



Ayurvedic Management of Bell's Palsy - A Case Report

Aiswarya Krishna*, Mayur V. Shiralkar, Anand Kale, Pallavi Jagtap,
Santosh Rahinj and Shubhangi Kale

Department of Shalaky Tantra, Dr. D. Y. Patil College of Ayurved and Research Centre, Dr. D. Y. Patil
Vidyapeeth (Deemed to be University), Pimpri, Pune – 411018, Maharashtra, India;
aiswaryakrishna309@gmail.com

Abstract

Background: Bell's palsy is a sudden and unexplained condition characterized by temporary weakness or paralysis of one side of the face or the areas supplied by the facial nerve, resulting from the paralysis of the peripheral facial nerve. It can be caused by various factors varying from trauma, infection, ischemia, or inflammation that affects the seventh cranial nerve. In *Ayurveda*, Bell's palsy can be compared to *Ardita Vata*, a condition described within the realm of *Vatavyadhi* Chapter mentioned in various *Samhitas* and its treatment has also been explained in detail in *Samhitas*. **Aim and Objectives:** The effectiveness of different *Kriyakalpa* techniques, as well as oral medication, was studied and observed in detail in this medical study by investigating a patient with Acute Bell's palsy. The main goal was to assess the outcomes of these interventions which is a much better option than Allopathic steroids. **Settings:** A fresh case of Bell's palsy that had occurred only 24 hours ago was treated at the outpatient Department of Shalaky Tantra OPD at Dr. D. Y. Patil College of Ayurved and Research Centre, Pimpri, Pune. The patient's condition was evaluated before and after receiving the prescribed treatment. **Treatment Plan:** The individual received *Mukhabhyanga* (facial massage) with *Mahamasha* oil, *Nadi Sweda* (sweating therapy) with *Dashamoola* herbal decoction fumigation, *Marsha Nasya* (intranasal treatment) with *Panchendriya vardhana* oil, and *Netratarpana* with *Ksheerabala* oil for seven days in addition to *Shamana* medication for one month. **Result:** Significant progress was noted according to the House-Brackmann scale. Following 15 days of therapy, the scale decreased from IV to III, and subsequently to II and I after the 30th day of monitoring. **Conclusion:** This study demonstrates encouraging and speedy outcomes of *Ayurvedic* therapy by taking into account factors of *Vatavyadhi*, particularly *Ardita Vata*, without exhibiting any complexities.

Keywords: *Ardita Vata*, Bell's Palsy, *Dasamool Kashaya Dhooma*, *Nasya*, *Ksheerbala Taila*, *Vatavyadhi*

1. Introduction

Facial paralysis, which comes under Neurological disorders is also nicknamed prosopoplegia, and refers to the paralysis of structures controlled or supplied by the facial nerve. Bell's palsy is the predominant form or the most common cause, making up around 60-75 % of cases of sudden one-sided facial paralysis. The exact cause of this condition is still unknown. Bell's palsy is likely to occur to anyone irrespective of age and gender but is more common in individuals aged 15-45, with diabetes,

pregnancy, hypertension, high BMI rate or URTIs being the primary factors that increase the risk. Most individuals experience recovery from the condition within a period of 8-12 weeks¹. Exposure to low temperatures is a common triggering factor for facial paralysis, it can be either staying in low altitudes for a long period of time or excessive consumption of frozen items; it has also been suggested that the inflammation and swelling of the nerves can be caused by a herpes simplex virus infection or any other underlying infections. Stress, lack of sleep, and physical or mental trauma which in turn leads to less immunity

*Author for correspondence

can also trigger Bell's palsy. It is likely to be the outcome of a defect in either the upper motor neurons or the lower motor neurons. The initial indication is generally discomfort in the area of the Stylomastoid foramen, through which the facial nerve passes, and presenting indications and symptoms include sudden onset of one-sided facial weakness, inadequate closure of the eyelid, pain behind the ear, numbness of the cheek, deviation of the angle of the mouth to the unaffected side, impairment of taste on the front two-thirds part of the tongue, excessive salivation from mouth, intolerance to noise, difficulty in eating or drinking etc².

