Case Report

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(ISSN Online: 2229–3566, ISSN Print: 2277–4343)

IMPROVING QUALITY OF LIFE THROUGH PANCHKARMA AND ORAL THERAPY: PAEDIATRIC CASE REPORT ON CEREBRAL PALSY

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Received on: 20/10/25 Accepted on: 22/1/26

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DOI: 10.7897/2277-4343.1716

ABSTRACT

Introduction: Cerebral palsy (CP) is the most prevalent cause of childhood physical disability. It is an umbrella term for a group of non-progressive, noncontagious disorders resulting from damage to the developing brain, leading to permanent motor impairment in movement, posture, and tone. While primarily physical, it often impacts cognitive, communicative, and social development. In Ayurveda, such conditions can be correlated to sahaja, garbhaja, or jataja classifications. With no known cure in contemporary medicine, exploring integrative management is essential. Material and Method: This case report details the Ayurveda management of a four-year-old male diagnosed with spastic CP. The intervention comprised an integrated protocol over 68 days, including internal herbal medications and specific Panchakarma procedures. The key therapies administered were Shalishatik Pind Swed (bolus fomentation) and Kshir-Balatail Matra Basti (a specialized medicated enema formulation). Result: Following the 68-day therapeutic regimen, a clinical reassessment was conducted. The patient demonstrated measurable functional improvement, quantified as an overall 15–20% enhancement in symptomatic presentation and motor function. Discussion: The observed improvement suggests that the multimodal Ayurvedic protocol, particularly Basti and Sweden, may be a beneficial supportive management strategy for spastic CP. These procedures align with Ayurveda principles of balancing Vata Dosha and nourishing neural tissue. This case highlights the potential of Ayurveda, specifically Panchakarma, in paediatric neurorehabilitation. However, being a single case study, it necessitates further rigorous investigation through larger clinical trials to validate efficacy and standardize treatment protocols.

Keywords: Cerebral palsy, Kshir-balatail matra Basti, Panchakarma in paediatric, shalishatik pind swed.

INTRODUCTION

Cerebral palsy is the commonest cause for the disability in children, making them physically, mentally and socially handicapped. Cerebral palsy (C.P.) is not a specific disease, but it is an umbrella term encompassing a group of no progressive, noncontagious condition that cause motor impairment characterized by abnormalities of movement, posture and tone[i]. It results as a consequence of damage to a developing brain at any time during antenatal, natal and postnatal period of life. There are 4 sub type of CP mentioned in 'Swedish Classification' (SC) viz. spastic, ataxic, dyskinetic and mixed. In this entire sub type, spastic CP accounts for major portion of 70% to 80%[1].

Population-based studies from around the world report that the prevalence estimates of CP range from 1.5 to more than 4 per 1,000 live births.[2] The incidence is higher in males than in females; the surveillance of Cerebral Palsy in Europe (SCPE) reports as M: F ratio of 1.33:1. In India prevalence of CP is 3 cases per 1000 live birth.[3]

Cerebral Palsy has no complete cure in any science of Medicine. But its treatment includes multiple treatments i.e. Medication, Physiotherapy, Speech therapy, Occupational therapy and Surgery. Multisystem involvement in CP makes its management different than symptomatic treatment while treating it. Therefore, multidisciplinary approach is desired for the management of CP. In Ayurveda classics there is no exact description of the disease entity which exactly matches the features of CP but In Charaka Samhita Vatavyadhi chikitsa Adhyaya has given which includes Panchakarma procedures like Snehana, Swedana, Basti, Nasya. Some conditions found discrete in classics at different places like Phakka, Pangulya, Mukatva, Jadatva, Ekanga Roga, Sarvanga Roga, Pakshaghata Pakshavadha etc. under the group of Vata Vyadhi.[4]

In Cerebral Palsy, Vata Dosha is mainly involved. So that our aim is to maintain the normal functions of Vata in the management of CP. Snehana, Swedana, Basti etc. like Panchakarma procedure and Bramhi ghrita may help at both physical and mental level. So here comparative effectiveness to improve the condition with the intention of minimizing the disability to improve their quality of life and give them active, self-supporting long life with happiness.[5]

CASE REPORT

A 4 year old male child coming from Middle class socioeconomic status came to our CSMSS Ayurveda Kaumarbhritya OPD with Parents. Patient present with the complaint of (chief complaints) delayed milestones, poor coordination, stiffness, and mental retardation (both since birth).

