WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 14, Issue 19, 717-727. Case Study ISSN 2277–7105

AYURVEDIC MANAGEMANT OF CEREBRAL PALSY – CASE STUDY

Dr. Sundaravadana M.*

Associate Professor, Dept. of Koumarabhrityam, Sri Adishiva Sadguru Alisaheb Shivaryula Ayurvedic College, Guntakal, A.P, India.

Article Received on
10 August 2025,

Revised on 02 Sept. 2025,
Accepted on 23 Sept. 2025

https://doi.org/10.5281/zenodo.17222118

***Corresponding Author**
Dr. Sundaravadana M.
Associate Professor, Dept. of Koumarabhrityam, Sri Adishiva Sadguru Alisaheb Shivaryula Ayurvedic College, Guntakal, A. P, India.

ABSTACT

Cerebral palsy (C.P) has been described as a group of disorders of the development of movement and posture causing activity limitations that are attributed to non progressive disturbances that occurred in the developing foetal or infant brain. Cerebral palsy cannot be directly co-related with any single disease mentioned in *Ayurveda*, as it is a multi-factorial condition As all most all neurological disorders are identified with the derangement of *Vata* and considering the clinical features of Cerebral palsy, it can be correlated with *Vatavyadhi*. The available therapies are also highly expensive and complicated. In spite of all the sophisticated technologies, no effective treatment for the underlying brain pathology has been formulated till date. Considering all these, this study has been undertaken to increase the functional and physical capabilities, reduce muscle stiffness thereby minimizing the disability and promoting independence in activities of daily living. Even small degree of improvement makes a great difference. The present case was carried out in OPD&IPD koumarabhrithyam department, Sri adhishiva sadguru alisaheb shivaaryula ayurvedic medical college, Guntakal, A.P to evaluate the Ayurvedic treatment in cerebral palsy.

KEYWORDS: Cerebral palsy, *Vata vyadhi*, Ayurvedic management.

INTRODUCTION

Cerebral palsy is defined as a non-progressive neuromotor disorder of cerebral origin. It includes heterogenous clinical states of variable etiology and severity ranging from minor incapacitation to total handicap. Most of the cases have multiple neurological deficits and

variable mental handicap. Approximately 1-2 per 100 live births is are reasonable estimate of the incidence.[1]

Cerebral palsy is classified on basis of tropographic distribution, neurologic findings and etiology.

Types

Phisiological classification

1. Spastic cerebral palsy
2. Hypotonic cerebral palsy
3. Extrapyramidal C P
4. Cerebellar involvement
5. Mixed type

Functional classification

1- Near normal (Does not require support for activity)
2- Mild restriction of activity (requires support for complex activity)
3- Moderate restriction of activity (requires support for day to day activity)
4- Severely restricted activity (Bed ridden- totally dependent for all kind of routine activity)

Clinical Manifestations[2]

CP is basically a motor disorder with varying degree of impairment of movement & co ordination. The disability may vary from mild to severe. The motor disability is usually associated with other deficits like.

- Mentral retardation
- Epilepsy
- Behavioural abnormalities
- Speech dysfunction
- Psychiatric problems like depression
- Visual problems like refractive, squaint, nystagmus
- Hearing problems

Diagnosis

Evaluation includes perinatal history, detailed neurological and developmental examination and assessment of language and learning disabilities. CT and MRI help delineate the extent of cerebral damage in a case of cerebral palsy.[3]

Ayurvedic View

An exact *Ayurvedic* correlation to Cerebral Palsy is not directly available in the *Ayurvedic* classical literatures. But much information regarding the different aspects of this condition can be found scattered in various contexts of antenatal, natal and postnatal care. Based on clinical features, the chief humor involved is identified to be *Vata*, hence it can be considered as a disorder of *Vata* and treated accordingly. Cerebral palsy may be considered as *Shiromarmabhighata Vata vyadhi*, as most of the etiological factors lead to pathological course of disease, which occurs in brain and the presenting symptoms of neurological deficits can be considered as *Vata vyadhi*.