Ardita, a *Vatavyadhi* caused either by *Dhatu Kshaya* which then results in *Vata Prakopa* or due to *Vata Avarana*, manifests with symptoms clinically resembling Bell's palsy. According to *Ayurveda* classics, *Acharya Sushruta* has explained the causes of *Ardita Vata* as pregnant women, post-delivery period, children, aged people, weak and emaciated people, anaemic and bleeding conditions, excessive yawning, laughing, eating cold foodstuff, carrying heavy loads on head and sleeping in uncomfortable postures³. The *Chikitsavidhi* or the treatment protocol of *Ardita* according to *Acharyas* includes *Nasya Karma*, *Murdhni Taila*, *Akshi Tarpana*, *Nadi Sweda*, *Upanaha*, *Vamana* and *Raktamokshana*. According to modern medicine, there are many different causes and manifestations same as of facial paralysis, including Ramsay Hunt syndrome, Lyme disease, trauma, cerebrovascular accidents, Guillain-Barre syndrome, tumours, Myasthenia Gravis, etc. These conditions should be ruled out before a proper diagnosis and the treatment protocol should be developed accordingly. Usually, *Ardita* affects *Mukha Ardha* or *Shareera Ardha*. Chronic facial spasms, face pain, corneal infections, synkinesis, and gustatolacrimal reactions are some of the major side effects of facial paralysis⁴. Allopathic treatment protocols include administration of Steroids,

Antivirals and Analgesics even after which a complete recovery can't be guaranteed. Thus, a systematic *Ayurvedic* line of care is necessary and can be executed to prevent these problems and to achieve total remission.

2. Materials and Methods

2.1 Vital Data

Age: 33 years
 Gender: Male
 Religion: Hindu
 Education: Graduate
 Occupation: Accountant
 Marital status: Married
 Socio-economic status: Upper middle class

2.2 Case Details

The complaints are mentioned in Table 1.

2.3 Past History

- Patient denied any type of facial trauma or exposure to any type of contagious diseases.
- Patient also did not report any recent or long-term fever, nausea, vomiting or any other systemic illness.

2.4 Clinical Findings

2.4.1 Face-Inspection

- Twisting of corner of mouth to right
- Absence of facial expressions
- Unable to blow air through mouth
- Difficulty to shut the left eye properly
- Flat nasolabial fold on left side

2.4.2 Facial Nerve - Examinations

The evaluation of motor functions are mentioned in Table 2.

Table 1. Presenting complaints with duration

S. No.	Presenting Complaints	Duration
1	Twisting of corner of mouth to right side	1 day
2	Difficulty to shut left eye properly	1 day
3	Increased lacrimation from left eye	1 day
4	Slurred speech	1 day
5	Numbness on left side of the face	1 day

Table 2. Tests to evaluate motor functions⁵

Test	Active muscle	Patient response
Patient was instructed to raise the eyebrows	Frontal belly of Occipitofrontalis	Not symmetrical – not able to raise the left eyebrow
Patient was instructed to close the eyes tightly	Orbicularis oculi	Not able to shut the left eye properly, i.e., it indicates Bell's phenomenon to be positive
Patient was instructed to puff out his cheeks	Orbicularis oris, Buccinator	Not able to puff out his cheeks as air comes out through left side of the mouth
Patient was instructed to grin	Levator anguli oris, Zygomatic major, Zygomatic minor, Depressor anguli oris, Risorius, Buccinator	Corner of mouth was tilted to right side
Patient was instructed to clench his teeth	Platysma	Unable to clench his teeth as corner of mouth tilted to right side
Patient was instructed to speak	4 Intrinsic and 4 Extrinsic muscles of tongue, 11 muscles for lip movement, 8 muscles for jaw movement.	Left side of mouth drooped and participated less in speaking

2.4.3 Tests to Evaluate Sensory Functions

- Taste test – Normal taste perception on anterior 2/3rd part both sides of tongue.

2.4.3.1 Reflexes

- Corneal reflex – Difficulty to shut left eye
- Blink reflex - diminished in left eye
- Glabellar tapping - blinking not present
- Suck reflex - weak on left side
- Snout reflex or orbicularis oris reflex - weak on left side
- Orbicularis oculi reflex - blinking of left eye decreased
- Palmomental reflex – not present⁶

2.4.3.2 Roga pareeksha

2.4.3.2.1 Nidana

- *Athi sheeta vata* - cold working atmosphere
- *Ratri prajagara* – staying awake at night
- *Chinta* - stress

2.4.3.3 Poorvarupa - Avyakta

2.4.3.3.1 Rupa

- *Mukhardha vakrata* - Tilting of corner of mouth to right side
- *Vaksanga* - difficulty in speech
- *Sthabdha netratha* – not able to shut left eye properly
- *Netra aavilatha* - increased lacrimation from left eye
- *Twak swaapa* - numbness on left side of face

