VOLUME - 14, ISSUE - 12, DECEMBER - 2025 • PRINT ISSN No. 2277 - 8160 • DOI : 10.36106/gjra

Original Research Paper

Ayurveda

CASE REPORT ON CEREBRAL PALSY WITH AYURVEDIC TREATMENT PROTOCOL

Dr. Vagisha* P.G. Scholar, Department of Kaumarbhritya, R.G.G.P.G. Ayurvedic College and Hospital, Paprola. *Corresponding Author

Dr. Karam Singh Lecturer, Department of Kaumarbhritya, R.G.G.P.G. Ayurvedic College and Hospital, Paprola.

ABSTRACT Cerebral palsy is a non-progressive disorder, which arising in early stages of development of child. There are many etiology factors like antenatal, natal and postnatal factors responsible for causing cerebral palsy but exact cause is still unknown. Spasticity is the main feature of cerebral palsy. Symptoms of spastic cerebral palsy can be corelated with *Jadhata* in *Ayurveda*. In *Jadhata*, there is tightness of muscles occurs, improvement can be got in children with *ayurvedic* treatment. **Aim -** To improve the quality of life of child suffered from spastic CP. Place and duration of study – study as done in Rajiv Gandhi Govt. Post Graduate Ayurvedic College and Hospital, Paprola, Himachal Pradesh. In this case study, *udvartana*, abhyanga with *ksheerbala tail, shastishali pind swedan* and *matrabasti* and then *yogbasti* and *kalabasti* was given to child. **Results –** Improvement in spasticity of left leg completely and gait is improved completely in first sitting and mild improvement in spasticity of left arm. **Conclusion –** Hence, through *ayurveda* treatment, improvement in symptoms of spastic cerebral palsy can achieve and quality of life of child can increase spontaneously.

KEYWORDS : Cerebral palsy, *jadhata, ayurvedic* treatment

INTRODUCTION

Cerebral palsy is the leading cause of childhood disability. It is a group of non-progressive but often changing motor impairment syndromes secondary to lesions or anomalies of brain arising in early stages of development. There are many etiologic factors responsible for CP viz. antenatal, natal and postnatal in which preterm birth and hypoxic condition at the time of delivery are the major cause of CP. CP is classified on the basis of physiologic as spastic, dyskinetic, ataxic, hypotonic, mixed etc. and topographic as quadriplegia, hemiplegia, diplegia, monoplegia etc.[1] Children suffering from cerebral palsy make their parents life miserable as they can't do daily requirement work properly and walk. In spastic cerebral palsy, there is tightness of muscles. In *Ayurveda,* spasticity can be corelated with *Jadhata,* which have predominant *lakshanas* of *vata dosha*. *Stambha, Sthaimityam, apatavam, and murkha* are the meanings of *jadhata*.

CASE REPORT

Chief Complaints

A 2 years old female child having known case of spastic hemiplegic cerebral palsy secondary to neuroglial cyst come to OPD of Rajiv Gandhi Govt. Post Graduate Ayurvedic College and Hospital, Paprola, Himachal Pradesh, with the complaints of restricted movement of left arm and left leg with stiffness of same, associated with abnormal gait and unable to do daily activities with the left arm and left hand and unable to grasp objects with left hand. Patient starts noticing these symptoms of not moving her left arm properly at 3rd month of infant life. At 1 year of age, patient's attendant noticing of unable to stand and walk properly associated with tightness of muscles of same with abnormal gait after 1 year of age. With these above mentioned complaints, patient got admitted in Bal Rog IPD for further management.

Past History

Patient had a history of abnormal movements in left lower limb – clonic movement once in a month and stopped by holding the limb. After that when parents noticed about her delayed milestones like not attaining social smile, neck holding, language milestones and other milestones, they visited various hospitals and health centers seeking treatment including some medicines, physiotherapy, CIMT (Constraint induced movement therapy) for left upper limb and splint for left cortical thumb, prosthetics and orthotics. Due to financial issues, patient can't take these therapies. But patient had taken various medications such as multivitamins, calcium. Patient not got better improvement. Patent had already been diagnosed with Spastic Hemiplegic Cerebral Palsy secondary to Neuroglial Cyst in MRI-Brain at 1 month of age. Patient did not take any *ayurvedic* treatment before now.