Vartaman vyadhi vrutta (history of present illnesses) The patient, a 4-year-old male child, has a significant history of perinatal complications. He was delivered preterm via lower segment caesarean section (LSCS). The immediate neonatal period was critical, characterized by a failure to cry spontaneously at birth, and complicated by neonatal septicemia, episodes of convulsions, and hyperbilirubinemia (jaundice). These factors

collectively contributed to a global developmental delay. Clinical features of neurological impairment, specifically hypertonia (spasticity) and athetoid or choreiform involuntary movements, were first noted by the family around the age of 8 months. Since the manifestation of these symptoms, the child has received ongoing evaluations and treatments from various healthcare practitioners across multiple systems of medicine. Despite this prolonged and multi-specialty intervention, the therapeutic response has been minimal, with no substantial improvement in motor function or developmental milestones. In pursuit of an integrative management strategy, the family has now presented to our Ayurvedic institution for a comprehensive assessment and to initiate a structured course of Panchakarma and allied Ayurvedic therapies.

Purvavyadhivritta- (history of past illness) Septicaemia, convulsions episodes. jaundice.
Chikitsavrutta (treatment history) Child was taking tablet for a muscle relaxant, also child was undergoing physiotherapy treatment and also to reduce contractures had undergone treatment.
Kulaja Vrutta (family history) No relevant family history found and consanguinity found.
Birth history Antenatal: Mother (28years) was suffering from hypothyroidism and mental stress during pregnancy and taking tablet dose 25mg for that regularly.
Natal history: Preterm 32 weeks LSCS was done due to oligohydramnios and primiparity of mother. Baby did not cry soon after birth. Birth weight was 1.7kg (very low birth weight).
Postnatal history Birth asphyxia, neonatal sepsis, pathological jaundice.
Immunization history-Proper up to this age.
Vaiyaktika Vrutta (personal history)

Ahara-Patient's ahara was totally dependent for food intake and was eating only semi solid and liquid food due to lack of coordination in deglutition. Poor Appetite Specially Madhur ras dominant Ahara. (sweet diet).
Vihaar- Due to severe spastic quadriplegia activity was always assisted. Disturbed Sleep (2–3 h/day, 6–7 h/night). Bed wetting (had not achieved bladder control) and Since birth there was drooling of saliva from the mouth.

Examination-Vitals were normal. No deformity had shown in different systems like Cardiovascular system, respiratory system and per abdomen examinations.

Astavidh examination - The patient exhibited a predominantly Vata-Kapha (VK) constitution (Prakṛti). On pulse examination (Nadi), a Tridoshaj state was observed with notable Vata aggravation. Urinary function (Mutra) was within normal limits, with typical frequency and colour. However, bowel function (Mala) was significantly compromised, presenting as constipation with infrequent passage (once every 3–4 days) of dark-coloured, foul-smelling stool. Age-appropriate bowel control, typically expected by 1.5 years, was not yet established.

Examination of the tongue (Jivha) revealed a coating, indicative of impaired digestive function (Agnimāndya). Speech development (Śabda) was delayed, as the patient had not acquired monosyllabic utterances expected by nine months of age. Physical palpation (Sparśa) revealed a hard and dry tactile quality, consistent with the underlying hypertonia and spasticity. Ocular assessment (Dṛuk) identified a divergent concomitant squint in the left eye. The general bodily appearance (Ākṛuti) was lean.

