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Ayurveda

AYURVEDIC MANAGEMENT OF SPASTIC CEREBRAL PALSY : A CASE REPORT

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ABSTRACT **Introduction:** Spastic cerebral palsy (SCP) is a neurological disorder with persistent motor spasticity and behavioral issues like hyperactivity. Conventional treatment target symptoms while Ayurveda offers a holistic approach. **Material And Method:** This case report examines the impact of Ayurvedic therapies on a 13-year-old boy diagnosed with Spastic Cerebral Palsy and hyperactivity, focusing on improvements in his quality of life.The patient was treated using a combination of Ayurvedic oral medications, Panchakarma procedures (including therapies like Abhyanga and Shirodhara), and supportive interventions. The treatment spanned over a specific duration, with periodic evaluations of motor skills, spasticity, and behavioral outcomes. **Result And Discussion:** The intervention led to notable improvements in motor abilities, a reduction in spasticity, and better control of hyperactive behavior. Enhanced daily functioning and quality of life were observed, as reported by caregivers and clinical assessments. This case highlights the therapeutic potential of Ayurveda in managing SCP and its associated symptoms. These findings underscore the need for further research to validate Ayurveda's role as a complementary therapy in pediatric neurodevelopmental conditions.

KEYWORDS : Spastic Cerebral Palsy, Hyperactivity, Vata Dosha.

INTRODUCTION

Cerebral palsy (CP) refers to a set of persistent developmental disorders of movement and posture that cause restricted activity and are thought to be caused by non-progressive disruptions that occurred in the growing fetal or infant brain. Disturbances of sensation, perception, cognition, communication, and behavior are frequently associated with the motor disorders of cerebral palsy, along with epilepsy and secondary musculoskeletal issues.[1] In India, there are 3 cases of cerebral palsy for every 1,000 live births, with 77.4% of these kids being diagnosed with the spastic form of the disease.[2] Spasticity is a motor condition defined by (i) excessive tendon jerks (hyper reflexia) and (ii) an elevation in muscle response to applied stretch, which is favorably related to the rate at which the muscle lengthens (velocity-dependent hypertonia).[3] As Cerebral Palsy is a multifactorial illness, it cannot be associated to any one condition described in Ayurveda. However, Cerebral Palsy may be regarded as Janma Bala Pravritta Vyadhi (congenital condition) and Beeja Dosha Janit Vyadhi due to the categorization and unique characteristics of the kinds[4]. Doshas (bodily humors) can also be a cause. It may be thought of as Shiro Marmabhighata Vata Vyadhi, which is a condition brought on by head injuries[5]. Due to a variety of reasons, Marmaghata can occur before conception (Garbhapurvaka), before delivery (Prasava Purvaka), during delivery (Prasavakaleena), or following delivery (Prasavottara).4 Given that it is Vata Kapha Pradhana, where Snehana, Swedana with Alternate Rukshana, and Basti are the main lines of treatment, the therapeutic management is performed accordingly. This case study examines the treatment of spastic cerebral palsy with the use of specific Ayurvedic internal and external therapy approaches.

Spastic Cerebral Palsy-

Spastic Cerebral Palsy (SCP) is a non-progressive neurological disorder caused by brain injury or abnormal brain development, affecting movement and muscle coordination. It is the most common subtype of cerebral palsy, accounting for about 70–80% of all CP cases. Characterized by muscle stiffness (spasticity), impaired motor control, and difficulty in voluntary movements.

Motor disorder of CP are often accompanied by disturbance of sensation, perception, cognition communication and behavior.

There is not direct correlation available in ayurvedic classics with CP, but there are many conditions and some causative factors linked to eitiopathology for such type of disease condition.

- Some conditions which find an overlap of symptoms of CP include phakka, pangulya, mukatva, jadatva, ekangavata, sarvangavata, pakshaghata under the group of vatavyadhi.

- **Causes & Risk Factors**

Prenatal Causes: Infections during pregnancy, maternal hypertension, or genetic mutations.
Perinatal Causes: Birth asphyxia, premature birth, low birth weight.
Postnatal Causes: Brain infections (meningitis, encephalitis), head injuries, or lack of oxygen supply to the brain.

Clinical Features Of SCP-

1. **Motor Impairment:** Muscle stiffness, abnormal reflexes, difficulty in walking.
2. **Hypertonia:** Increased muscle tone leading to stiff movements.
3. **Delayed Milestones:** Late crawling, standing, or walking.
4. **Associated Conditions:** Speech difficulties, cognitive delays, seizures, and behavioral issues like hyperactivity.

