

COMPREHENSIVE AYURVEDIC SOLUTIONS FOR SPASTIC CEREBRAL PALSY: A MULTIMODAL APPROACH

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ABSTRACT

Cerebral Palsy is a condition which mainly occurs due to neuro-motor dysfunction and limit motor activity. It is considered one of the leading causes of disability in children and prevalence are more in early childhood or from birth. From an Ayurvedic perspective, it is considered as *Vata Vyadhi*, characterized by *Sthambha* and *Sankocha*. Other symptoms include muscle rigidity, poor muscle coordination, delays in motor milestones, difficulty in walking and challenges with swallowing, etc. Ayurvedic treatments can play significant role in alleviating symptoms; however complete cure is very difficult. Ayurvedic therapies such as *Snehana*, *Swedana*, *Vasti* and *Upanaha*, etc. can be employed to manage symptoms of disease. These therapies reduces spasticity, enhances shoulder motion and increased strength of muscle. Other Ayurveda modalities such as; *Deepana*, *Pachana* and *Vatanulomana* therapies can also be used to improves quality of life of affected children. This article described comprehensive Ayurvedic solutions for Spastic Cerebral Palsy.

KEYWORDS: *Ayurveda, Cerebral Palsy, Vata Vyadhi, Children, Neuro-Motor.*

INTRODUCTION

Cerebral Palsy is a disorder which mainly affecting movement and posture, thus causes neuro-motor limitations. The non-progressive disturbance in brain is considered as major pathological event of this condition. It is categorized into several motor syndromes; spastic hemiplegia, a subtype of this condition which often attributed to neonatal stroke. Children with Cerebral Palsy witnesses reduced spontaneous movement. In this condition arm is being more severely impacted than the leg. Spasticity in the ankle causes deformity of the foot. It can be categorizes into various forms as depicted in **Figure 1**. Among them diplegia is most common followed by hemiplegia and quadriplegia, however monoplegia and triplegia are very rare.^[1-4]

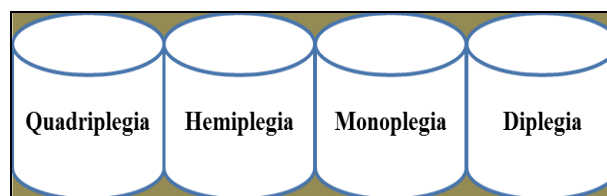


Figure 1: Various forms of Cerebral Palsy.

In Ayurveda, Cerebral Palsy is considered as one of the *Vata Vyadhi*, with spastic hemiplegia and symptoms can be correlated with early age *Pakshaghata*. Several factors are believed to contribute to the development of disease as mentioned below.

- ✓ Imbalance in *Ritu*, *Kshetra*, *Ambu* and *Bija*.
- ✓ Neglect of *Dauhridd Avamanana*.
- ✓ Inappropriate *Garbhopaghatkar Bhavas*.
- ✓ Failure to follow *Garbhini Paricharya*.
- ✓ *Akala Pravahana*.
- ✓ *Shiromarmabhighata* or *Prana Pratyagamana*, etc.

Samprapthi

Abhighata or indulgence in causative factors can lead to the vitiation of *Vata* followed by *Rakta*, these altogether damages *Sira* (blood vessels). Further event of hemorrhagic infarctions obstruct blood flow and aggravates *Vata*. The disturbed *Vata* impacts *Snayu*, manifesting symptoms of hemiplegia. Vascular occlusion is the most common event of cerebral palsy, leading to spasticity and other complications.^[4-6]

Symptoms of Cerebral Palsy in Children

- ✚ Delayed speech
- ✚ Difficulty in grasping and other motor activities
- ✚ Urinary incontinence
- ✚ Movement and coordination difficulties
- ✚ Visual and auditory impairments, etc.

The management of Cerebral Palsy involves multidisciplinary approach including occupational therapy, orthopedic interventions, physiotherapy and uses of botulinum toxin to manage spasticity. Ayurvedic management involves internal medicines along with *Panchakarma* procedures. Therapies like *Udvartana*, *Abhyanga*, *Swedana* and *Basti* can be used along with herbal remedies.^[5-7]

Ayurvedic Solutions for Spastic Cerebral Palsy**Internal Medicine**

- Enhancing the digestive fire (*Deepana*).
- Facilitating the digestion of improperly digested metabolites (*Pachana*).
- Regulating the movement of *Vata Dosha* (*Vatanulomana*).

