

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 brain⁵. 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 intra ventricular 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 *Phakka*⁷ (a disease entity in which locomotion is affected), *Pāngulya*⁸ (locomotor disorders), *Mūkatva*⁸ (dumbness), *Jaḍatva* (mentally subnormal),

*Ekāṅgaroga*⁹ (monoplegia), *sarvāṅgaroga*⁹ (quadriplegia), *Pakṣaghāta*⁹ (hemiparesis), *Pakṣavadha*⁹ (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), *dauhrdā* (neglect of urges during *dauhrda* avasta of pregnant women), presence of *garbhopaghātakarabhāva*¹⁰ (substances which can cause defects or death of fetus), incompatible *garbhavṛddhikarabhāva* (normal requisites for growth and development of fetus) and improper *Garbhiṅparicaryā* (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 VRTTĀNTA (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 VRTTĀNTA (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 Weight 2.8kg

POSTNATAL - No History of Jaundice or Birth Asphyxia

VIRUDDHĀBHISAMSKRTI (HISTORY OF IMMUNIZATION)

Proper for age

VAIYAKTIKA VRTTĀNTA (PERSONAL HISTORY)

Aharaja- Patient was totally dependent for food intake, Appetite was poor. Diet was dominant in *madhura rasa* (sweet diet).

Vihara- 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 *vātādhikatridoṣaja*. There was no complaint with regard to *Mūtra* (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). *Śabda* (speech) was not learnt (monosyllables should have been learnt by 1 year of age, presently inappropriate to age). *Sparsā* (touch) was hard and dry (due to hypertonia and spasticity). *Drk* (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 Elicited 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 *Vidangarishta* 5ml TID

Udwarthana with *Triphala choorna* + *shashtikashalee choorna* (20 min)

Nadisweda with *Dhashamoola Kashaya*(10min)

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. Ashworth scale to assess spasticity

3. Muscle Power (Standard grading system)

4. Appetite (questionnaire)

5. Bowel habits (Bristol scale)

TABLE: 1

<i>ROGA PRAKRITI</i>	<i>SAMPRAPTI GHATAKA</i>	<i>SAMPRAPTI VIGHATANA</i>
<i>DOSA</i>	<i>Vatadhika tridosha</i>	<i>Basti</i>
<i>DUSHYA</i>	<i>Asthi, Sandhi, Snayu, Kandara</i>	<i>Abhyanga & Swedhana</i>
<i>AGNI</i>	<i>Mandya</i>	<i>Koshta Shodhan, Krimihara chikitsa</i>
<i>SROTAS</i>	<i>Majjavaha</i>	<i>Medhya chikitsa</i>
<i>SROTO DUSTI</i>	<i>Sanga</i>	<i>Udwarthana</i>
<i>UDBHAVASTHANA</i>	<i>Pakvasaya</i>	<i>Basti</i>
<i>SANCHARASTHANA</i>	<i>SarvaShareera</i>	Whole Body <i>Udwarthana, Abhyanga, Swedhana</i> f/b <i>Basti</i> is done
<i>VYAKTHASTHANA</i>	<i>Shaaka</i> [Lower limbs]	<i>Abhyanga, Swedhana, Basti</i> f/b <i>Godhuma upanaha</i> helps in reducing <i>Staimithyata</i> of lower limbs
<i>ROGA</i>	Spastic cerebral palsy	<i>Samanya Vatavyadhi chikitsa</i> is followed
<i>UPADRAVA</i>	<i>Sankocha, Manodushti, Vibandha</i>	<i>Godhuma upanaha</i> relives <i>Sankocha</i> and <i>Basti</i> relives <i>Vibandha</i>

FIGURE-1: MUSCLE SPASTICITY

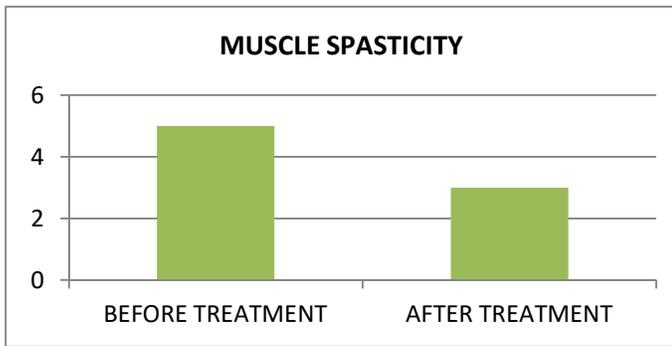
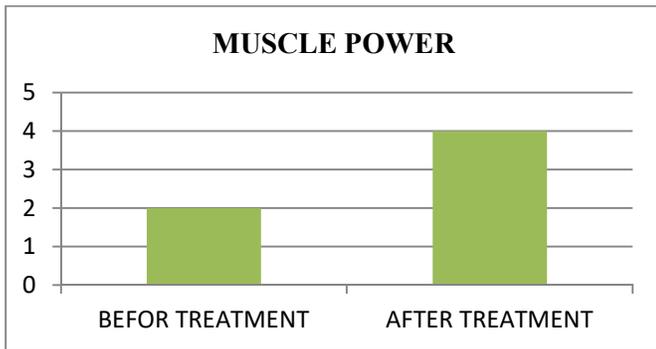


FIGURE-2: MUSCLE POWER



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.

Udvarthana 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, *Udvarthana* helped in reduction of vitiated *Avarita Kapha* by its *Ruksha* and *Srotoshodhana* property. Once *Avarana* is removed, the aim of treatment is to pacify vitiated *Vata*. *Vayu* resides in *Sparshnendriya*, which is located in *Tvacha*, *Abhyanga* 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).

Sarvanga Abhyanga with Dhanwantara Taila



Sarvanga Shastika Shalli Pinda Sweda



Godhumaupanaha to both lower limbs



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, Shastikashalipindasweda, Matra Basti & Godhumadhi Upanaha* gave good result in this case, thus it acts in reducing spasticity of lower limb.

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