



CASE STUDY OF PAEDIATRIC CEREBRAL PALSY PATIENT-

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ABSTRACT It is most common cause of physical disability in children. It encompasses a group of non-progressive & non-contagious disorders. Prevalence rate is 2-2.5 per 1000. Cerebral palsy may be described as a static encephalopathy, the neurological features may change over the time.¹ We cannot correlate cerebral palsy with any one disease in Ayurveda since it's a group of disorder, but can be considered as a *vata vyadhi*. Cerebral palsy is divided into spastic, hypotonic & extrapyramidal.² *Vagbhatt* classified disease as- *sahaj(hereditary), garbhaj(congenital) & jataj(psychosomatic)*.³ A case study of 2 & a half year male child had been discussed here. With the help of Ayurvedic medicine, *panchkarma procedures* & physiotherapy child would had been better than earlier.

KEYWORDS : Non-progressive, static encephalopathy, spastic, extrapyramidal, panchkarma

INTRODUCTION-

Cerebral palsy is defined as a group of permanent disorders of the development of movement & posture causing activity limitation. It also attributed to non-progressive disturbances that occurred in the developing foetal brain. The motor disorders of CP are often accompanied by disturbances of sensation, perception, cognition, communication & behaviour, epilepsy & secondary musculoskeletal problems. CP usually refers to the first 2-5 years when there is active growth of brain.⁴

Etiopathogenesis includes cerebral malformation, perinatal hypoxia, birth trauma, chorioamnionitis, prothrombotic factors, acid base imbalance, indirect hyperbilirubinemia, metabolic disturbances & intrauterine infections.

Prematurity is important risk factor for spastic diplegia while term babies get quadriplegia/hemiparesis.

TYPES- 1.

Spastic CP-classified into spastic quadriplegia, diplegia/hemiparesis. Early diagnostic features of neural damage include abnormally persistent reflexes, feeding difficulties, persistent cortical thumb after 3 months of age & a firm grasp.

On vertical suspension, infant goes into scissoring due to adductor spasm with an extensor posture & does not flex his knees/thigh.

Stretch tendon are always brisk.

Variable degree of mental & visual handicaps, seizures & behavioural problems.

- Spastic quadriplegia- common in term babies, exhibit signs- opisthotonic posture, pseudobulbar palsy, feeding difficulties, restricted voluntary movements, motor deficit
- Spastic diplegia- common in pre-term babies, & associated with periventricular leukomalacia. Lower limbs are more severely affected with extension & adduction posturing, brisk tendon jerks & contracture.
- Spastic hemiplegia- recognised after 4-6 months. Early hand preference, abnormal persistent fisting, abnormal gait disturbance. Vascular insults, porencephaly or cerebral anomalies may be associated.

2. Hypotonic CP- tendon reflexes are normal or brisk & Babinski response is positive. They are often severely mentally retarded. In cerebellar involvement, hypotonia is not associated with exaggerated reflexes. Muscle may show fiber disproportion & delayed CNS maturation.

3. Extrapyramidal CP- clinically, it includes athetosis, choreiform movements, dystonia, tremors & rigidity. Arm, legs, trunk, neck may

be involved. Mental retardation, hearing deficit may present. Cerebral damage following bilirubin encephalopathy is one of the causes.

4. Cerebellar involvement- seen in less than 5% of patients. There is hypotonia & hyporeflexia. Ataxia & intention tremors appear by the age of 2 year.⁵

In Ayurveda, CP can be considered as congenital disorder. Also caused due to *doshas*. CP can be discussed under *shiro-marmabhighat vata vyadhi*. So, for *vata roga, basti* can be considered as best treatment. For case study, a male child had been taken from inpatient department of *kaumarbhritya* of R. D. Memorial College & Hospital, Barkhedi kala, Bhopal. He had given ayurvedic medicine, *panchkarma* procedure & physiotherapy. The outcome was assessed using different parameters.

PATIENT INFORMATION-

Age-two and half year

Gender-male

Socio-economic status-middle class

Chief complaint- 1. unable to walk & stand

2. unable to speak & make eye contact.

Birth history- child was delivered through LSCS in reputed private hospital by renowned doctor. Baby delivered prematurely at 36 weeks of gestation. After birth, baby cried immediately but later on develops respiratory distress so the baby had to be kept in ventilator for 6 days due to severe pneumonia. Due to respiratory distress, baby had sign of brain atrophy as concluded from his MRI. At the time of birth weight of baby is 2.25kg (low birth weight). Baby was timely immunized according to immunization schedule.