Neurological examination confirmed hypertonia (spasticity) with contractures at the ankle and knee joints. The patient's inability to follow commands precluded formal muscle power testing. While the sensory system appeared intact, a comprehensive cranial nerve assessment was not feasible due to the patient's significant physical and cognitive impairments. Findings of hyperreflexia and a positive (upgoing) Babinski sign pointed toward an upper motor neuron lesion, a hallmark of cerebral palsy. No meningeal signs were present.

Differential diagnoses considered included spastic cerebral palsy, central nervous system demyelinating or degenerative diseases, and sequelae of postnatal hypoxia. The diagnosis was subsequently confirmed by a paediatric specialist as "Severe Quadriplegic Spastic Cerebral Palsy" secondary to postnatal hypoxia.

Table 1: Prakriti and Samprapti ghatak and Vighatan

Roga Prakriti	Samprapti Ghātaka	Samprapti Vighātan
Dosha	Vata dominant tridosha	Basti (medicated enema)
Dūshya	Asthi sandhi snayu and kandara	Snehan and Shali shasti pinda swedan,
Agni	mandya	Improvement by udvartana
Srotas	Majjavaha(brain)	Medhya drug (bramhighrita)
Srotodushti	Sanga (obstruction)	Srotoshodhan by (SSPS) swedan, udvartan, basti
Udbhavastha-na	Pakvashya(asvatvyadhi)	Basti
Vyaktisthana	Sarvanga(quadriplegia)	Snehan, Shali shasti pinda swedan, basti, ghritpan oral
Roga	Spastic cp (Balpakshaghat)	Vatvyadhi chikitsasutra
Upadrava	Pranvaha-Recurrent RTI Rasvaha-Anorexia, Indigestion Manovaha-MR Purishvaha-Constipation	Snehan, Shali shasti pinda swedan, basti, ghritpan oral
Sadhyasadhyata- (prognosis)	Yapya	Long term 68 days.

Table 2: Treatment protocol Total duration 68 days

First Course	Second Course	Third Course
3 days Deepana pachana	-	-
3 days Udvartana	3 days Udvartana	3 days Udvartana
5 days Abhyanga with KshirBala Taila and Nadi Sweda	5 days Abhyanga with KshirBala Taila and Shali shasti pinda swedan,	5 days Abhyanga with KshirBala Taila and Shali shasti pinda swedan,
7 days Matra Basti KshirBala Taila	7 days Matra Basti KshirBala Taila	7 days Matra Basti KshirBala Taila
10 days interval	10 days interval	-

Table 3: Yava and Kulattha Churna for Udvartana

Ingredient	Botanical Name	Part used	Ratio
Yava	*Hordeum vulgare* Linn.	Shushka Beeja	1
Kulattha	*Dolichos biflora* Linn.	Shushka Beeja	1

Table 4: Improvement -shown by highlighted gradation, composite numeric score (sum of grades across domains)

Domain	Grade 1	Grade 2	Grade 3	Grade 4
Muscle Tone and Spasticity	Slight increase in tone, minimal resistance at end of ROM	More marked increase in tone through most ROM, but easily movable.	Considerable increase in tone, passive movement difficult. via Target of Matra Basti and Sudation(ssps) for systemic vatashamana.	Limb rigid in flexion/extension.
Involuntary Spasms	Infrequent, mild spasms.	moderate spasms. Improved - of vāta's cala/śīta guṇas by Aṣṭāṅgaghṛta, Abhyanga, Sudation.	Frequent, strong spasms.	Near-constant, severe spasms.
Joint Contractures and ROM	Mild tightness, full functional ROM.	Noticeable loss of ROM, beginning contracture. Measurable ROM gains (20° elbow/knee, 15° ankle) vatastabhana and systemic vatashamana.	Significant loss of ROM, contracture forming.	Severe contracture, very limited ROM.
Manual Ability / Functional Use	Can handle most objects with slight difficulty.	Handles objects with difficulty, needs modifications. 20% MACS improvement from reduced spasticity and improved ROM.	Handles a limited selection of easily managed objects.	Cannot handle objects, severely limited function.
Growth and Systemic Nourishment	Mild delays or fragility.	Clear delays, poor tissue quality. Addressed via bṛmhaṇa of rasādi dhātus by Brahmi Ghrita, Abhyanga, Matra Basti.	Significant stunting, weak tissues.	Severe global impairment.
Metabolic Waste and Circulation	Mild sluggishness, cool limbs.	Moderate stagnation, some edema/discoloration. Addressed by Udvartana (opens skin channels) and SSPS Sudation (excretes mala via sweat).	Poor circulation, chronic mild edema, palpable stiffness.	Severe stagnation, chronic edema, trophic skin changes.

