AYURVEDIC MANAGEMENT OF CEREBRAL PALSY (VYANA AVRUTA UDANA VATA) - A CASE STUDY

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ABSTRACT

Cerebral palsy as it is commonly known as the most common cause of physical disability in children. It results from a defect or lesion of the developing brain. In spite of all the progresses in newborn care its prevalence remains at 2-2.5% per 1,000. Although cerebral palsy is described as a static Encephalopathy, the neurological features may change over the time¹. Ayurveda has a specialized branch for child health care called as Kaumarabhritya. But in are classics there is no pin point co-relation related to cerebral palsy, But it can be considered as Vyana Avruta Udana Vata, Considering all the above, we have formulated an Ayurvedic protocol to improve the condition of Cerebral Palsy patients. Of the many types and subtypes of Cerebral Palsy, none has any known “cure.” Here, an effort was made to treat a 5-year-old male child with spastic type of Cerebral Palsy using multiple Ayurveda treatment modalities. At the end of 10 days of treatment, Pañcakarma procedures along with internal medication resulted in 5-10% improvement in the overall effect of therapy.

Keywords: Cerebral palsy, Medicated enema, Balaroga, Vyana Avruta Udana vata

INTRODUCTION

Cerebral palsy as it is commonly known as the most common cause of physical disability in children. Cerebral palsy is non progressive disorder of posture and movement often associated with epilepsy and abnormalities of speech, vision and intellect. It results from a defect or lesion of the developing brain². In spite of all the progresses in newborn care its prevalence remains at 2-2.5% per 1,000. The prevalence in India is not definitely established. Although cerebral palsy is described as a static Encephalopathy, the neurological features may change over the time³.

At present 75-80% of causes of cerebral palsy point to antenatal factors, which are responsible for abnormal development of brain⁴. Main etiological factors in 10-25% of children with cerebral palsy are intra partum asphyxia & exposure to maternal infections such as chorioamniotic sepsis, UTI & Fever with elevated levels of cytokines, prematurity especially infants weighing less than 1,000gms are major risk factors for intraventricular hemorrhage & Periventricular leukomalasia⁴.

Perinatal and Neonatal causes such as sepsis, neonatal seizures, cerebral ischemia & low APGAR Scores are present in substantial number of children with cerebral palsy⁵. Ayurveda has a specialized branch for child health care called as Kaumarabhritya which deals with Dharana and Poshana of the individual from the period of conception, newborn, infancy, and toddler and till it reaches into adulthood⁶. But in are classics there is no pin point co-relation related to cerebral palsy, but there are many conditions and some causative factors linked to etiopathology for such type of disease condition described in many chapters in different texts. Some conditions which find an overlap of symptoms of Cerebral Palsy include Phakka⁷ (a disease entity in which locomotion is affected), Pāṅgulya⁸ (locomotor disorders), Mūkatva⁸ (dumbness), Jaḍatva (mentally subnormal),
Ekāṅgaroga (monoplegia), sarvāṅgaroga (quadriplegia), Pakṣaghāta (hemiparesis), Pakṣavadha (hemiplegia) etc., under the group of vātavyādhi (neurological disorders). As these disorders are present in Cerebral Palsy these diseases can be taken for differential diagnosis. In Ayurvedic classics Acharyas have mentioned regarding antinatal causes like inappropriate ṛtu (ovulation cycle), kṣetra (uterus), ambu (amniotic fluid and foetal nutrition) and bīja (sperm and ovum), dauhṛdāvamanana (neglect of urges during dauhṛda avasta of pregnant women), presence of garbhopaghātakarabhāva (substances which can cause defects or death of fetus), incompatible garbhavṛddhikarabhāva (normal requisites for growth and development of fetus) and improper Garbhiniparicaryā (antenatal regimen) may have undesirable effects on the fetus hampering its normal growth and development consequently leading to many diseases, deformities, and even death including the Cerebral palsy.

Considering all the above, we have formulated an Ayurvedic therapy protocol to improve the condition of Cerebral palsy patients.