Challenges In Conventional Management-

Physiotherapy & Rehabilitation: Helps improve mobility but requires long-term therapy.
Medications: Antispasmodic drugs (e.g., Baclofen) reduce spasticity but may have side effects.
Surgical Interventions: Selective dorsal rhizotomy (SDR) or tendon release procedures, often invasive and costly.

Role Of Ayurveda In Spastic Cerebral Palsy (SCP)-

Ayurveda classifies SCP under Vata Vyadhi (neurological disorders caused by Vata Dosha imbalance). As Sushrutacharya have mentioned Sankoch[6], Bhedadi gunas. Due to this gunas there is increse in spasticity. Pathophysiology involves Dhatukshaya (tissue depletion) and Margavarodha (obstruction in neural pathways).

Ayurvedic Therapies Focus On: Vata pacification through Panchakarma & herbal medicines. Balya (strength-promoting) & Rasayana (rejuvenation) therapy to enhance nervous system function. Holistic care combining diet, lifestyle modifications, and external therapies like Abhyanga (medicated massage), Shirodhara, and Basti therapy. In ayurvedic classification of diseases this can be classified as Yapya disease. Hence, no total cure is available and supportive management have to be done throughout lifetime.

Case Report

- A diagnosed case of Spastic Cerebral Palsy, Male -13 years brought by parents in kaumarbhritya OPD.
- **Chief Complaints-**

1. Unable to stand and walk without support

2. Speech Not developed (only Monosyllable)
3. Cognitive developemental delay
4. Spasticity of Upper and lower Limbs
5. Hyperactive.

Birth history – Not significant- Normal Antenatal, Natal and postnatal period.

FT/LSCS/BCIAB/Bt. Weight- 2.8 kgs.

Personal history- Child was totally dependent for food intake, appetite was normal,.

Nature of activity was always assisted (due to severe quadriplegia). Bed wetting was present. Child was not given any treatment previously. Child was currently on Physiotherapy and was adviced for Botox treatment and Oral Baclofen.

Examination-

- weight- 29.5kg: HR- 98/min; RR- 26/min;

Vitals were normal. Cardiovascular system , Respiratory system and per abdomen examination showed no abnormality.

- Prakriti- Vatadhika-pittaja

- **Ashtavidha Parikshan-**

1. Nadi – Vataja (pulse- 88/min)
2. Mutra- Prakrut
3. Mala- Prakrut
4. Jivha- sama
5. shabda- speech was not developed (only monosyllables)
6. Sparsha- was Hard and Dry skin due to vatadhikya and spasticity.
7. Druk- showed squint in left eye.
8. Akruti- krusha (was lean due to malnourishment)

CNS Examination-
Patient was diagnosed Hypertonia and contractures at ankle joint. Child was unable to follow command.

Hypereflexia S/o upper motor neuron lesion seen in SCP.

GMFCS score – Level V
ASHWORTH SCALE for spasticity- Grade- IV
RANGE OF MOTION SCALE- shoulder 4; Elbow-2; wrist and fingers-2;
Foot dorsiflexion- 1

- Differential Diagnosis-

Neuro Degenerative diseases
Muscular dystrophy

Pathophysiology And Management

- Dosha- Vata Pradhan Tridoshaj
- Dushya- Rasadi sapta dhatu primarily- Mansa, Asthi, Majja, Snayu, Kandara.
- Agni- Mandya
- Srotas- Mansa-Asthi-Majjavaha srotas
- Sroto dushti- Sanga + Vata Avrodh.
- Sthana- Pakvashaya (vata sthana)
- Vyaktisthana- Sarvanga

Treatment Details –

Deepana and Pachana	Hinguvachadi Vati and Chitrakadi Vati 1 tablet twice a day before meals with Lukewarm waer. Given before starting Panchkarma therapy for 5 days.
Abhyanga with Nadisweda	Sarvanga Abhyanga with BalaGuduchyadi taila for 15 minutes Followed by Nadi Sweda for 7 days.
Shirodhara	Done with Brahmi taila for 15 minutes for 7 days
Prati Marshya Nasya	Done with Ksheerbala 101 taila 4 drops in each nostrils once daily.
Matra Basti	Done with Panchagavya Ghrita (80ml) for 7 days.
Upnaha Sweda	Upnaha choorna paste was applied on both legs and wrapped with banana leaves and kept for 3-6 hours for 7 days.

Child was asked for follow up 15 days after discharge.

On Discharge Child Was Given

1. Dhanvantara Taila Capsules 1 capsule twice a day for 1 month
2. Ksheerabala 101 taila nasya daily 4 drops in each nostrils once a day
3. Ajmodadi Rasayanam 5gm choorna three times a day for 1 month

This treatment was set over 6 months with 3 seatings of mentioned Panchakarma therapy was given for 7 to 15 days each.