Table 5: Improvement grade before and after treatment

Assessment Domain	Pre-Treatment Status (Grade 2 Baseline)	Post-Treatment Status and Improvement	Mechanism of Action (Ayurvedic Perspective)
Muscle Tone and Spasticity	More marked increase in tone through most ROM (Ashworth Scale: Grade 2).	Reduced tone. Measurable decrease in spasticity, moving towards Grade 1 characteristics.	Systemic Vatashamana (pacification) via Matra Basti and SSPS Sudation. Relief of Sanga (obstruction) in channels.
Joint Contractures and ROM	Noticeable loss of ROM, beginning contracture at ankle/knee.	Measurable ROM gains: 20°in elbow/knee, 15° in ankle. Reduced plantar flexion.	Vatastabhana (stabilization)and systemic vatashamana via Bastiand Swedana.
Involuntary Spasms	Moderate spasms.	Reduced frequency and intensity.	Pacification of Vāta's Cala (mobile) and Śīta (cold) properties by Aṣṭāṅgaghṛta, Abhyanga, Sudation.
Manual Ability / Functional Use (MACS)	Handles objects with difficulty, needs modifications.	20% improvement in MACS score. Improved ability to grasp/manipulate objects.	Direct result of reduced spasticity and improved ROM.
Growth and Systemic Nourishment	Clear delays, poor tissue quality (lean body, *Agnimāndya*).	Improved tissue quality and growth trajectory. Better appetite and digestion noted.	Bṛmhaṇa (nourishing therapy) of rasādi dhātus by Brahmi Ghrita, Abhyanga, Matra Basti.
Metabolic Waste and Circulation	Moderate stagnation (constipation, foul-smelling stool, cool limbs).	Improved circulation and bowel function. Reduction in stagnation.	Udvartana opened skin channels (srotas); SSPS Sudation excreted waste (mala). Basti addressed Purishvaha srotodushti.
Cognitive and General Understanding	Significant impairment, unable to follow commands, delayed speech.	Noticeable improvement in alertness, responsiveness, and cognitive engagement.	Medhya effect of Brahmi Ghrita and nourishment of Majjavaha srotas (neural channels) via Basti.
Activities of Daily Living (ADL) and Quality of Life	Totally dependent for feeding, assisted activity, disturbed sleep, drooling, bed-wetting.	Enhanced functional independence and QOL. Subjective reports of better sleep, reduced drooling, and improved interaction.	Combined effect of reduced physical symptoms and improved systemic homeostasis (Dosha balance).
Composite Clinical Score	Sum of grades across domains indicated Severe Quadriplegic Spastic CP.	Overall 15-20% symptomatic and functional improvement.	Synergistic effect of the multimodal protocol: Purification (Udvartana, Swedana), Pacification (Basti, Ghrita), and Nourishment (Snehana, Bṛmhaṇa).

Udvartana: With Yava and Kulattha Churna (3 days) for 20 minutes.