2.4.3.4 Samprapti Vighatana

- *Dosha* - *Vata pradhana, kapahanubandha*
- *Dhatu* - *Rasa, raktha, mamsa*
- *Upadhatu* - *Twak, kantara*
- *Srotas* - *Vatavaha, Rasavaha, Raktavaha, Mamsavaha*
- *Srotodushti* - *Sanga, Vimargagamana*

2.4.3.5 Anupashaya

- Cold climate (*sheeta vata*) - on exposure to cold, pain in left side of face increases
- Diagnosis - *Ardita vata (Kaphanubandha)*
- Facial nerve palsy - LMN type with unidentified Etiology - Bell's Palsy

3. Treatment

The medications, treatment procedure and *Rasayana* treatment are shown in Tables 3-5.

4. Observations

Observation based on the gradation system by House and Breckmann and assessment of clinical features according to gradation system are mentioned in Tables 6 and 7.

Figures 1 and 2 represent before treatment and Figures 3 and 4 represent the after treatment. Figure 5 shows the improvement of patient according to gradation system.

Table 3. Oral medications

S. No.	Oral medications	Dose	Time of administration	Duration
1	Capsule <i>Palsinuron</i>	2-0-2	After food	15days
2	<i>Ashwagandha ghana vati</i>	1-0-1	After food	15days
3	<i>Mashabaladi kashaya</i>	15ml-0-15ml	Before food	15days

Table 4. Treatment procedures

S. No.	Kriyakalpa procedures	Duration
1	<i>Mukhabhyanga with Mahamasha Thaila</i>	7 days
2	<i>Nadi Sweda with Dashamoola Kwatha</i>	7 days
3	<i>Marsha Nasya with Panchendriya Vardhana Taila</i>	7 days
4	<i>Pinda Sweda with Shashtishali in mukha pradesha</i>	7 days
5	<i>Netra Tarpana with Ksheerabala Taila</i>	7 days

Table 5. Rasayana treatment

S. No.	Medicine	Dosage	Duration
1	<i>Ashwagandha Pak</i>	1tsp-0-1tsp, after food	15 days

Table 6. Observation based on the gradation system by House and Breckmann⁷

Grade	Clinical features	Before treatment	After treatment	After follow up
Grade I	Normal Normal facial function in all areas	-	✓	✓
Grade II	Slight Dysfunction Gross: slight weakness noticeable on close inspection; may have very slight synkinesis At rest: normal symmetry and tone Motion: forehead - moderate to good function; eye - complete closure with minimum effort; mouth - slight asymmetry.	-	-	-
Grade III	Moderate Dysfunction Gross: obvious but not disfiguring difference between two sides; noticeable but not severe synkinesis, contracture, and/or hemi-facial spasm. At rest: normal symmetry and tone Motion: forehead - slight to moderate movement; eye - complete closure with effort; mouth - slightly weak with maximum effort.	-	-	-
Grade IV	Moderate Severe Dysfunction Gross: obvious weakness and/or disfiguring asymmetry At rest: normal symmetry and tone Motion: forehead - none; eye - incomplete closure; mouth - asymmetric with maximum effort.	✓	-	-
Grade V	Severe Dysfunction Gross: only barely perceptible motion At rest: asymmetry Motion: forehead - none; eye - incomplete closure; mouth - slight movement	-	-	-
Grade VI	Total Paralysis No movement	-	-	-

Table 7. Assessment of clinical features according to gradation system

Clinical Features	Grading	Before Treatment	After Treatment	After Follow-up
Widening of palpebral aperture	Complete closure of eyelids - 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 rd of upper sclera visible)	2	1	0
Lacrimation from left eye	No lacrimation - 0 Persistent lacrimation but no disturbance in routine work - 1 Persistent lacrimation disturbing routine work - 2 Continuous lacrimation disturbing routine work- 3	3	1	0
Absence of Nasolabial crease	Nasolabial crease visible - 0 Nasolabial crease visible when trying to speak - 1 Nasolabial crease visible when trying to grin - 2 Nasolabial crease not visible- 3	2	1	0
Slurring of speech	Normal pronunciation and speech - 0 Speaking with less effort - 1 Speaking with great effort -2 Completely slurred speech - 3	2	1	0
Tilting of corner of mouth to right side	No deviation - 0 Slight deviation - 1 Moderate deviation -2 Severe deviation - 3	2	1	0

5. Result and Discussion

Facial paralysis has been described in *Ayurveda* as *Ardita*. Detailed description of presenting complaints has been explained in classical texts. It is caused due to vitiation of *vata dosha*, which results in symptoms like deformity of one side of face, difficulty in speech and smiling, difficulty in movement of eyes, loss of touch sensation of face or one half of the body, drooping of eyelid to one side. Since the patient had sudden manifestation of *Ardita* symptoms, chances of *Amatva* involvement were high. As *ardita* is purely caused by *vata*, medications of opposite qualities will be more beneficial.

