

**AN AYURVEDIC APPROACH TO THE MANAGEMENT OF DIPLEGIC CEREBRAL
PALSY****Dr. Haritha V.***

Assistant Professor, Department of Kaumarabhritya, Vishnu Ayurveda College Shoranur.

***Corresponding Author: Dr. Haritha V.**

Assistant Professor, Department of Kaumarabhritya, Vishnu Ayurveda College Shoranur.

DOI: <https://doi.org/10.5281/zenodo.23034291>**How to cite this Article:** Dr. Haritha V.* (2026). An Ayurvedic Approach to The Management of Diplegic Cerebral Palsy. World Journal of Pharmaceutical and Medical Research, 12(10), 167–172.

This work is licensed under Creative Commons Attribution 4.0 International license.

Article Received on 26/08/2026

Article Revised on 17/09/2026

Article Published on 01/10/2026

ABSTRACT

Cerebral palsy (CP) is the most common childhood motor disability. It is a group of permanent conditions, characterized by abnormal tone, posture and movement. Based on the affected motor system it is classified as spastic hemiplegia, spastic diplegia, spastic quadriplegia, and extrapyramidal or dyskinetic. The incidence of CP is 1.5 to 4 cases per 1000 live births. In developed countries the incidence has reduced by up to 40% due to improved neonatal care. Prematurity, Low birth weight, maternal infections, multiple gestation, insult to brain are considered as most common risk factors. In Ayurveda we can correlate this under the broad term Vata Vyadhi. As it is a multifactorial disease, with various clinical features it cannot be correlated under a single disease or condition. Here an attempt was made to treat a 7 year old male child with spastic type of CP using multiple Ayurveda treatment modalities. At the end of 94 days of treatment, Pañcakarma procedures along with internal medication resulted in 10–15% improvement in the overall effect of therapy. A 7 year-old boy with spastic diplegic cerebral palsy was treated in the In-Patient Department. The management was based on the principle of Vata vyadhi chikitsa and Avarana Chikitsa with various Ayurvedic medicines internally and appropriate Panchakarma procedures and also physiotherapy and speech therapy was also done. He has been assessed before and after the treatment and found noticeable improvement. Here spastic diplegic cerebral palsy was managed by using Ayurveda medicines, Panchakarma procedures and supportive therapies. Significant improvements in the quality of life of the child was noted. Ayurveda management along with supportive therapies are highly efficient in managing spastic cerebral palsy, thereby providing a better standard of living.

KEYWORDS: Cerebral Palsy, Diplegia, Avarana, Udwartana, Pratimarsha Nasya, Dhooma.**INTRIDUCTION**

Cerebral palsy refers to the permanent, non-progressive and occasionally evolving disorders of tone, movement and posture, caused by an insult to the developing brain. It is the most common chronic motor disability of childhood, affecting 2-3 infants per 1000 live births.^[1] In this disease delay in attaining milestones, difficulties in sensation, cognition, communication and perception are seen.

Based on an international consensus, a generally agreed upon definition of CP is as follows:

CP describes a group of permanent disorders of movement and posture, causing activity limitation that is attributed to non-progressive disturbances that occurred in the developing foetal or immature brain. The motor disorders of CP are often accompanied by disturbances

of sensation, perception, cognition, communication, and behaviour, by epilepsy, and by secondary musculoskeletal problems.^[2]

Cerebral palsy may arise from developmental abnormalities of the brain or brain injury occurring during the prenatal, perinatal, or early postnatal period. Important contributing factors include perinatal hypoxia, birth trauma, metabolic disturbances, hyperbilirubinaemia, and intrauterine or acquired infections.

These can be classified under ante natal, natal and also post natal. Most of the infants may have multiple risk factors. Among them Low birth weight is an important one. A variety of pathological lesions such as cerebral atrophy, porencephaly, migration defects, microcephaly,

leukomalacia, degeneration of basal ganglia and cerebellar lesions may be observed.