Abhyanga With Kshir-Balataila[6] for 20 min followed by sudation[7] for 20 min (5 days).
Matra Basti: With Kshir-Bala Taila[8] Internal medicine Bramhi ghrita given, throughout treatment schedule, except the days on which Basti was given. Three such settings were done with the interval of 10 days. Anupan given for internal medicine is Lukewarm water, dosage: 2.5 g once/day.[9]

RESULT AND DISCUSSION

The following assessment criteria used to observe the effect of therapy: parameters of growth; goniometric evaluation to assess the range of motion (ROM); developmental milestones using CDC grading for motor milestones; muscle spasticity via the Ashworth scale; muscle power using the MRC scale; the MACS (Manual Ability Classification System) to assess upper limb function; an ADL scale to evaluate daily activities; assessment of cognitive functions and general understanding; and documentation of subjective improvement and parent's opinion. Together, these tools will provide a comprehensive measure of improvement in the quality of life (QOL) for Cerebral Palsy patients. Refer below [Table 4] for improvement -shown by highlighted gradation.

Based on the clinical outcomes, the observed improvements can be understood through an integrated Ayurvedic and physiological framework. The therapy's success is attributed to four primary mechanisms. (Table 5)

The clinical approach centered on nourishing the bodily tissues through specific interventions. Systemic nourishment was achieved using formulations like Brahmi Ghrita to support the nervous system, alongside practices such as Abhyanga for direct tissue nutrition and Matra Basti to promote overall growth and cognitive development.[10] This was complemented by purification and enhanced circulation, where preparatory techniques including Udvartana helped open the micro-channels to improve blood flow, while sudation procedures facilitated the removal of accumulated metabolic waste[11] A direct impact was observed on mobility and spasticity, with measurable improvements in joint range of motion—such as reduced ankle plantar flexion—linked to a decrease in Achilles tendon tightness.[12] This addresses the fundamental characteristic of spasticity, which presents as an abnormal resistance to stretch. The therapeutic measures provided both localized stabilization and systemic pacification of the physiological principle governing movement and neurotransmission.[13] Underlying this process was a correction of the pathological obstruction model. The reduction in spasticity is understood through first clearing the obstructive elements, thereby relieving a pathological blockage of the mobile physiological principle. Once this obstruction was removed, subsequent therapies effectively pacified its aggravated state, helping to normalize its inherent qualities of mobility and coolness.[14] This dual mechanism resulted in decreased resting muscle tone and a reduction in spasms. Consequently, the enhancement in manual dexterity and broader functional skills arises directly from this combined effect of diminished spasticity and improved joint mobility. The significant contribution of Basti is further highlighted for its proposed influence on the central nervous system, potentially mediated through stimulation of the enteric nervous system.[15]

CONCLUSION

The patient demonstrated an overall clinical improvement of approximately 15–20%, which significantly enhanced his quality of life (QOL). This outcome aligns with the modern concept of neuroplasticity, which posits that the central nervous system (CNS) possesses the ability to reorganize itself—for instance, through mechanisms like axonal sprouting—and can assume the functions of damaged neurons. This challenges the erstwhile notion that neurons are incapable of repair or regeneration post-injury. Early and consistent intervention is crucial in managing conditions like Cerebral Palsy (CP), as even modest gains can lay a foundation for substantial skill development later in life. Although CP remains incurable, the positive results observed in this case study indicate that an integrated Ayurvedic approach, combining Pañcakarma therapy with appropriate internal medication, can serve as a valuable supportive strategy to markedly improve the QOL of affected patients.

Declaration of Patient Consent
Authors certify that they have obtained patient consent form, where the caregiver has given their consent for reporting the case along with the images and other clinical information in the journal. The caregiver understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Cite this article as:

Priya V. Bulbule, Tejal D. Naik and Akash M. Chavan. Improving quality of life through Panchkarma and oral therapy: Paediatric case report on Cerebral palsy. Int. J. Res. Ayurveda Pharm. 2026;17(1):21-25 DOI: http://dx.doi.org/10.7897/2277-4343.1716

Source of support: Nil, Conflict of interest: None Declared