Antenatal History

Age of mother was 26 years at the time of delivery. Test reports of HIV, HbsAg, VDRL were negative. Mother was not diagnosed with any type of gestational hypothyroidism, gestational hypertension, gestational diabetes mellitus, anemia. There was no history of hypoglycemia, seizures, stress and any other complications. There was no history of intake of any type of medicine during pregnancy.

Natal History

Child was delivered through spontaneous vaginal delivery with 36 weeks gestation period. Baby cried immediately just after birth. Baby was dried and kept under radiant heat warmer under observation. There was no relevant history of hypoxia, neonatal seizure or hypoglycemia. There was no history of any obstructed or delayed labor. Respiratory distress was not noticed at the time of birth. Term baby was 2.5 kg in weight at time of birth.

Postnatal History

Baby was discharged at 3rd day of life. There was a history of hyperbilirubinemia (dark yellowish color of body from head to toe) after discharge, but patient didn't take treatment for it.

Breast Feeding

Baby start breastfeeding within an hour of delivery. Baby had taken exclusive breastfeeding for 6 months and weaning began with home - made complementary feed.
At present – Adult diet

Developmental History

All milestones are not achieved at its appropriate age. All milestones are delayed such as Neck holding, waving bye-bye, sit with support, sit without support, stand with support, standing without support. Social smile was absent, not attained speech and language milestones, not able to speak one or two words properly. Baby attained neck holding after 5 months of age, sitting without support at 18 months of age, started walking after 20 months of age and waving bye-bye after 12 months of age and started speaking 4-5 words with no sentence forming at around 18 months. Patient had regression

of milestones. Patient spoke sentences at 12 months but after sometime, he stopped speaking more than 2 words.

MILESTONES ACHIEVED –

		Before Treatment	After Treatment
GROSS MOTOR MILESTONES			
1.	Neck holding	6 months	
2.	Sitting with support	6 months	
3.	Sitting without support	18 months	
4.	Standing with support	7 months	
5.	Standing without support	15 months	
6	Walking with support	-	20 months
7.	Walking without support	-	Improved, only a few steps at 24 months
FINE MOTOR MILESTONES			
1.	Palmar grasp	-	20 months
2.	Immature Pincer grasp	-	24 months
3.	Mature Pincer grasp	-	Not achieved yet
4.	Buttoning	-	Not achieved yet
5.	Self-feeding	-	Not achieved yet
SOCIAL AND ADAPTIVE MILESTONES			
1.	Social smile	1 month 24 days	
2.	Indicates her want	-	23 months
3.	Dresses unassisted	-	24 months
LANGUAGE MILESTONES			
1.	Monosyllables	10 months	
2.	Bisyllables	12 months	
3.	Small sentences	-	Not achieved yet
4.	Storytelling	-	Not achieved yet

Family History – Nothing relevant

Immunization History – Immunized up to age

Personal History
Diet – mixed, Appetite – Good, Thirst – normal, Bowel habits - normal, Sleep – Sound, Urination – normal limits, Allergies – nil

Vital Signs
Heart rate – 100 bpm
Respiratory rate – 28/min
Temperature – 37 °C

Anthropometry –
Head circumference – 46 cm, Chest circumference-49 cm, Mid arm circumference – 13.3 cm, Height - 78.7cm, Weight - 8.54 kg

General Examination
Nose - Broad nasal bridge
Color - Pallor
Gait -Spastic diplegic gait (scissor gait – while hold baby on standing position)
No lymphadenopathy
No oedema
No organomegaly

Systemic Examination
Respiratory Examination – B/L Chest symmetry. Trachea centrally placed. AEE chest clear, no wheezing, crepitations and other abnormal sounds heard with no retractions and recessions.

GIT Examination – No scar and any abnormal growth was not observed on abdomen, umbilicus was normal on inspection. Abdomen was soft and non – tender, no hepatosplenomegaly was found on palpation. There were no abnormal peristaltic sounds present on auscultation. There was no dullness present on percussion.