According to *Ayurveda* the treatment described for *Ardita* is considered as effective. Ayurvedic treatment helps with strengthening of Facial muscles and nerves,

improving the blood circulation and also in preventing the recurrence of disease. Treatment principle of *Ardita* is explained as,

Ardithe navanam moordhini thailam tharpanamevacha |

Nadi sweda upanahascha apyanoopa pisithair hitha ||⁸

Nasya karma, Moordha taila, Tarpana Kriya, Nadi Sweda, Upanaha Sweda are the main procedures included in treatment of *Ardita*.

After seven days of treatment, patient was able to close the eyelids completely, drooping of corner of mouth was reduced, and skin crease of face got normalised. Patient evaluations were performed prior to, throughout, and following treatment. After treatment, the patient's grade on the House and Breckmann scale went from a Grade 4 to a Grade 1.



Figure 1. Bell's phenomenon, i.e., upward movement and incomplete closure of left eyeball.



Figure 3. Deviation of mouth to normal side, i.e., right side.



Figure 2. Improvement in Bell's phenomenon.

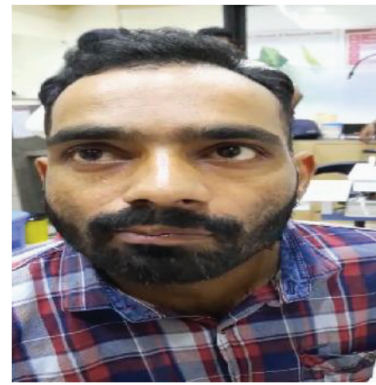


Figure 4. Improvement in deviation of mouth.

IMPROVEMENT OF PATIENT

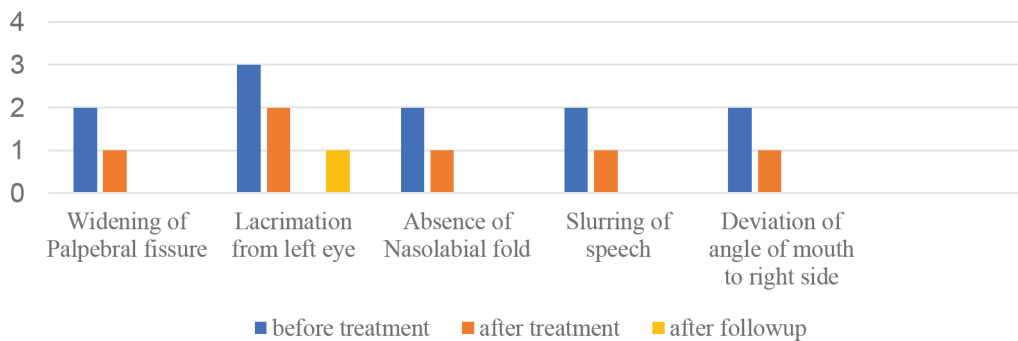


Figure 5. Improvement of patient according to gradation system.

Additionally, reflexes, taste perception, and motor functions were also improved.

Probable Mode of Action

Abhyanga, *Swedana*, *Nasya*, and *Tarpana* procedures have shown good results in many patients with *Ardita*⁹.

According to *Acharya Charaka*¹⁰ and *Acharya Sushruta*¹¹, *Nasya* and *Nadi sweda* are the most important treatment procedures for *Ardita*. *Sthanika Abhyanga* with *Mahamasha Taila*, followed by *mridu Nadi Sweda* with *Dashamoola Kwatha*¹², till *Samyak Swinna lakshanas* appeared. These procedures pacify *Vata Dosha*.