Cerebral palsy is classified topographically as Quadriplegic, Hemiplegic, Monoplegic or Diplegic. Physiologically the main types are Spastic, Dyskinetic, Ataxic, and Mixed Cerebral Palsy. Among these, Spastic Quadriplegia is the most common type of cerebral palsy in India.^[3]

In the *Ayurvedic* point of view, this being a *Vata* predominant condition, could be included under the *Avarana Janya Vyadhi* or *Vata Vyadhi*. *Vatavyadhi* treatment like *Snehana*, *Swedana*, *Mridu shodana* and *Brimhana* can be done to get pacify the condition.^[4]

Along with the medications rehabilitation therapy also can be done to get better results.

Patient Information

Name – ABC

Age – 7 yrs

Sex – Male

Religion – Hindu

Socio economic status- Middle class

Main Complaints

Not able to walk.

Speech is inappropriate to age.

Growth and Development is not appropriate to age.

History of Present Illness

A 7yrs male patient, 3rd Born was brought by Consanguineous Married Parents, Give history that child was apparently normal at the age of 10 months later parents noticed delay in walking milestone at the age of 2 years and speech problem as it was also not appropriate to age and other growth and developments was also not appropriate to the age like drooling of saliva, involuntary neck movements hence they brought the child to hospital for proper evaluation and management.

History of Past Illness

Milestones till the age of 10 months were appropriately attained.

No any h/o Convulsions, Fever, Trauma or any illness of hospitalization.

Birth History

Antenatal History

Mother (25yrs) undergone proper antenatal care, there was no any significant abnormality concerned to mother during pregnancy.

Natal History

FT, NVD

Birth wt -2.8kg.

Post Natal History.

No H/O Jaundice, Sepsis, Respiratory illness, Feeding issues.

Treatment History

Child was brought primarily to our hospital for management related to the above illness.

Family History

Consanguinity in marriage.

1st Child – FTNV /11 yr / Healthy.

2nd Child – FTNV / 9yrs / Global developmental delay.

3rd Child – FTNV / 7yrs.

No any H/O of chronic physical and mental illness in family.

Immunization History

As Per mother its complete but details not available.

Developmental History

Gross Motor:

3 months- Neck Holding

5 months – Sitting with support

8 months- stilling without support, crawling

9 months – standing with support

10 months – Walking with support [not attained]

12 month – standing without support [not attained]

13 month – walking without support [not attained]

18 months – Running [not attained]

24 months – walking upstairs [not attained]

36 month – Riding Tricycle [not attained]

Fine Motor

4 months – Grasps things when placed in hand.

5 months – Bidextrous grasp by intentional reaching.

7 months – Palmar grasp.

9 months – Immature pincer grasp is present.

[Yet Mature pincer grasp is not attained]

Language

1month – Turns head to sounds

3 months – Cooing

6 months – Monosyllables

12 months – Bisyllables [Delay]

True speaking not yet attained.

Social milestone

2 month – Social smile

3 months – Reconization of mother

6 month – Smiles at mirror image

9 month – waves bye bye

12 months – Plays a Simple ball games

36 months – Knows gender

Personal History

Bowel – Constipated (once in 2-3 days).

Micturation – 7-8 times/ day.

Sleep – 6-7 hrs /night, 2-3hrs /day.

Appetite – Reduced

Dashavida Pareeksha

Prakruti – VataKaphaja.

Vikruti – Vata dosha, Rasa Dathu.

Sara – Avara.

Samhanana- Avara.

Pramana – Avara.

Satmya – Vegetarian diet, predominantly Madura rasa.

Satva – Madyama.

Ahara Shakti-Avara.

Vihara Shakti – Avara.

Vaya – Bala.

Ashtavidha Pareeksha

Nadi- Vatadikatridosha.