CNS Examination – MRI Brain

Patient under evaluation for decreased movement of left upper limb with current MR showing -

- There is e/o CSF signal intensity area seen in right frontal and parietal lobe region measuring approximately 3.6 x 3.2 x 2.8 cm (AP*TR*CC) causing scalloping of inner table of skull. There is surrounding T2/FLAIR hyperintensity showing no diffusion restriction, blooming or post contrast enhancement s/o Gliosis. There is dilated I/L lateral ventricle.
- There is thinning of corpus callosum in body and isthmus part.

Higher Mental Functions
Appearance – not cooperative
Behavior – attentive
Level of consciousness – conscious
Delusion, amnesia, hallucination, illusion, dementia – absent
Sleep – sound
Orientation of place and time – present
Memory – normal
Speech – with decreased clarity
Dysphonia – absent
Dysgraphia – not able to assess
Echolalia – absent
Gait – abnormal, spastic diplegic gait
Emotions – normal

Cranial Nerves
All the cranial nerves were tested. All were found to be intact.
Nystagmus – absent
Co-ordination of movements
Finger nose test – not possible
Cerebellar signs – absent

Motor System
Muscle tone – Hypertonic, spastic
Muscle power – reduced

On Examination
Hypertonocity – present
Generalized spasticity (left limb) – present
Left cortical thumb – present
Left palmar and pincer grasp – negative
Rest - WNL

Treatment Protocol
Spastic CP is a disorder with *vata* predominancy *prakopa* and it requires *vata shamaka chikitsa* and *brihana rasayana chikitsa* due to muscle tightness and effect on brain for improvement in milestones.

Treatment was done on the basis of *vata vikara* along with *panchkarma* therapies in which 7 sittings were done and every sitting were of 15-20 days.

Udvartana with *yav-mash churna* for first 3 days in each sitting.

Abhyanga with *ksheerbala taila* for 20 minutes daily once a day, started at 4th day after *udvartan*.

Shastishali pind sweda for 25 minutes daily after *abhyanga* for 15 days.

Matrabasti with 15 ml *ksheerbala taila* was given in first 2 sittings.

Yogbasti was done in 3rd and 4th sitting in which alternate *anuvasana* and *niruhana basti* were given. *Niruhana basti* was given with 50 ml *erandmool*. *Anuvasna basti* was given with 15 ml *ksheerbala taila*.

Kalabasti has started from 5th sitting.

Orally *samvardhan avleha* 3 gm was given twice a day with milk.

Table 1. Treatment Protocol

S. No.	Treatment	Duration	Anupaan
1.	*Samvardhan avleha*	Twice a day	Lukewarm water/milk
2.	*Udvartana*	Once a day	
3.	*Abhyang* with *ksheerbala taila*	Once a day	
4.	*Shastishali pind swedan*	Once a day	
5.	*Basti*	Once a day	

RESULTS

Before the treatment, child was not able to stood properly even with support but after the first sitting of 15 days, patient got marked improvement in the spasticity of left leg with marked improvement in patient's gait and walking. After first sitting patient's mother observed that her baby start standing, walking or moving completely normal with no any spasticity with got strength in feet. After treatment, initially child was able to stood with support or without support for 2-3 minutes and with time, duration of standing increased and after 1-2 months of first sitting, patient got complete improvement in gait and walking with no spasticity. Child was not able to hold things with left hand along with spasticity in left upper limb. Child has not achieved palmar grasp and immature and mature pincer grasp of left hand. Second sitting was done after 1 month, in which there is some relief in spasticity of left arm with partial palmar grasp. In third sitting, after a gap of 1 month, patient got some improvement in palmar grasp and spasticity with no improvement in pincer grasp. After 3rd sitting patient had huge improvement in palmar grasp. After 4th and 5th sitting, patient had achieved immature pincer grasp and started walking with support. After 6th sitting patient started trying to open the shoe, trying to undress himself, started indicating his wants such as water by mimicking coughing, started understanding what other people are saying or when other talking to him, trying to eat himself with immature pincer grasp along with properly achieved palmar grasp. All sittings were done for a duration of 15-20 days and in a gap of 1 month. Patient had decided to continue the treatment for further management and for further *Panchkarma* sittings.

