significant improvement in symptoms and motor functions over a 14-day inpatient treatment period, demonstrating the efficacy of Ayurvedic interventions in managing acute onset LMN Facial palsy. This case underscores the importance of individualised treatment approaches and the potential of Ayurveda in addressing complex neurological conditions.

Keywords: *Bell's palsy, Arddita, facial palsy, LMN Facial palsy, Sopha\ Kapha Anubanda Arddita, Vata vyadhi, Ayurvedic management, case study*

INTRODUCTION

Disorders called *vatavyadhi* result from vitiated *vata*. Either *Dhatukshaya* or *Avarana* may be responsible for the *Vata vyadhi*. *Arddita* is one of the *Vatavyadhi*. Loud talking, eating, laughing and sleeping in uncomfortable positions are the leading causes of *Arddita*. Symptoms such as facial deviation, tremulousness, difficulty speaking, and deformities of the eyes may result from it[1]. *Arddita* can also be correlated with Bell's palsy, a lesion of the lower motor neurons. A pain in the stylomastoid foramen, where the facial nerve passes, is frequently the initial symptom of Bell's palsy. Other symptoms include facial deviation, Bell's phenomenon, difficulty rolling the affected eye, altered taste on the anterior two-thirds of the tongue, drooling saliva, etc[2]. The available treatment options are *Nasya, Moordha Taila, Srotra Akshi Tarpana, Naadisweda,* and *Vamana*. In cases where *Sopha, Daha,* and *Raga* conditions are present, *Siravyadha* can also be done [3].

Case history:

Presenting complaints with history:

A 52-year-old female patient presented at the outpatient department with a sudden onset of deviation of the angle of the mouth towards the left side one week ago. She complained of speech difficulty, inability to close the right eye, reduced taste sensation, heaviness, mild swelling over the affected side of the face, as well as pain and swelling over the neck. The patient had a history of earache one week prior to the onset of symptoms. Subsequently, she was admitted to the inpatient department of Amritham Ayurvedic Hospital and Research Centre, Irinjalakuda.

Past History of illness:

No relevant past history of illness

Personal history:

Prakriti: vata pitta, Ahara: mixed diet & *Sarvarasa Abhyasa*, reduced appetite, *Vihara*: Heavy physical exertion

Examination:

On facial nerve examination, symmetrical wrinkling of forehead in the right side is absent, while clenching the teeth asymmetry of the face is seen. The patient cannot close her right eye against the resistance of examiner. Blowing cheeks is not possible. While examining the sensory systems, taste sensation in the anterior 2/3rd is absent, corneal reflex in the right eye is absent, Glabellar tap is positive and Bell's phenomenon is observed over the left eye.

Differential diagnosis:

Arddita, Hanusthambha, Pakshaghata

Diagnosis:

The diagnosis was made clinically based on classical symptoms of *Arddita*, including *Vakrata* (deviation) of *Vaktrarddha* (half of the face), *Ukata* (speech difficulty), *Hasita* (smile), and *Ikshita* (gaze). Additional symptoms such as Swarabhramsa (speech abnormality), *Ekasya Akshnou Nimeelana* (difficulty in closing one eye), and *Jatrorudha ruja* (pain above *Jatru*) were also observed. These complaints were accompanied by *Gourava* and *Sopha* on the affected side of the face. Thus, the condition was diagnosed as *Sophanubandha Arddita (Kapha Anubandha).* Bell's palsy was identified by the presence of facial paralysis on one side, impaired taste, pain around the affected side of the face and behind the ear, incomplete closure of the right eye, impaired speech, difficulty in eating or drinking, and Bell's phenomena. Laboratory investigations, including blood and urine routine checkups, revealed elevated ESR (45mm/hr).

Methodology/Treatments Given:

The management of *Sophanubandha (Kapha Anubandha) Arddita* involved a treatment protocol consisting of *Kaphahara/Sophahara* followed by *Vatahara* medicines. Additionally, therapeutic procedures were selected based on the same treatment principle. The patient underwent assessment both during the inpatient treatment period and after a two-week follow-up. The 'House and Breckmann' assessment scale was used for evaluation, alongside monitoring signs and symptoms at similar time points[4]. Refer to Table 1 for details on the medications administered and Table 2 for information on therapeutic procedures. Assessment results are summarized in Tables 3, 4, and 5.

