

Ayurvedic Management of Bell's Palsy - A Single Case Report

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Abstract:

Bell's palsy is characterised by the sudden weakness in the muscles of one half of the face due to the inflammation or compression of facial nerve which is commonly unilateral. Bell's palsy can be correlated to *Arddita* mentioned in *Ayurvedic* classics. *Arddita* is included among *Vatavyadhi*. The aggravated *Vata* will produce symptoms like deviation of half of the face, Tremulousness in the head, Speech difficulty, deformities in eyes etc. A 45year old male patient reported in the outpatient department with sudden onset of deviation of angle of mouth towards right before 2 weeks. The complaints are associated with speech difficulty, drooling of saliva from the left side, inability to close the left eye, reduced taste sensation, heaviness & mild swelling over the affected side of the face. The case was clinically diagnosed as Bell's Palsy/*Arddita*. The patient is treated with *Kaphahara/Sophahara* followed by *Vatahara* medicines and procedures. The case was assessed with 'House and Breckmann' assessment scale. The result showed significant improvement in motor factions and asymmetry of face. After the treatment, the 'House and Breckmann' gradation improved from grade 4 to grade1. This case report shows that classical *Arddita* treatment is effective in Bell's palsy.

Keywords: Ayurveda, *Arddita*, Bell's palsy, *Nasya*

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Introduction:

Arddita is included among *Vatavyadhi*. *Vatavyadhies* are disorders due to vitiated *Vata*. It can be caused either due to *Avarana* or *Dhatukshaya*. The etiological factors include speaking in a loud voice, eating hard food substances, excessive laughing, carrying heavy loads on the head, sleeping in uncomfortable postures etc. The aggravated *Vata* will produce symptoms like deviation of half of the face, Tremulousness in the head, Speech difficulty, deformities in eyes etc.^[1] Bell's palsy can be correlated to *Arddita*. Bell's palsy is characterised by the sudden weakness in the muscle of one half of the face due to the inflammation or compression of facial nerve which is commonly unilateral. Bell's palsy is a lower motor neuron lesion. LMNs are located in an anterior grey column, anterior nerve roots or the cranial nerve nuclei of the brain stem. The first symptom is often an ache in the region of stylomastoid foramen (where the facial nerve passes) then the deviation of face, inability to close the eye of the affected part while trying it rolls up (Bell's phenomenon), disturbance of taste on the anterior 2/3rd of the tongue, drooling of saliva etc^[2]. The line of treatment for *Arddita* includes *Nasya*, *Moordha Taila*, *Srotra Akshi Tarpana* and *Naadisweda*. *Vamana* and *Siravyadha* are advised in *Sopha* and *Daha*, *Raga* conditions respectively^[3].

Case history:

Presenting complaints with history: A 45year old male patient reported in the

outpatient department with sudden onset of deviation of angle of mouth towards right before 2 weeks. The complaints are associated with speech difficulty, drooling of saliva from the left side, inability to close the left eye, reduced taste sensation, heaviness & mild swelling over the affected side of the face. He had a H/o toothache 3 days prior to the onset of symptoms. He was admitted in the inpatient department of National Ayurveda Research Institute for Panchakarma hospital (NARIP).

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

Differential diagnosis: *Arddita*, *Hanusthambha*, *Pakshaghata*

Diagnosis: Diagnosis was done clinically with classical symptoms of *Arddita* like *Vakrata* (Deviation) of *Vaktrarddha* (Half of the face), *Ukata* (Speech), *Hasita* (Smile) and *Ikshita*(Gaze). *Swarabhramsa* (Speech

abnormality), *Ekasya Akshnou Nimeelana* (Difficulty in closing one eye), *Jatrorudharuja* (Pain above Jatru). These complaints are associated with *Gourava* and *Sopha* on the affected side of the face. So the condition is diagnosed as *Sophanubandha Arddita* (*Kapha Anubandha*) Bell’s palsy was diagnosed by the presence of paralysis on one half of the face, drooling of saliva, impairment of taste, pain around affected side face and behind the ear, incomplete closure of left eye, impaired speech, difficulty eating or drinking and Bell’s phenomena. Laboratory investigations for blood and urine routine checkups were done before showed elevated ESR (45mm/hr).

Methodology/Treatments Given:

Sophanubandha (*Kapha Anubandha*) *Arddita* was managed with *Kaphahara/Sophahara* succeeded by *Vatahara* medicines (Table.1). The therapeutic procedures (Table.2) were also selected according to the same treatment principle mentioned above. The patient was assessed during the inpatient treatment period and after two weeks of follow-up. The case was assessed with ‘House and Breckmann’ assessment scale (Table.3). The signs and symptoms of the patient were also assessed during similar time points. ^[4] (Table.4, Table-5).