DISCUSSION

Udvartana:

The procedure of massaging and dusting of herbal powder on the whole body below the neck in a direction opposite to the orientation of hair with some pressure[2] is called *Udvartana*. *Sharira parimarjana* is another term mentioned by *Charaka*.[3] According to *Charaka*, depending upon the variation in the therapeutic effect, it is of two types: *snigdha*[4]and *rukhsha udvartana*.[5] Here we have done *rukhsha udvartana* with *yav-mash churna*. It opens the circulating channels. Rubbing stimulates both motor and sensitivity nerve endings for various parts of the body. Deep pressure massage helps the interchange of tissue fluids by increasing the circulation in the superficial vein and lymphatic.

Abhyanga:

It means applying oil and lightly massaging the body. Often medicated and usually warm, the oil is massaged into the entire body in specific directions. It improves blood circulation, facilitates removal of the toxins from the tissues, relieves physical and mental fatigue, improves the functioning of musculoskeletal system, clears stiffness and heaviness of the body and leads to feeling of lightness. In the commentary of the *Dalhana*, it is mentioned that *Abhyanga* should be applied in *Anuloma* (downwards) direction. According to Dinacharya, it is one of the most important therapy of the daily routines.[6] It has long lasting effects on *Rasa, Rakta, Mamsa, Meda, Asthi* and *Majja dhatu*. Blood amino acids like Tryptophan increases after massage and an increase in plasma tryptophan subsequently cause a parallel increase in neurotransmitters and serotonin, which is made from tryptophan. It provides nutrition to the muscles, prevent muscle atrophy and improve muscle tone. Application of pressure done in correct manner may decrease the alpha motor neuron activity and thus decrease hyperexcitability of motor neuron.

Shashtishali Pind Swedan:

Shastika Shali Pinda Sweda comes under the category of *Saagnisweda* with *Snigdha dravyas* as *Ksheera* and *Shalidhanya* (rice harvested in 60 days). It has *Snigdha, Guru, Sthira, Sheeta* and *Tridoshaghna* properties. It is a *Swedana karma*, but processes *Brimhanaguna*.[7] The warmth supplied by *Pottali* of *Shashtishali* dipped in *Balamool kwath* and *Dashmool kwath* with *Godugdha* may enhance the blood circulation, decrease muscular stiffness, increase tendon extensibility and give relief from pain. *Bala* prevents from emaciation through local absorption into muscular tissue. Thus effect of both *Abhyanga* and *Shashtishali pind sweda* helps in reducing spasticity, facilitating the movement of the joints and preventing from advancement of disabilities and contractures.

Matrabasti:

Matrabasti is a specific type of *basti*.[8] Medicated decoctions, *ghee* and oil are delivered in the body through anus using a particular device designed for the *basti* process.[9] *Matrabasti* is a subtype of *Anuvasna Basti*.[10] It is given in extremely little doses, making it incredibly convenient in today's world. It will stay in the colon for as long as possible and will provide all of the desired effects. While undergoing *Matra Basti*, no *Pathya* is recommended. It increases strength without requiring a rigid dietary regimen, as well as facilitating the evacuation of *Mala* and *Mutra*. According to *Acharya Charaka "Bastihi Vataharanam," basti* is the greatest treatment for *Vata*. The *Basti* drug travels to *Pakvashaya* initially (large intestine). *Vatsdosha's* main location is *Pakvashaya*, As a result of its activity on the primary site, *Basti* gains control over *Vata* throughout the body.

As a result of *Basti*, one can obtain *Vayu Dosha Shamana* as well as *Dhatus Snehana* and also has *Rasayana* qualities.

Ksheerbala Taila:

Ksheerbala taila[11] is used to treat *Vata Vikara* (central nervous system disorders). Main content of *Ksheerbala Taila* is *Bala* (Sida cordifolia), *Ksheera* and seasome oil has more antioxidant activity used for the management of neurode generative diseases. It also normalizes *Vata* and has anti-inflammatory properties. It soothen's excited nerves helps in strengthen muscles. Cow's milk had both proxy radical trapping capacity and superoxide radical trapping activity. Investigators had also demonstrated the significant neuro-protective activity of Seasome oil.

Basti:

The disease where *Vata dosha* is mainly vitiated in such condition *basti chikitsa* is the choice of treatment to treat the disease without any complications. In *basti chikitsa* the medicines are pushed through anus or urethra or vagina which reaches *basti Pradesh* and where it will exhibit its effect to cure the diseases and the medicines inserted will not remain in body, it is expelled out from the body. According to modern science resent research identified as Gut is the second brain in the body, which helps for the absorption medicine and initiate necessary healing process to overcome from the disease.