Caraka Samhita

Caraka has described features of *siromarmabhigata* which are seen in cerebral palsy:

शिरस्यभिहते मन्यास्तम्भा-
र्दितचक्षुर्विभ्रममोहोद्वेष्टनचेष्टानाशकासश्वासहनुग्रहमूकगद्गदत्वाक्षिनिमील-
नगण्डस्पन्दनजृम्भणलालास्रावस्वरहानिवदनजिह्मत्वादीनि (Ca.Si.9/6)

If there is injury to head the following features are seen.

Manya Sthambha, *Ardita* (facial paralysis), *CakshuVibramsha* (abnormality in eye), *Moha*(unconsciousness), *Udvestana* (Cramps), *Cestanasha*(loss of motor activities), Cough, Asthma, *Mukatva* (dumbness), *Gadgadatva* (lalling speech), *Lala-Srava*(excess salivation), *Svarahani*(Aphasia), *Vadanajihmatva*(twisting of face) etc.[4]

KashyapaSamhita

In contest of *vataja nanatmaja vyadhis Kashyapa* also described features like *Vyudaso* (Squint), *supti*, *harsha*, (alteredsensorium), *sankocha*, *khara*, *parushyam*, (impaired motarsystem), *kampanam*(tremars) etc.[5]

CRITERIA FOR ASSESSMENT OF TOTAL EFFECT OF THERAPY

The assessment was done after completion of all 3 courses of treatment. At the end of treatment, the result in view of percentage of relief was classified as given below.

1. Maximum improvement: More than 75% to 100% improvement of ROM and Reduced spastisity.

2. ModerateImprovement: More than 50% to 75%improvement of ROM and reduced spastisity.

3. Mild Improvement: More than 25% to 50%improvement of ROM and reduced spastisity.

4. NoImprovement: Equal or less than 25%improvement of ROM and reduced spastisity.

CASE STUDY

Chief Complaint

A 4 years old Male child by name Master. Manjeeshwar Reddy from vizag, was brought to our OPD by his grand mother with chief Presenting complaints of-partial neck holding inability in sitting, standing, walking without support and is unable to speak according to his chronological age.

Associated Symptoms

- Drooling of saliva
- Scissoring of lower limbs

History of present illness

At the age of 2years parents of the child consulted local hospital on observing delay in development, subsequently they were referred to St Johns Hospital, Bangalore, and under went all investigations and they were advised medication & physiotherapy, upon which they didn't got any relief, for better improvement they came to S.V.Ayurveda hospital.

BIRTH HISTORY

Antenatal – Mother underwent regular Ante natal check ups

T.T vaccination taken

No H/O Hypothyriodism HTN, DM etc

Natal – Preterm NVD (delivery at hospital) due to preterm contractions.

Birth cry delayed

Birth weight 1.2kg (VLBW- IUGR)

Postnatal – H/O Birth Asphyxia, respiratory distress, pneumonia

Treated in NICU for one month

Family History

- Non consanguineous couple
- First issue: A 11yrs female child - normal
- Second issue: Preterm male child- died-?
- Third issue: present case
- Fourth issue : a female child- died-?

•Gross motor Mile stones	•Normal time of achievement	•Actual time of achievement
•Neck holding	•3rd month	•32 months
•Rolls over	•5th month	•Recently achieved
•Sitting with support	•5th month	•34 months
•Sitting with out support	•8th month	•Not yet achieved
•Walking with support	•10th month	•34 months
•Standing with out support	•12th month	•Not yet achieved
•Walking with out support	•13th month	•Not yet achieved
•Running	•18th month	•Not yet achieved
•Walking upstairs	•24th month	•Not yet achieved

Fine motor mile stones

Fine motor Mile stones	Normal time of achievement	Actual time of achievement
Hands kept open	By 4-6 months	2+ years
Bidextrous	4 month	Recently attained
Unidextrous	6 month	Recently attained
Mature pincer grasp	12 month	Not yet attained
Self –feed with spoon	18 month	Not attained

Social mile stones

Social Mile stones	Normal time of achievement	Actual time of achievement
Social smile	2nd month	4th month
Recognize mother	3rd month	6th month
Recognize strangers	6 th month	9th month
Waves bye bye	9th month	12th month