Table.1- Internal medications

Date of starting	Duration	Name of the medication	Dose	Reason for selection	Remarks
29/05/2018	7 days	<i>Punarnavadi Kashaya</i>	60ml two times	<i>Sophahara Sulahara</i>	After 3 days wrinkles appeared on forehead patient can hold water in the mouth
3/06/2018	14 days	<i>Maharasnadi Kashaya</i>	60ml two times	<i>Vata Samana</i>	Complaints markedly relieved
3/06/2018	14 days	<i>Ksheerabala Taila</i> (101Avartti)	10 drops two times	<i>Vatapitta Samana, Rasayana</i>	Complaints markedly relieved

Table .2- External treatment and Kriyakrama

Date	Duration	Kriyakarma	Reason for selection	remarks
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29/05/2018	7 days	<i>Lepana with Rasnadi Churna and Jambheera Swarasa over face</i>	<i>Sophahara Kaphahara</i>	Complaints improved after treatment
29/05/2018	7 days	<i>Thalam with Rasnadi Churna and Jambheera Swarasa</i>		
29/05/2018	5 days	<i>Nasya with Shadbindu Tailam</i>	<i>Vatakapha Hara, Dantachala, Drishti Dourbalya, Siroroga Hara</i>	Complaints improved after treatment
29/05/2018	11 days	<i>Ksheera Dhuma</i>	<i>Vatapta Samana</i>	-do-
03/06/2018	4 days	<i>Nasya with Ksheerabala Taila 101 Avartti</i>	<i>Vatapitta Samana Rasayana, Indriya Dridata</i>	-do-
Review	After 2 weeks	<i>Maharasnadi Kashaya with Ksheerabala Taila (101 Avartti) continued during the follow-up period</i>		

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.	-	-	-

	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Followup
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 with effort
5	Taste sensation (antr.2/3 rd)	Absent	Can identify the taste	Can identify the taste more than the previous visit
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 left eye	No watering-0 Persistent but do not disturb routine work-1 Persistent disturb routine work-2 Constant watering-3	0	0	0	0
Widening of palpebral aperture	No widening-0 Slightly wide-1 (whole cornea visible) Moderately wide-2 (cornea and 1/3 rd of upper sclera visible) Severely wide-3 (cornea and 1/2 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	0	0	0	0
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	Dribbling absent-0 Intermittent dribbling-1 Constant but mild dribbling-2	0	0	0	0

left corner of the mouth	Constant and profuse dribbling-3				
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	1	0	0	100%
Earache	No ear ache-0 Intermittent ear ache-1 Persistent earache, do not disturb routine work-2 Persistent earache affect routine work-3	0	0	0	0

Result and Discussion:

The patient assessment was carried out at three time points (before treatment, after treatment and after two weeks follow-up period). In this patient ‘House and Breckmann scale’ grade was improved from grade 4 to grade1 (Table.3) after the treatment. Motor functions, taste sensation, reflexes (corneal and glabellar reflexes) were also found improved (Table.4, Table5).

Since the patient had suddenly manifested *Arddita* there was a high chance of *Ama* association in this case. The patient had also presented with symptoms like *Gaurava* and *Sopha*. So at the initial stage, he was managed with *Kaphahara* and *Sophahara* medicines. *Punarnavadi Kashaya* [5] has *Sophhara* and *Amahara* properties. *Lepana* was carried out with *Rasnadi Churna* [6] and *Jambeera Swarasa* over the face and scalp, for relieving the *Sopha*. In *Sopha Anubandha Arddita*, *Vagbhata* has advised *Vamana* for relieving the associated *Kapha Dosha*. The same treatment principle was adopted here.

Considering *Rogabala* and *Doshabala* procedures like *Vamana* cannot be advised in this case. So for relieving *Kapha Dosha* and *Sopha* the *Ruksha Lepana* and *Punarnavadi Kashaya* were selected. *Nasya* is the prime treatment described for *Arddita*. So *Nasya* was advised with *Shadbindu Taila*[7]. These treatments were adopted for 7 days. The patient responded well with this treatment as there was the appearance of wrinkles over the forehead on frowning and improvement in the closure of eyes. After relieving associated *Kapha* the treatment continued with *Vata Samana* medicines. *Punarnavadi Kashaya* was replaced with *Maharasandi Kashaya* [8] and *Ksheerabala Taila (101Avartti)* [9] as *Anupana*. These medicines have *Brmhana* and *Vatasamana* properties. *Nasya* was did with *Ksheerabala Taila (101Avartti)* in this stage. *Ksheerabala Taila* was selected due to *Brmhana*, *Rasayana*, *Indriya Prasadana* and *Vatapitta Samana* properties. The internal medicines were continued for 14 days follow-up period.

Conclusion:

The 'acute onset LMN Facial palsy' is considered as *Sopha/Kapha Anubanda Arddita* and given *Vatakapha Samana* treatments. The patient responded positively within 3 days of treatment and the majority of complaints were relieved with 14 days inpatient treatments. The patient is managed with minimum and cost-effective treatments. This case study shows that an acute onset LMN Facial palsy (Bell's palsy) can be effectively managed with *Ayurvedic* treatment.

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