Mala- Vibandha.[Vata Prakopa]

Mutra – Shwetha / Phenila. [VataKapha Prakopa]

Jihwa – Aliptha.[Kapha Prakopa]

Shabdha- Vikrutha.[Vata Vikruti]

Sparsha – Sheeta.[Vata Prakopa]

Drik – Chanchala.[Vata Vikruti] [Horizontal Nistagmus]

Akruti- Avara. [Due to Vata Kapha Vikruti the functions related to Pakwashaya, Kati, Sakti, Asthi, Sparsha,

Kanta, Sira, Rasa, Jiwha are affected]

SAMPRAPTI GHATAKA**(Table 1)**

ROGA PRAKRUTHI	SAMPRAPTI GHATAKA
<i>Dosha</i>	<i>Vatadhika Tridosha</i>
<i>Dushya</i>	<i>Rasa,Asthi,Majja,Sandhi, Snayu, Kandara</i>
<i>Agni</i>	<i>Mandya</i>
<i>Srotas</i>	<i>Rasavaha, Majjavaha</i>
<i>Sroto dusti</i>	<i>Sanga</i>
<i>Udbhavasthana</i>	<i>Pakvasaya, Shiras</i>
<i>Sancharasthana</i>	<i>Sarvashareera</i>
<i>Vyakthasthana</i>	<i>Shakha</i>

GENERAL EXAMINATION

General Appearance: Conscious and intrested in surroundings

Head: Dolichocephaly, frontanel are closed

Eyes: Horizontal nystagmus

Limbs: Spastic, wasting seen

Gait: Scissoring Gait

Vitals: HR-90/min, RR: 20 /min Temperature: Afebrile

Anthropometry

Weight: 14.5 Kg

Height: 101 Cm

Head Circumference: 49 Cm

Chest Circumference: 54Cm

Mid Upper Arm Circumference: 17.5 Cm

BMI: 14.2

SYSTEMIC EXAMINATION**Central Nervous System Examination****Higher Mental Functions**

Alert, awake, response to stimuli.

Speech is slurred. [Dysarthria].

Interested in surroundings.

Examination of Cranial Nerves

Olfactory (s)- Smell is not hampered.

Optic(s) –Fixing of objects, colour, visual acuity, pupillary reflex normal.

Oculomotor(m)- Nystagmus.

Trochlear(m)- Child not able to look at nose

Trigeminal (sm) – Jaw jerk was absent, Corneal and conjunctival reflexes present.

6) Abducent (m) – Not able to look laterally.

7) Facial (ms) – Inability to close the eye tightly.

Inability to whistle.

Buccinator weakness.

8) Vestibulo Cochlear (s)-Hearing is proper.

Glossopharyngeal (s)- gag reflex is seen.

Vagus (sm)-Uvula in midline.

Spinal accessory(m)-N

Hypoglossal (m)-Abnormal movements seen.

Motor System

Invouluntary Movements- Tremors, Dystonia

Bulk of muscles- Generalized wasting of muscles is seen.

Tone- Inspection: Scissoring gait

Palpation: Stiffness

Resistance to Range of Passive movemets

Co-ordination: Inco-ordination due to [Cerebellar dysfunction]

Finger –nose test

Dysdiadochokinesia

Heel- knee test –positive

Romberg's sign – not possible to assess.

Deep tendon reflexes

Jaw jerk – absent

Biceps – +++

Triceps- +++

Supinator or radial -++

Knee – ++++

Ankle – ++

Superficial Reflexes

Corneal /Conjunctival reflex – positive

Abdominal reflex – positive

Cremasteric reflex – positive

Anal reflex – Not done

Plantar reflex or Babinski response –Normal

Primitive Reflex

Rooting Reflex – 3-4 months
 Swallow Reflex – Never disappear
 Sneezing Reflex-
 Coughing Reflex-
 Gag Reflex-
 Tonic neck reflex – 3-4 months
 Moros Refelex -3-6 months
 Palmer Grasp – 4 months
 Babinski Reflex – 2 yrs
 Walking and stepping 3-4 months

Cardiovascular System

S1,S2 +, no murmur.

Respiratory System

AEBL Clear.

Gastro-intestinal System

P/A –soft, no organomegaly.