Language mile stones	Normal time of achievement	Actual time of achievement
Coos	3rd month	1 year
Monosyllables	6th month	3 years
Bisyllables	9th month	3 years
1-2 words with meaning	12 month	Not attained
10 words with meaning	18 month	Not attained

Physical examination: pallor +

icterus -

cyanosis -

clubbing –

ANTHROPOMETRY MEASUREMENTS

- Weight: 10 kg
- Height : 91cm
- Head circumference: 46 cm
- Chest circumference : 51cm
- Mid upper arm circumference :

Right : 12cm

left : 12cm

- Mid thigh circumference

Right : 19cm, left:19 c.m calf muscle: 15cm b/l

Asta sthana pariksha

- *Nadi: 86/min* *Mala:Baddha*
- *Mutra: Prakuta* *Jihva:Nirama*
- *Sparsa: Mrudu* *shabda:prakruta*
- *Aakruthi: Avara* *Druk:prakruta*

Systematic Examination

GIT- NAD

CVS- S1, S2 heard, NAD

RS- Lungs- clear, NAD

UGS- NAD

Motor system examination.

Motor system examination	**Rt Upper Limb**	**Lt UL**	**Rt LL**	**Lt LL**
Bulk	Normal	Normal	Normal	Normal
Tone	Normal	Normal	Spasticity	Spasticity
Power	3/5	3/5	1/5	1/5
Gait	-----	-----	Scissoring	
DTR	Could not elicit	Could not elicit	Brisk (+++)	Brisk (+++)
Involuntary movements	Not present	Not present	Not present	Not present

CNS

Higher mental functions.

- Alert
- Conscious

Sensory system examination.

- Touch :responded
- Pain :responded
- Temperature: responded

Investigations

- Blood for – Hb% 10gms/dl

T C 9,200cells/cumm

D.C- N 60% L 30% M 2% E 8%

- Urine:- sugar - Nil

Albumin - Nil

- Stools – ova - Nil

cyst - Nil

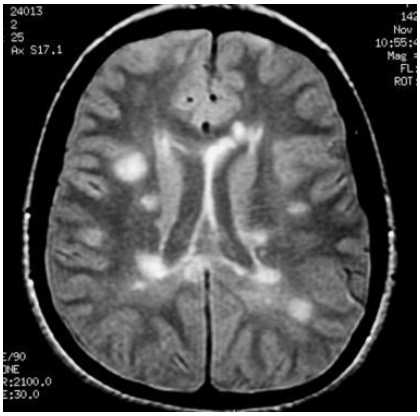
- Neuro sonogram: 22.Nov.2012

Small Peri-ventricular cysts both frontal white matter.

?sequelae of HIE of the pre term.

- MRI BRAIN :-12 Feb. 2014

Peri ventricular leukomalacia.



Treatment plan

Samana chikistha

- *Tab.Triphala guggulu* one tablet twice a day along with honey
- *Kalyanaka ghrutham* 10 ml daily with milk
- *Sarawataristam* 10 ml along with 10 ml water two times a day
- *Smruthi granules* 1 tsp once day with milk
- *Mentat syrup* 10 ml once a day

Sodhana chikistha

- *Abhyangam* with *Bala tailam* for 14 days
- *Sastika Sali Pinda swedam(Nvara kizi)* for 14 days
- *Vasti with C.P formula* for 7 days

(kashayam prepared with Brahmi churanam, vacha churnam yasthi churnam)

Ingredients		**C.P formula(150ml)**
Madhu		4 ml
Saindavam		½ g
Satapushpa		1 g
*Kashaya*m	*Brahmi*	4 g
	Yasti	2 g
	Vacha	1 g
*Taila*m – *Mahanarayana Taila*m		75 ml
Gomutram		5 ml

66ml

Duration of study

The period of study is six months(3 consecutive sittings with interval of 2 months).

OBSERVATIONS AND RESULTS

Goniometric measurement

Analysis was done before and after treatment based on clinical features of C.P and scoring was given as per scales used for study.