Yogabasti:

In *Yoga basti*[12], 8 *basti* are given in total, in this procedure first

anuvasana basti should be given followed by 3 *niruha* and *anuvasna basti* are given alternatively and at the end again one *anuvasna basti* should be given. In the beginning, one *anuvasna basti* and at the end, 3 *anuvasna basti* were given for the purpose of *snehna*.

Kalabasti:

In *kala basti*[13], 16 *basti* are given in total, in this procedure 10 *anuvasana basti* and 6 *niruha basti* are given. On day 1, *anuvasna basti* should be given followed by *niruha basti* alternatively till 12th day. In last 4 days, from day 13th to day 16 *anuvasana basti* should be given. Drugs used here for *Basti Karma* are mainly acting on *Vata Dosha* and regulates *Vata Dosha* activity all over the body.

Acharya Sushruta has told that the *virya* of *basti* drug reaches all over the body through the *strotas* in the same way as the water poured at the roots of the plant reaches up to leaves. He has further explained that even through *basti* drugs quickly comes out with *mala* and their *virya* acts all over the body by the action of *apana vayu* and other *vayu*. The action takes place just like as sun draws moisture from earth.

Prashara had highlighted the importance of *guda* by saying that *guda* is *mula* for all the *siras* in the body, hence the medicine administered through *guda* reaches up to head and nourishes the body. *Basti karmukta virya* of *basti apana vayu tripti samana vayu tripti vyana vayu tripti udana vayu tripti prana vayu tripti* normalcy of *pitta* and *kapha sarva sharira poshana*.

According to *Acharya Charaka*, it is said to be *Balya, Sukhopachaya, Sruta Purisha, Brimhana* and *Vatarogahara*. Stimulation of *basti* either by chemo or mechano receptors may lead to activation of concerned part of CNS which precipitates result accordingly.

Erandmool Niruh Basti:

Ingredients:

S. No.	Name	Botanical name	Quantity
1.	*Erandamula*	Roots of *Ricinus communis*	3 *pala* – 144 grams
2.	*Palasha*	*Butea monosperma*	1 *pala* – 48 grams
3.	*Laghu panchmool (5 roots)*	Roots of *Desmodium gangeticum, Uraria picta, Solanum indicum, Solanum xanthocarpum* and *Tribulus terrestris*	1 *pala* – 48 grams each
4.	*Rasna*	*Alpinia galanga*	1 *pala* – 48 grams
5.	*Ashwagandha*	*Withania somnifera*	1 *pala* – 48 grams
6.	*Atibala*	*Abutilon indicum*	1 *pala* – 48 grams
7.	*Guduchi*	*Tinospora cordifolia*	1 *pala* – 48 grams
8.	*Punarnava*	*Boerhavia diffusa*	1 *pala* – 48 grams
9.	*Aragvadha*	*Cassia fistula*	1 *pala* – 48 grams
10.	*Devadaru*	*Cedrus deodara*	1 *pala* – 48 grams
11.	*Madanaphala*	*Randia dumetorum*	1 *pala* – 48 grams

Samvardhan Avleha:

Ingredients:

S. no.	Drug	Latin name
1.	*Khadira*	*Acacia catechu Wild.*
2.	*Prishniparni*	*Pseudarthria viscida* Desv.
3.	*Bala*	*Sida cordifolia* Linn.
4.	*Atibala*	*Abutilon indicum* Linn.
5.	*Syandana*	*Ougenia dalbergiodes* Benth.
6.	*Kebuka*	*Costus speciosus Smith.*
7.	Milk	
8.	*Ghrita*	

Samvardhan ghrita is mentioned in *Kashyap Samhita – Lehyadhya* that it improved the impaired conditions like *pangu, muka, ashruti, jadatava* and promoting growth, strength and development in children. Word *Samvardhana* itself means growth and development without obstacle in any disease. *Samvardhan ghrita* have *Madhur, Lavana rasa* and *Madhur vipaka* and have *Vatashamaka* properties with its *Snigdha guna* and *tridoshshamaka* property. Hence, it helped to achieve the milestones like neck holding, social smile and other milestones.