Observations

Before Treatment	After treatment (6 months0
Ashworth scale- Grade IV	Ashworth scale- Grade III
GMFC score- Level V	GMFC score- Level IV
Range of motion for shoulder-4 ROM for elbow- 2 ROM for wrist and finger-2	Range of motion for shoulder- 5 ROM for Elbow-3 ROM for Fingers and wrist-3
Speech- monosyllables (ba-ba)	Speech – Monosyllables (learnt new words- Dada, Aai)

RESULT

- The treatment was aimed at samprapti vighatana using internal medicine as well as panchakrma therapy. The aim was to Vata shaman and shodhana; Rasadi dhatu Nourishment; Agni Deepana, Sroto shodhana,
- Improvement in appetite was seen. Due to Snehana, Swedana and Upanaha helped opening the minute channels and may have improved lymph and blood circulation and resulted in reduction of kapha and vata avarodha.
- After 6 months of treatment there was 20% improvement in spasticity and mobility of joint.
- Upper extremity movement, grasp was seen. Child was readily picking up small objects, was able to throw ball. Was walking 4-5 steps without support of caretaker (with foot drop support belts).
- Child was able to recognize people, was following small command like To say hello, to wave bye bye, to pray when prayer started.
- There was significant relief in Hyperactivity and temper tantrums. Child was calmer.

DISCUSSION

Spastic cerebral palsy is a neurological disorder marked by muscle stiffness and difficulty in movement, affecting posture and daily functioning. Ayurveda views this as a Vata dosha imbalance, classified under Vatavyadhi. Treatment focuses on pacifying Vata through therapies like Snehana, Swedana, Basti, Shirodhara etc. along with oral medications and diet. This holistic care aims to improve nervous system function, reduce symptoms, and enhance quality of life for patients with this chronic condition.

1. Hinguvachadi vati- ingredients- Hingu, Vacha, Haritake, etc. It is Renowned drug used in treatment of Adhmana, shola, Gulma, Pandu, Agnimandya, Vatavyadhi. Works by Agni Deepana, Pachana of doshas and Srotoshodhaka.
2. Chitrakadi Vati- Ingredients- Chitraka, Pippalimoola, etc. Used in Aam Avastha, For Agni Deepana, Vatanulomana, Aam and Dosha pachana. Also works as Vatakaphahara.
3. Balaguduchyadi Taila- Bala, Guduchi, Deodar, Teel Taila. Used in- Vata Roga. Vatahara and Pittahara. Reduces Rukshata in body and helps in ROM and spasticity.
4. Panchagavya Ghrita[7] - made Dugdha-Ghrita-Dadhi-Gomutra-Gomaya and Stated by different acharyas in treatment of apasmara, Vishama Jwara, For deha shuddhi and Kapha vinasha. As Vata is the main dosha involved in Neurological diseases. This ghrita acts on Vata and given through basti acts on Pakvashaya which is defined as Vata Sthana.
5. Brahmi Taila[11]- ingredients- Brahmi, amalaki, tila taila. Brahmi is Medhya, Vak pravrutti vardhak, Unmada vinashini. Brahmi is Medhya, Balya and is Vatahara through this action Brahmi Taila works on neurological disorders, delayed development, spasticity and hyperactivity.
6. Ksheerabala 101 Taila[10]- Ingredients- Bala, Ksheera, Tila taila. Ref- Ashtang HridayaIt is a Great Rasayana, indriya prasadaka and Vata shamaka. Jeevana, Bruhana helps in Muscle wasting, Spasticity.
7. Upnaha Choorna- Vacha, Kinwa, Sathawha, Devdaaru, Dhanya, Gandha Dravya, Rasna, Eranda, Mansi are used in Upnaha

Choorna. It is stated in Ashtang Hridaya used in vata vyadhi and Kapha avrutta vata.

8. Dhanvantar taila capsule- Reference – Sahasrayoga. Used in Vata vikara, Neurological conditions.
9. Ajmodadi Choorna- Ajmoda, Vidanga, etc. mentioned in Sharangadhara Madhyama Khanda

All contents are Vatahara and works in Sandhi gata vata and, ruja. Useful in Kapha-Vataja diseases.

CONCLUSION

As Cerebral Plasy can be classified as Yapya Vydadhi complete cure is not possible. Given the limitations in the Modern medicine. Holistic approach is necessary and adviced. The therapy regimen used here is intended to alleviate spasticity and enhance higher cognitive abilities. The topic demonstrated significant progress in gross motor skills, strength, spasticity reduction, scissoring, and several personal, social, and linguistic milestones. With the correct therapy, the quality of life can be raised and dependency can be reduced, even if cerebral palsy cannot be cured completely.

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