TYPES OF JOINTS		BT	AT		
			1st sitting	2nd sitting	3rd sitting
ELBOW (FLEXION)(0-150)		30	30	45	50
WRIST	FLEXION (0-60)	10	10	10	20
	EXTENSION (0-60)	10	10	10	10
	RADIAL DEVIATION (0-20)	10	10	10	10
	ULNAR DEVIATION (0-30)	10	10	15	15
KNEE (FLEXION)(0-150)		40	40	50	60
ANKLE	PLANTAR FLEXION(0-40)	0	10	10	10
	DORSIFLEXION (0-20)	0	0	0	10

Mild progress seen in spasticity, mild improvement seen after overall therapy, attains neck holding, sitting with out support now.

DISCUSION

Cerebral palsy cannot be co-related with any single disease or condition in *Ayurveda* as it is a multi factorial condition. All most all major neurological disorders are identified with *Vata dosha*. So, considering the classification and their respective features, Cerebral Palsy can be compared to *Vata vyadhi* or *Vikara*, which may manifest itself in any form like *Pakshaghata, Ekangavata, Pangu, Sarvangavata, Kampavata* etc., and diagnosis is based on the *lakshanas.*

Probable mode of action of *samana oushadhi*

Triphala guggulu acts as vatahara, other drugs like saraswatharistam etc having Medhya properties improves central nervous system functions.

Probable mode of *abhyanga & Navarakizi*

Abhyanga with ksheera bala and Navara kizi(Snigdha swedana) acts as brimhana, best vata prasamana. which is suitable for children. It decreases the muscle and joint stiffness

(spasticity), improves blood circulation also, it synergies between the Central nervous system composed of the spinal cord and the brain and the Peripheral nervous system.

Probable mode of vasti

Concept of mechanism of *vasti* can be interpreted by understanding the microanatomy of the gut. It reveals scattered, frequently solitary hormone producing cells of the stomach, intestines and pancreas. These are known as Gastro entero pancreatic endocrine system able to produce peptides and amines as active as hormones or as neurotransmitter. Gastro entero pancreatic system releases their secretions in response to nutrient stimulation from the circulation and lumen and has to potential to secrete into the circulation and lumen too. These specialized cells of gut are known as entero endocrine cells, enterocromaffin cells etc. as they exactly act like that of neurons of the brain, they are designated as paraneurons. The GEP endocrine cells are presumed to have receptor sites on their surface, adequate stimulation to which by Secretogogoues reaction. When *Vasti* dravyas are passed through the GIT tract probably stimulate the cells and act as Secretogogoues thus compensating neurological deficit and improving the functions.[6]

CONCLUSION

As the condition is co-related with *vata vyadhi*, *snehana* and *vasti* which is the prime therapy to pacify *vata* has been selected. There was always an incessant quest of enquiry regarding management of Cerebral palsy case from all branches of medicine. Though a lot of researches are being carried out, the conventional medical field has failed to achieve effective result in the treatment. Due to its Multidisiplinary team approach, the available therapies are also highly expensive and complicated. In spite of all the sophisticated technologies, no effective treatment for the underlying brain pathology has been formulated till date. Physiotherapy is presently accepted as the standard management protocol.

REFERENCES

1. OP Ghai, Vinod K paul, Arvind bagga, Cerebral palsy, Central nervous system, Ghai essential pediatrics, Seventh edition: 2009, Cbs publishers & distributors pvt ltd, Pg no: 559.
2. Mayoor K chedda, Cerebral palsy, Chapter 5, Centarl nervous system, Practical aspects of pediatrics, Seventh edition, CBS publishers & distributors pvt ltd, Pg no: 161.

3. OP Ghai, Vinod K paul, Arvind bagga, Cerebral palsy, Central nervous system, Ghai essential pediatrics, Seventh edition: 2009, Cbs publishers & distributors pvt ltd, Pg no: 560.
4. P.V.Sharma, threemarmeeya adhyaya, ninth chapter, siddhi sthana, 9/6, Charaka samhitha text with English translation, edition: 2014, Chaukambha orientalia, Varanasi, pg no: 645.
5. P.V.Tiwari, Rogaadhyaya, twenty seventh chapter, 31-32 sloka, Kasyapa samhitha, Reprint: 2016, Chaukambha viswabarathi, pg no: 68.
6. Sundaravadana M, N. Krishnaiah, An Evaluation of Madhutailyadhi yapana vasthi in management of cerebral palsy published on IAMJ.