CASE REPORT
BASIC INFORMATION OF THE PATIENT
AGE - 5 Years
SEX - Male
RELIGION-Hindu
SOCIOECONOMIC STATUS- Middle Class
PARENTS: FATHER- Farmer, MOTHER- Housewife

PRADHĀNAVEDANĀVISESA (CHIEF COMPLAINTS)
Delayed milestone, unable to walk since birth

VARTAMĀNAVYĀDHIVRTTA (HISTORY OF PRESENT ILLNESSES)
A Male Patient of 5 Years was brought by Consanguineous Married Parents, Baby delivered through normal vaginal delivery at 36 weeks of pregnancy, Cried immediately after birth and with no other complications at birth. Milestone like neck holding was attained at appropriate age, crawling & sitting milestone was attained appropriate to age, walking milestone has not been attained so far. Speech is inappropriate to age hence for the same complaints child was brought to our hospital for further Management.

PŪRVAVYĀDHIVRTTA (HISTORY OF PAST ILLNESS)
No significant past history relevant to present condition

CIKITSĀ VRṬTĀNTA (TREATMENT HISTORY)
Patient was not under any medication, they approached Shri B M K Ayurveda Hospital, Belagavi, Karnataka, for first time, they have not consulted any Doctors before approaching us.

KULAJA VRṬTĀNTA (FAMILY HISTORY)
2nd Degree Consanguineous married parents.
Has 3 children
- 1st child (female) FTND 9 Years Normal
- 2nd child (female) FTND 7 Years Diagnosed case of Spastic Cerebral palsy.
- 3rd child (Male) FTND 5 Years Spastic Cerebral palsy

BIRTH HISTORY
Antenatal - Mother (25 Years) undergone proper antenatal care, there was no any significant abnormality concerned to mother during pregnancy
Natal - Normal Vaginal Delivery, Baby cried immediately after Birth, Birth Wight 2.8kg
POSTNATAL - No History of Jaundice or Birth Asphyxia

VIRUDDHĀBHISAMSKRĪTI (HISTORY OF IMMUNIZATION)
Proper for age

VAIYAKTIKA VRṬTĀNTA (PERSONAL HISTORY)
Aharaja- Patient was totally dependent for food intake, Appetite was poor. Diet was dominant in madhura rasā (sweet diet).
Viharaja- Nature of activity was always assisted (due to severe spastic quadriplegia). Sleep was disturbed (2–3 h/day, 6–7 h/night).

Examination
Vitals were normal. Cardiovascular system, respiratory system and per abdomen examinations had shown no deformity. Prakṛti (constitution) was Vātādhikakapha Astavidhaparīksā

Nādi (pulse) was vātādhikakapraṣāda. There was no complaint with regard to Miitra (urine). Frequency and color were normal. Mala (stool) was constipated and passes, once in 2–3 day Bowel control achieved (which should have been achieved by 1.5 years of age). Jihvā (Tongue) was sāma (coated suggestive of improper digestion). Šabda (speech) was not learnt (monosyllables should have been learnt by 1 year of age, presently inappropriate to age). Sparśa (touch) was hard and dry (due to hypertonia and spasticity). Dṛk (eyes) showed (Horizontal Nystagmus). Akṛti (appearance) was lean (due to malnourishment)
CENTRAL NERVOUS SYSTEM EXAMINATION

Patient was diagnosed to have the hypertonic (spasticity), Muscle Power is Elicitated by Standard Power Gradation, Hyperreflexia was present, suggestive of upper motor neuron disease (which is the hallmark of CP). Sensory system was intact and no abnormality found

DIFFERENTIAL DIAGNOSIS

Spastic CP, Acute Flaccid Paralysis, Leukodystrophy, Krabbe disease

DIAGNOSIS

Spastic Cerebral Palsy

TOTAL DURATION- as given below.