Nasya karma was done with *Panchendriya Vardhana Taila*. Through *shirovirechana*, it enhanced the power of *indriya* and normalised the *vatika* and *kaphaja* doshas. According to *Ashtanga Samgraha*, *Nasa* or nose is considered as the starting point to *Shiras*, and the drug administered through the nostril spreads in the *murdha*, reaches the junction of the *netra*, *srotra*, *kantha*, and *siramukhas*, and eliminates or removes any morbid doshas present above the supraclavicular region before expelling them from the *uttamanga*¹³. *Nasya karma* plays a crucial part in nourishing the *pancha gnanendriya adistana* found in *Shiras*, in addition to acting as *Sirovirechana*, which comes under *shodhana chikitsa*, which is the elimination of doshas, and as *shamana chikitsa*, which is the regulation of the *doshas*¹⁴.

According to *Acharya Sushruta*, the qualities of *Taila* are described as *Chakshushya* in *Dravadravyavidhi Adhyaya*, which is why *Ksheerabala Taila*¹⁵ was utilised for *netratarpana*¹⁶. And it contains *Bala*, *Ksheera*¹⁷, and *Tila taila*¹⁸. *Bala* has *Balya karma*, which helps in alleviating *vata* dosha and promoting strength as well as providing nourishment to the nerves¹⁹. It has *madhura rasa*, *guru*, *snigdha guna*, *sheeta virya* and *madhura vipaka*²⁰. It also possesses analgesic and anti-inflammatory properties, which protects the nerve²¹. All the ingredients of *Ksheerabala taila* has *madhura rasa* and *madhura vipaka*, which pacifies *vata* dosha. Since *Ardita* is a *Vatavyadhi*, and *Taila* is considered as the *Agryoushadha*, an effort was made to study the effect of *taila* in *Ardita*.

Shashtika shali pinda sweda, which is a *Brimhaniya swedana* procedure with a bolus of boiled *shashtika shali* in *vatahara kwatha* and milk. It is one among the types of *swedana*, which is usually advocated for neuromotor conditions related to thinning of muscle mass, emaciation and weakness²². *Shashtika shali* rice (*Oryza sativa* Linn.) has the special properties of *shareera dhardhyakara*, *snigdhakara* and *bala vardhaka*. A bolus of *shashtika shali* dipped in *Devadaru*, *Ashwagandha*, and *Balamoola kwatha* with *godugdha* offers localised heat that enhances blood flow, relieves muscle spasm, increases tendon flexibility, and relieves pain.

Capsule *Palsinuron* contains ingredients like *Mahavatavidhwamsa*, *Sameerapannaga*, *Ekangaveer Ras*, *Sootashekhar Ras*, which are *vatahara*, *shulahara*, and *rasayana*, which helps to reduce *vata* symptoms²³.

5. Conclusion

From this case study, it can be inferred that the *Ayurvedic* treatment methods outlined in classical literature or *samhitas* even without using any allopathic medicines, and are effective in reducing Bell's palsy symptoms and signs significantly while also enhancing patient's well-being. The scope of *Ayurvedic* treatment in such conditions is yet to be exploited enthusiastically and carefully. Therapies like *Nasya*, *Tarpana*, *Shashtika shali pinda sweda* soothe the increased *vatika dosha* and provide and supply essential nutrients to all the sense organs. This case was treated successfully by *Ayurvedic* treatment without intervention of any steroid drugs. Further clinical studies should be conducted to validate the efficacy of the treatment.

6. Acknowledgements

We want to express our sincere gratitude to Dr. Mayur V. Shiralkar, our mentor for being a constant support during the study. Our gratitude and appreciation goes to Dr. D. Y. Patil Vidhyapeeth, Pune (Deemed to be University) for the successful completion of the study.

7. References

1. Gorthi SP, Venkataraman S. Disorders of cranial nerves. In: Munjal YP, editor. API Textbook of Medicine vol 2, 9th edition. Mumbai: The Association of Physicians of India; 2012. p. 1397-8.
2. Adams RD, Victor M. Principles of neurology, 5th edition. New York: McGraw-Hill, Health Professions Division; 1993. p. 1175-7.
3. Shastri AD. Nidanasthana 1/68. Sushruta Samhita, Part 1. Varanasi: Chaukhamba Sanskrit Sansthan; 2013. p. 303.
4. Gorthi SP, Venkataraman S. Disorders of cranial nerves. In: Munjal YP, editor. API Textbook of Medicine vol. 2, 9th edition. Mumbai: The Association of Physicians of India; 2012. p. 1398.
5. Walker HK. Cranial nerve VII: The facial nerve and taste. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The History, Physical and Laboratory Examinations, 3rd edition, Chapter 62. Boston: Butterworths; 1990.
6. Walker HK. The suck, snout, palmental and grasp reflexes. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The history, physical and laboratory examinations, 3rd edition, Chapter 71. Boston: Butterworths; 1990.