DIFFERENTIAL DIAGNOSIS

Spastic CP
 Dystonic CP
 Mixed CP
 Paraplegia
 Kaphavrutha Prana vata
 Udanavruta Prana vata
 Pranavruta Vyana Vata

INVESTIGATIONS

Urine Examination to find out the preventable cause of MR.
 -Phenylketonuria
 -Galactosemia
 -Hypothyroidism
 MRI
 CT Scan
 Assessment of vision, Hearing.

CONFIRMATORY DIAGNOSIS

Spastic Diplegic cerebral palsy
 Pranavruta Vyana Vata.

CHIKITSA SUTRA

“वातस्योपक्रमः स्नेहः स्वेदः संशोधनं मृदु
 स्वाद्वम्ललवणोष्णानि भोज्यान्यभ्यङ्गमर्दनम्॥ १॥
 वेष्टनं त्रासनं सेको मद्यं पैष्टिकगौडिकम्
 स्निग्धोष्णा बस्तयो बस्तिनियमः सुखशीलता॥ २॥
 दीपनैः पाचनैः सिद्धाःस्नेहाश्चानेकयोनयः
 विशेषान्मेद्यपिशितरसतैलानुवासनम्॥ ३॥”

“सर्वाङ्गकृपितेऽभ्यङ्गो बस्तयः सानुवासनाः॥ ११॥
 वायुना वेष्ट्यमाने तु गात्रे स्यादुपनाहनम्॥ १७॥”

MANAGEMENT

Rasnerendadi Kashayam (30ml with Honey) BD

Ashta choorna with Curd (B/F)

Udwarthana with Triphala Choorna

Nadi Sweda

Pratimarsha Nasya with Anutaila 20 each nostrils

Dhooma.

Sarvanga Abhyanga with Bala Taila.

Nadi Sweda

Matra Basti with Mahamasha taila [21ml].

Veshtana with Kottamchukkadi Taila

Siroupanaha with

Vacha+Shatawa+Devadaru+Rasna+Jatamansi+Yashti
 madu+ Musta

During the period of stay in the hospital, Physiotherapy and Speech therapy were also done. Physiotherapy is often an exercise program adapted to the needs of each individual.^[5] Speech and language therapy focuses on maximizing an individual's communication skills.^[6]

OBSERVATIONS AND RESULTS

Assessment of spasticity was done using The Modified Ashworth Scale. This is the most widely accepted clinical scale to measure the increase of muscle tone or spasticity.^[7] As per this scale, spasticity is graded from 0 to 4, with grade 0 being the normotonic state and grade 4 being the most spastic.^[8] On analysis before and after the treatment, the spasticity grades showed improvement. Before treatment, the child had marked spasticity in both lower limbs. After treatment, spasticity was moderately reduced, with refined passive movement and reduced stiffness.

Muscle strength was evaluated using the Medical Research Council Manual Muscle Testing Scale which is the most commonly accepted method of evaluating muscle strength.^[9] In this method, the key muscles from the extremities are tested against the examiner's resistance and the patient's strength is graded on a scale of 0 to 5, with grade 0 indicating no muscle strength and grade 5 indicating full power.^[10]

Muscle strength in both lower limbs improved from Grade 3 to Grade 4, indicating development from active movement against gravity to active movement against moderate resistance.

Deep Tendon Reflexes are important parameters of neurological examinations used to assess the degree of facilitation of spinal cord centres.^[11]

Observation: Before treatment, exaggerated reflexes were seen in the biceps, triceps, and knee jerks, with the knee jerk being exactly exaggerated (4+). After treatment, the biceps and triceps reflexes decreased from 3+ to 2+, and the knee jerk was also minimised from 4+ to 3+, indicating moderate progress in hyper reflexia. The supinator/radial and ankle jerks remained unaltered at 2+. The jaw jerk remained absent.