DISCUSSION

The patient's assessment was conducted at three distinct time points: before treatment (Figure 1), after treatment (Figure 2), and after a two-week follow-up period. Notably, the patient's 'House and Breckmann scale' grade showed improvement from grade 4 to grade 1 following treatment (refer to Table 3). Improvement was also observed in motor functions, taste sensation, and reflexes, including corneal and glabellar reflexes (Tables 4 and 5).

Due to the sudden manifestation of *Arddita* in the patient, there was a suspicion of *Ama* association. Additionally, symptoms like *Gaurava* and *Sopha* were present. Hence, the initial approach involved managing the condition with *Kaphahara* and *Sophahara* medications. *Amrutotharam kashyam*[5], known for its *Sophhara* and *Amahara* properties, was administered. *Lepana* with *nagaradi lepa choorna*[6] and *murivenna*[7], as well as *mahabala taila*[8] over the cervical area, were carried out to alleviate Sopha and strengthen the cervical nerves. In cases of *Sopha Anubandha Arddita*, *Vagbhata* recommends *Vamana* for relieving associated *Kapha Dosha*, following a similar treatment principle. However, considering *Rogabala* and *Doshabala*, procedures like *Vamana* were deemed unsuitable. Instead, *Ruksha Lepana* was chosen to address *Kapha Dosha* and *Sopha*. After relieving associated Kapha, treatment continued with *Vata Samana* medicines. *Amrutotharam Kashayam* was replaced with *Danadanayanadi Kashayam* along with *suvarnamukthadi gulika* as *Anupana* for five days. Nasya, a prime treatment for Arddita, was administered using *Ksheerabala Taila* 101 *Avartti*[11] for 12 days due to its *Brmhana*, *Rasayana*, *Indriya Prasadana*, and *Vatapitta Samana* properties. Along with this, *ksheera dhuma*[12] for seven days was followed by *shashtika pinda sweda*[13] over neck face and upper-limbs for five days. *Maharasandi Kashaya*[14], accompanied by *suvarnamukthadi gulika* as Anupana. These medications possess *Brimhana* and *Vatasamana* properties. The patient responded positively to this treatment, as evidenced by the appearance of wrinkles over the forehead upon frowning and an improvement in eye closure. The internal medicines were sustained throughout the 14-day follow-up period to ensure continued improvement and management of the condition.

CONCLUSION

This case study demonstrates the effective management of acute onset LMN Facial palsy, which is considered as *Sopha/Kapha Anubanda Arddita*, through *Vatakapha Samana* treatments. The patient exhibited a positive response within three days of treatment, with the majority of complaints alleviated during the 14-day inpatient treatment period. The approach to management prioritized minimum and cost-effective treatments. Overall, this case highlights the efficacy of Ayurvedic treatment in effectively managing acute onset LMN Facial palsy (Bell's palsy).

Tables

Table.1- Internal medications

Date of starting	Duration	Name of the medication	Dose	Reason for selection	Remarks
03/12/2023	4 days	*Amrutotharam Kashayam*	60ml two times	*Sophahara*	Pain and swelling got reduced
07/12/2023	5 days	*Danadanayanadi Kashayam*	60ml two times	*Sophahara Sulahara*	After 4 days wrinkles appeared on my forehead. Patient can hold water in the mouth
07/12/2023	5 days	*Suvarna mukthadi gulika*	1 tablet two times with kashaya	*Vata Samana*	After 4 days wrinkles appeared on my forehead. Patient can hold water in the mouth

12/12/2023	12 days	*Maharasnadi Kashayam*	60ml two times	*Vata Samana*	Complaints markedly relieved
12/12/2023	12 days	*Suvarna mukthadi gulika*	1 tablet two times with kashaya	*Vata Samana*	Complaints markedly relieved

Table .2- External treatment and Kriyakrama

Date	**Duration**	**Kriyakarma**	**Reason for selection**	**remarks**
03/12/2023	9 days	*Churna pinda swedam*	*Sophahara kaphahara*	*Pain and swelling got reduced after treatment*
03/12/2023	2 days	*Nagaradi lepanam over neck*		
05/12/2023	3 days	*Pichu with murivenna over neck*		
07/12/2023	4 days	*Pichu with mahabala over neck*	*Vata Samana*	
12/12/2023	12 days	*Nasya* with *Ksheerabala Taila* 101 *Avartti*	*Vata Samana Rasayana, Indriya Dridata*	Complaints improved after treatment
12/12/2023	7 days	*Ksheera Dhuma*	*Vata Samana, Bhrimhana*	-do-
13/12/2023	5 days	*Shashtika pinda sweda*	*Vataptta Samana, Brihmana, Peshi Dridata*	-do-
Review	After 2 weeks	*Maharasnadi Kashaya* with *suvarnamukthadi gulika as internal medication and Mahabala tailam for external application over the face and neck before bath* continued during the follow-up period		