Cerebral palsy is considered as '*Bala Samvardhana Vikara*', based on the *lakshanas* such as *Pangu* (lame), *Mooka* (dumb), *Ashruthi* (deaf), *Jada* (mental retardation) where the chief *dosha* involved is *vata*. Hence all such were treated with line of treatment of *vata vikara*.[14]

Cerebral Palsy is compared with *Shiromarma Abhigatajvata Vikara*, leading *Vata Prakopa, Udvartan, Abhyanga, Shastishali Pind Swaedan* and *Basti*, all with *Vatahara* properties advised as the line of treatment in the classics with intention to alleviate *Vata*.

Probable mode of action: The main causative factor for the Cerebral Palsy is *Vata* and best therapy is supposed to be *Vatahara Chikitsa*. This is most probably due to its controlling and regulating mechanism over the nervous system.

CONCLUSION

The present study showed better results in activities of daily living evaluation, Gross motor function and mental function. If treatment can be started early age, (i.e. immediately after cerebral injury or as early as possible) when there is lag in milestones of development, one can expect better results. Management of Cerebral Palsy includes of *Medha Rasayanas* specific *Panchkarma* like *Udvartana, Abhyanga, SSPS* and *Basti therapy* etc. Modern science mentioned a term of approach towards Cerebral Palsy patient with occupational therapist, physiotherapist etc. So rather than a single drug therapy a multiple treatment modality should be carried out to find better solution for Cerebral Palsy.

CONSENT

As per international standard or college standard, parent's consent has been collected and preserved by the author(s).

Ethical Approval

As per international standard or college standard written ethical approval has been collected and preserved by the author(s).

Competing Interests

Authors have declared that no competing interests exist.

REFERENCES

1. Ghai OP, Bagga A, Paul VK. Essential Pediatrics. 9th ed. New Delhi. Mehta Publishers. 2019. pg564
2. Ayurvediye Panchkarma Vigyana, Vd Haridas Shridhar Kasture, p88, Shri Baidyanath Ayurved Bhawan Ltd.
3. Charaka Samhita, Sutrasthana, Chapter 5/93, Vd. Harish Chandra Singh Kushwaha, Chaukhambha Orientalia, Varanasi
4. Charaka Samhita, Sutrasthana, Chapter 21/32, Vd. Harish Chandra Singh

Kushwaha, Chaukhambha Orientalia, Varanasi
5. Charaka Samhita, Sutrasthana, Chapter 21/21, Vd. Harish Chandra Singh Kushwaha, Chaukhambha Orientalia, Varanasi
6. Vagbhata, Astanga Hrdayam, Vol.I. Srikanta Murthy KR, editor. 2nd ed. Krishnadas Academy; Sutrasthana, 1994;24
7. Choudhary KR, Kumar A. A clinical study to evaluate role of Ayurvedic management for improving activities of daily living in cerebral palsy affected children. Innt J Ayur Pharma Research. 2014; 2(4): 68-82
8. https://www.researchgate.net/publication/347891390_MATRA_BASTI_THE_PANACEA_A_NARRATIVE_REVIEW
9. https://www.vedicus.com/basti-a-medicated-enema
10. Kadus P. A., & Vedpathak, S. M. Anuvasan Basti in escalating dose is an alternative for Snehapana before Vamana and Virechana: Trends from a pilot study. *Journal of Ayurveda and integrative medicine*, 2014 5(4), 246-250. https://doi.org/10.4103/0975-9476.147445
11. Nishtashwar, Vidyanath. Sahasrayoga (English) 1st ed. Varanasi: Chowkamba Sanskrit Series Office, 2006
12. Kasinath shastri; Charaka Samhita; Vol.2: Siddhisasthana; Chapter 1/47-49; Publication: Chaukhambha Bharati Academy; Varanasi; Edition; 2020, page 895
13. Kasinath shastri; Charaka Samhita; Vol.2: Siddhisasthana; Chapter 1/47-49; Publication: Chaukhambha Bharati Academy; Varanasi; Edition; 2020, page 895
14. Teewari PV. Kasyapa Samhita. Reprint ed. Varanasi: Chaukhambha Visvabharati; 2002. Chapter 18, Lehanadhyaya; p. 7