External Therapies

- Oil-based therapies (*Snehana*).
- Inducing perspiration to relieve stiffness (*Swedana*).
- Gentle purification therapies (*Mridu Shodhana*).

External Therapies

Rookshana therapy which is useful in *Dosha* vitiation may enhance blood circulation by opening channels, thus reducing stiffness and alleviates spasticity of disease. Similarly *Sarvanga Abhyanga* as full-body massage using medicated oils nourishes body and balances *Vata Dosha*. *Abhyanga* reduces stiffness, enhances flexibility and improves circulation. This also stimulates central nervous system by activating nerve endings, thus helps to promote motor function.

Sweating therapies like *Vaspa Swedana* and *Nadi Swedana* also considered beneficial for such types of condition which provide relief from stiffness and improves joint mobility. These therapies open *Shrotas*, reduce aggravation of *Vata Dosha* and improve circulation. *Shashtika Shali Pinda Swedana* improves local blood circulation, relieves pain, prevents muscle atrophy and reduces spasticity.

Nasal administration of medicated oils helps to clear channels and pacify aggravated *Dosha*. Drugs used in this therapy mainly include *Shadbindu Taila*, *Anu Taila* and *Pachendriyavardhan Taila*. These drugs support sensory organs and cure neurological functions in the patient of cerebral palsy.

Basti is also considered most significant therapy of Ayurveda for managing cerebral palsy in children. It regulates and balances *Vata Dosha*, expels accumulated waste and improves *Bala*. *Matrabasti* nourishes *Dhatu*, enhances motor skills and improves neuro-motor coordination. This therapy facilitates systemic absorption of drugs thus effects of medicine observed at targeted site. By targeting nerve terminals *Matrabasti* effectively manages *Vata Dosha* in cerebral palsy.^[7-9]

Internal Therapies

- ✓ *Samvardhana Ghrita* promotes rapid growth and considered beneficial for conditions like *Pangu*, *Muka*, *Ashruti* and *Jada*. It supports in walking and other physical activities.
- ✓ *Ashwagandha Ghrita* is indicated for enhancing vitality, improves digestive fire, imparts *Srotoshodhana* effect thus aiding in growth and development of children.
- ✓ *Swarnaprashana* involves oral administration of gold combined with herbs, *Ghrita* and *Madhu*. It improves *Buddhi*, *Bala* and support optimal growth of children.
- ✓ *Kumarabharana Rasa* is known for its antibacterial, antipyretic, immunomodulatory, rejuvenating and nourishing properties, it also promotes growth in children.
- ✓ *Medhya Rasayanas* such as *Yastimadhu*, *Guduchi*, *Shankhpushpi* and *Mandukaparni* enhances cognitive abilities, prevent impairments, promote neurodevelopment and boost mental functioning. Similarly *Kalyana Ghrita*, *Panchagavya Ghrita*, *Samvardhana Ghrita* and *Brahmi Ghrita* are used to support mental growth in children which also prevents consequences of Cerebral Palsy.

Mode of Action of Ayurveda Therapies in Cerebral Palsy

The treatment includes *Sarvanga Udvartana*, *Abhyanga*, *Swedana*, *Pichu*, *Shirodhara*, *Nasya*, *Basti* and herbal regimen. Ayurvedic therapies like *Deepana* and *Pachana* help to balance metabolic and digestive activities thus provide adequate nourishment to the body. This mental nourishment helps to promote brain recovery. *Snehana* and *Swedana* helps in the mobilization of metabolic waste, this facilitates waste's movement for effective elimination. Ayurveda therapies influence motor function thus improves muscle relaxation. The heat generated during these treatments accelerates tissue repair and improves spastic limbs. *Basti* therapy support neurological function ensures faster absorption and efficient action on the nervous system and facilitating neurotransmitter communication. Ayurvedic

management improve motor functions in children with cerebral palsy thus enhances quality of life.^[9-12]

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CONCLUSION

The goals of managing cerebral palsy include prevention of secondary complications, supporting motor coordination, curing joint deformities and improving quality of life of the child. The etiology and features of disease resemble to the *Vata Vyadhi*, which thus *Vata* balancing therapies mainly advocated for managing cerebral palsy. Ayurveda therapies promote flow of energy, enhance blood circulation and clearing channels; thus relieve symptoms of disease. Treatments like *Swedana*, *Basti* and *Abhyanga* along with oral medications reduces spasticity, enhances flexibility and relieving discomfort of disease.

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