Table.3-Assessment done on the basis of gradation system and according to House and Breckmann

Grade	**Clinical features**	**Before treatment**	**After treatment**	**After Follow-up**
Grade I	Normal symmetrical function	-	✓	✓
Grade II	a. Gross: slight weakness noticeable on close inspection; may have very slight synkinesis b. At rest: normal symmetry and tone c. Motion: forehead - moderate to good function; eye - complete closure with minimum effort; mouth - slight asymmetry.	-	-	-
Grade III	a. Gross: obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis, contracture, and/or hemifacial spasm. b. At rest: normal symmetry and tone c. Motion: forehead - slight to moderate movement; eye - complete closure with effort; mouth - slightly weak with maximum effort	-	-	-

Grade IV	a. Gross: obvious weakness and/or disfiguring asymmetry b. At rest: normal symmetry and tone c. Motion: forehead - none; eye - incomplete closure; mouth - asymmetric with maximum effort.	✓	-	-
Grade V	a. Gross: only barely perceptible motion b. At rest: asymmetry c. Motion: forehead - none; eye - incomplete closure; mouth - slight movement	-	-	-
Grade VI	No movement	-	-	-

Table. 4-Assessment of clinical features before and after treatment.

Sl.no	Clinical features	B.T.(left side)	A.T.(left side)	After Follow-up
1	Symmetrical wrinkling of the forehead	Absent	Present	Present
2	Clenching of teeth	Asymmetrical	Symmetrical	Symmetrical
3	The closing of the eye against resistance	Not possible	Possible	Possible
4	Blowing of cheeks	Not possible	Possible with effort	Possible
5	Taste sensation (antr.2/3rd)	Absent	Can identify the taste	Able to identify the taste
6	Corneal reflex	Absent	Present	Present
7	Glabellar tap	Positive	Negative	Negative

Table. 5- Assessment of clinical features based on gradation system

Clinical features	Grading	B.T.	A.T.	A.F	Relief
Watering from the right eye	No watering 0 Persistent but do not disturb routine work-1 Persistent disturb routine work-2. Constant watering 3	2	0	0	100%
Widening of palpebral aperture	No widening-0 Slightly wide-1 (whole cornea visible) Moderately wide-2 (cornea and 1/3rd of upper sclera visible) Severely wide-3 (cornea and ½ of upper sclera visible)	2	0	0	100%
The absence of nasolabial fold	Nasolabial fold present normally-0 Nasolabial fold is seen while trying to speak-1. nasolabial fold is seen while attempting to smile-2. nasolabial fold never seen-3	2	1	0	100%

Smiling sign	Absent smiling sign 0 Smiling sign present without upward movement of left angle of mouth-1 Smiling sign present with the upward movement of left angle of mouth-2 Smiling sign present all the time 3	1	0	0	100%
Slurring of speech	Normal speech-0 Pronouncing with less effort-1. Pronouncing with great effort-2 Complete slurring-3	2	0	0	100%
Dribbling of saliva from the left corner of the mouth	Dribbling absent-0 Intermittent dribbling-1 Constant but mild dribbling-2 Constant and profuse dribbling 3	0	0	0	0
Trapping of food between gums and teeth	No trapping 0 Mild trapping(not noticeable)-1 Trapped but easily removable by tongue-2 Trapped and need manual removal-3	3	0	0	100%
Earache	No earache-0 Intermittent earache-1 Persistent earache do not disturb routine work-2. Persistent earache affects routine work 3	2	0	0	100%

Figures

Figure 1: Before Treatment	Figure 2: After Treatment
	

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Source of Support: Nil
Conflict of Interest: None Declared

How to cite this URL: Aneesh M S & Blessy Y R: Management of bell's palsy - a case report. International Ayurvedic Medical Journal {online} 2024 {cited March 2024} Available from: http://www.iamj.in/posts/images/upload/694_700.pdf