7. House JW, Brackmann DE. Facial nerve grading system. *Otolaryngology. Head Neck Surgery.* 1985; 93:146-7. <https://doi.org/10.1177/019459988509300202>
8. Agnivesa, Charaka Samhita, Text with English translation and critical exposition. In: R K Sharma, V B Das, editors. Chakrapani Dutta's Ayurveda Deepika, Vol 5, Chikitsasthana, Chaukhamba Sanskrit Series, Varanasi; 2004. p. 31.
9. Acharya YT. Vimanasthana, 28/84. Charaka Samhita. 1st ed. Varanasi: Choukhamba Surabharati Prakashan; 2000. p. 620.
10. Shastri KN, Chaturvedi GN. Chikitsasthana, 28/99-100. Charaka Samhita. 1st ed. Varanasi: Chaukhamba Bhartiya Academy; 2007. p. 795.
11. Shastri AD. Chikitsasthana, 5/22. Sushruta Samhita. 2nd ed. Varanasi; Chaukhamba Sanskrita Sansthan; 2014. p. 43.
12. Mishra SN. Jwaradhikar Dashamoola Kwath. Chapter 5/233 - 235. In: KGD Sen, Bhaishajyaratnavali - edited with Siddhiprada Hindi Commentary. Varanasi: Chaukhamba Surbharti Prakashan; 2019. p. 105.
13. Vagbhata, Astanga Samgraha, Sutra sthana, 29th chapter, 2nd sloka, Vol 1, Translation by K. R. Srikantha Murthy, Chaukhamba Orientalia. 2018. p. 511.
14. Kashyapa Samhita edited by P V Tewari English translation and commentary, Chaukhamba viswabharati Publication, Kalpasthana Chap; 2013. p. 347.
15. Prabhakara RG. Taila Yoga Prakaranam, 123, Ch. 18. Sahasrayogam Sanskrit Text with English Translation and Prabhakara Vyakhyanam. 1st ed. New Delhi: Chaukhamba Sanskrit Sansthan; 2016. p. 559.
16. Susruta's Susruta Samhita Sutrasthana, 45/112-113, with Nibandhasamgraha commentary of Dalhana, edited by Acharya VJT, Varanasi: Chowkhamba Krishnadas Academy, Reprint edition; 2004.
17. Pandey GS. Dugdha Varga, verse 7-8. In: K C Chunekar, Sri Bhavamishra; Bhavaprakash Nighantu - commentary (Hindi). Varanasi: Chaukhamba Bharati Academy. Reprint edition; 2015. p. 742.
18. Pandey GS. Taila Varga, verse 2-5. In: K C Chunekar, Sri Bhavamishra; Bhavaprakash Nighantu - commentary (Hindi). Varanasi: Chaukhamba Bharati Academy. Reprint Edition; 2015. p. 763.
19. Munhall AC, Johnson SW. Dopamine mediated actions of ephedrine in the rat substantia nigra. *Brain Research.* 2006; 1069:96-103. <https://doi.org/10.1016/j.brainres.2005.11.044>
20. Pandey GS. Guduchyadi Varga, verse 144. In: K C Chunekar. Sri Bhavamishra; Bhavaprakash Nighantu- commentary (Hindi). Varanasi: Chaukhamba Bharati Academy. Reprint edition; 2015. p. 351.
21. Kanth VR, Diwan PV. Analgesic, anti-inflammatory and hypoglycemic activities of *Sida cordifolia*. *Phytotherapy Research.* 1999; 13:75-7. [https://doi.org/10.1002/\(SICI\)1099-1573\(199902\)13:1<75::AID-PTR387>3.0.CO;2-F](https://doi.org/10.1002/(SICI)1099-1573(199902)13:1<75::AID-PTR387>3.0.CO;2-F)
22. Gupta K, Mamidi P. Some efficacious Ayurvedic Panchakarma procedures in children with cerebral palsy. *International Journal of Alternative and Complementary Medicine.* 2018; 11(1):37-42. <https://doi.org/10.15406/ijcam.2018.11.00344>
23. Palsineuron, Proprietary Product. Manufactured by GMP certified SG Phytopharma Pvt Ltd., Kolhapur, Maharashtra, India. Available from: <https://www.sgphyto.com/product/palsinuron-capsules/#1518236090001-4a0f90c1-23e97260-dd594b54-2b47>