Based on the observed reduction in lower-limb spasticity, elevation in muscle strength, and regularization of exaggerated reflexes, the child showed moderate improvement in loco motor functions and day to day activities. The reduced need for assistance in performing routine activities indicates an overall functional independence followed by treatment.

DISCUSSION

Cerebral Palsy is a *Vata Vyadhi*. So main intention should be to alleviate *Vata*.

To cure *Vata* and to remove *Ama*, *Rasnerendadi Kashayam* and *Ashtachoornam* are given.

Due to *āvaraṇa*, *vāyu* cannot perform its normal function, that is, normal movement of joints (*pravartakaceṣṭanam*).

To remove *Avarana*, *Udwartana* is done.

Sudation causes excretion of waste metabolites through diaphoresis and is *Vata Hara* in Nature.

Massage provides nourishment due to its *snigdha*, *mṛdu* (soft), *picchila* (sticky) qualities.

Vāyu resides in *sparsanendriya* which is located in the skin. Massage is said to be as *tvachya* (good for the skin). Hence, massage might have directly worked on *vāta* to bring it back to normalcy.

Matra Basti (with Maha Masha Taila) is said to have *bṛmhana* effect. And this *Taila* is indicated in *Vatavyadhis*.

Basti acts on CNS by stimulating enteric nervous system (ENS)

ShiroUpanaha is mainly indicated for the disease of head due to provocation of *Vata*.

Nose is the entrance of the head so *Pratimarshanasya* (nasal drug application) directly effects on brain. It helps to remove vitiated *Vatadosha* from head and causes improvement of speaking.

CONCLUSION

Thus by the combined effect of total therapeutic measures, *Avarana* was removed, *Mastulunga Mija* got nourishment and *Vata* came to normalcy.

The treatment protocol followed here aims at reducing spasticity and improving the higher mental functions.

Though cerebral palsy cannot be cured completely the quality of life can be improved and dependency can be minimized with appropriate treatment.

REFERENCES

1. Ghai OP, Bagga A, Paul VK. Essential Pediatrics. 9th ed. New Delhi. Mehta Publishers, 2019; 564.
2. Rosenbaum P, Paneth N, Leviton A, et al. A report: the definition and classification of cerebral palsy April 2006. Dev Med Child Neurol Suppl, 2007; 109: 8-14.
3. Ghai OP, Bagga A, Paul VK. Essential Pediatrics. 9th ed. New Delhi. Mehta Publishers. 2019; 564.
4. Prof. K.R.Srikantha Murthy. Vagbhata's Astanga hrdayam. 10th edition. Varanasi. Chowkhamba Krishnadas Academy. 2014. Sutrasthana, chapter 13, sloka 1.
5. Stuart B. Porter. Tidy's Physiotherapy. London. Elsevier Saunders. 2013; 12: 264.
6. Pennington L, Goldbart J, Marshall J. Speech and language therapy to improve the communication skills of children with cerebral palsy. Cochrane Database Syst Rev. 2004; 2004(2): CD003466.
7. Meseguer-Henarejos AB, Sánchez-Meca J, López-Pina JA, Carles-Hernández R. Inter-and intra-rater reliability of the Modified Ashworth Scale: a systematic review and meta-analysis. Eur J Phys Rehabil Med., 2018 Aug; 54(4): 576-590. doi: 10.23736/S1973-9087.17.04796-7. Epub 2017 Sep 13. PMID: 28901119
8. Harb A, Kishner S. Modified Ashworth Scale. [Updated 2022 May 8]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK554572/>
9. Naqvi U, Sherman Al. Muscle Strength Grading. [Updated 2022 Aug 29]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK436008/>
10. A Santhosh Kumar. Paediatric Clinical Examination. 5th edition. New Delhi. Paras Medical Publisher. 2019; 212.
11. Arthur C. Guyton, John E.Hall. Textbook of Medical Physiology. 11th edition. Philadelphia, Pennsylvania. Elsevier Saunders. 2006; 678.
12. Mahoney FI, Barthel DW. Barthel index. Maryland State Medical Journal. 1965.