1st 3DAYS -  
Koshta Shodhan with Gandharvahastadi Taila Once at HS (20ml)  
Krimihara Management with Vidangarishtha 5ml TID  
Udvarthana with Triphala choorna + shashtikashalee choorna (20 min)

NEXT 7 DAYS - Sarwanga Abhyanga with Dhanwantara Taila (20min)

Shastika Shalli Pinda Sweda (20min)  
Matra basti - Ksheera Bala Taila (15ml)  
Godhumadi Upanaha lepa (Both lower limbs)
Along with PHYSIOTHERAPY & SPEECH THERAPY for 10 Days

DISCUSSION

To evaluate the efficacy the following assessment criteria used

1. Parameters of growth (weight)
2. Ashwarth scale to assess spasticity
3. Muscle Power (Standard grading system)
4. Appetite (questionnaire)
5. Bowel habits (Bristol scale)

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The causative factor in this case can be taken as Janmajatavikara due to history of Tulyagotriyavivaha. The prevalence of congenital/genetic disorders (Janmajatavikara) due to consanguineous marriages (Tulyagotriyavivaha) may be prevented by increasing awareness on Atulyagotriyavivaha. Delayed development of gross and fine motor function may be due to a problem in normal function of Vata (Pravartaka Cheshtanamucchavchanam)\(^{11}\). Hence, to achieve results in developmental disorders, function of Vata (normal physiology) should come to normal. Here, improvement in growth might have been achieved by nourishment of Rasādi dhātus. Koshtha Shodhana with Gandharvahastadi Taila, Udwarthana with Udwarthana Choorna & Nadi Sweda with Dashamoola Kashaya, had given a well platform for further procedures like Abhyanga, Swedana and Basti by removing Avarana and Srotorodha Abhyanga and Swedana caused Dosha Gati from Shakha to Koshtha, which helped in removing vitiated Dosha through Basti. Finally, Basti helped to accomplish the effect of Shodhana. Thus by the combined effect of total therapeutic measures, Avarana was removed, Vata came to normalcy, and hence the condition improved.

Udvartana opened the minute channels and improved blood and lymphatic circulation, Abhyanga provided nourishment by its property like Snigdha, Mridu, Bahala, Pichchhila which are told as properties of Brimhana Dravya. Swedana caused excretion of Mala (waste metabolites). Snigdha Basti (Matra basti with Khseera Bala Taila) is told to have Brumhana effect.

Spasticity is characterized by increased resistance by passive stretch. This may happen due to Avarana of Vata, wherein, due to Avarana, Vayu cannot perform its normal function, that is, normal movement of joints (Pravartaka Cheshtanam). Initially, Udvartana helped in reduction of vitiatiated Avarita Kapha by its Ruksha and Srotoshodhana property. Once Avarana is removed, the aim of treatment is to pacify vitiatiated Vata. Vayu resides in Sparshnendriya, which is located in Tvacha, Abhyanaga is quoted as Tvachya, so Abhyanga might work directly on Vata to bring it back to normalcy. Basti acts on CNS by stimulating ENS (enteric nervous system).

**FIGURE-1: MUSCLE SPASTICITY**

**FIGURE-2: MUSCLE POWER**

*Gandharvahastadi Taila, Udwarthana with Udwarthana Choorna & Nadi Sweda with Dashamoola Kashaya, had given a well platform for further procedures like Abhyanga, Swedana and Basti by removing Avarana and Srotorodha Abhyanga and Swedana caused Dosha Gati from Shakha to Koshtha, which helped in removing vitiated Dosha through Basti. Finally, Basti helped to accomplish the effect of Shodhana. Thus by the combined effect of total therapeutic measures, Avarana was removed, Vata came to normalcy, and hence the condition improved.

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CONCLUSION
The selected Ayurvedic treatment modality is effective in relieving signs and symptoms like Spasticity, Appetite and Improper Bowel habits and thus reducing the Spasticity in child with Spastic Cerebral Palsy along with Improvements in Muscle Tone and Muscle Power. Sarvanga Abhyanga, Shastikashalipindasveda, Matra Basti & Godhumadhi Upanaha gave good result in this case, thus it acts in reducing spasticity of lower limb.

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