Mother's obstetric history- Her first male child aged 8 yrs was normal followed by normal delivery. She had an ectopic pregnancy during second baby in right fallopian tube leading to tubectomy of right fallopian tube & termination of pregnancy. In her third pregnancy, she had complaints of hypertension & hypothyroidism. She was unable to breast feed her newborn. Due to which extra milk formulation had been provided to child.

Food habit- vegetarian, 1 chapati at morning & 1 at night.

Family history- not any hereditary disease found.

Developmental milestone- delayed

On examination,**VITALEXAMINATION-**

Temp-97 degree F, height- 90cm, pulse- 96/min, weight-11.2Kg, BP- 110/70mmHg, R/r-18/min

SYSTEMIC EXAMINATION-

Nervous system- conscious but dis-oriented. Patient was diagnosed to have the hypertonias (spasticity) and contractures at ankle and knee joint. Muscle power could not be elicited because patient was unable to follow the command. Sensory system was intact, and no abnormality found. Cranial nerve examination could not be done because of severely handicapped physical and mental state of the patient. Hyperreflexia was present, suggestive of upper motor neuron disease (which is the hallmark of CP). Babinski sign was up going (positive).

CVS-S1S2 Normal

Respiratory system-airway entry equal on both sides

Digestive system- P/A soft & non-tender

ASTHAVIDHAPARIKSHA-

Naḍi (pulse)- *vata*dhikatriḍoṣaja. *Mutra* (urine)- Frequency and colour were normal. *Mala* (stool)- constipated and passes with a foul smell and dark colour, once in 2-3 day. *Jihva* (Tongue) was *sama* (coated suggestive of improper digestion). *Shabda* (speech) was not learnt (monosyllables should have been learnt by 9 months of age). *Sparsha* (touch) was hard and dry (due to hypertonias and spasticity). *Dṛika* (eyes) showed squint in right eye (divergent and the concomitant type of squint). *Aakṛiti* (appearance) was lean (due to malnourishment).

DIFFERENTIAL DIAGNOSIS-

Spastic CP, demyelinating (degenerative) disease of central nervous system (CNS), sequel of postnatal hypoxia.⁶

INVESTIGATION-

MRI

EEG⁷

CHIKITSA-

1. *Brahmi ghrita*-half teaspoon BD
2. *Arvindasava*- 5ml TDS
3. *Chywanprash avelaha*-half teaspoon BD
4. *Bala, ashwagandha, masha-pindasweda*
5. *Chandanbalalakshadi tail* - *shiropichu*
6. *Brahmi ghrita-nasya*
7. *Vacha churna-udvartan*

Above treatment is given for one year. Later on, some improvement is seen in patient. Now the patient is advised to take following medicines-

1. *kalyanak ghrita*-1/4 tsp BD with milk
2. *paustik churna*-1/4tsp BD
3. *Ashwagandharishhta*-3ml BD
4. *kshirbala tail* for local application
5. Physiotherapy & regular exercise is advised.

After treatment, patient got somewhat relieved. Stiffness decreases in both legs.

Before treatment-



After treatment-



SAMPRAPTIGHATAK-

DOSHA- *vata pradhan tridosha*

DUSHYA- *mansa, asthi, majja, sandhi, snayu, kandara*

SROTAS- *majjavah*

SROTODUSHTI- *sanga*

AGNI- *manda*

ROGAMARGA- *madhyam*

UDBHAVSTHAN- *pakwashaya*

VYAKTISTHAN- *sarvanga sharira*

SADHYAASADHYATA- *yapya*

DISCUSSION-

As cerebral palsy is due to *vata roga so nasya of brahmi ghrita* is given which shows *brimhana & medhya* effect & we all know that "*nasa hi shirso dwaram*". Nasa (nose) is the portal route for administration of oil, this stimulates the olfactory nerve which is connected with the higher centres of brain which are damaged in CP. The lipid content of oil absorbed through blood brain barrier and reached to the damaged site and stimulates the nerves, increase the blood supply that ultimately leads to nervous sensation in different parts of the body. We can say that Neck holding which is much delayed milestone is achieved by the *nasya* very fast. *Nasya* helps in Fine motor and Language function. *Udvartana* (massage with dry powder) with *vacha churna* have qualities like *Ruksha, Kaphahara* helps to open up minute channels which improve blood and lymphatic circulation and also do some nerve stimulation. *Pinda Swedana (Sudation)* with *bala, ashwagandha, masha* pacifies the Vayu, which causes rigidity and contracture due to its *Ruksha and Shita* Guna. *Chywanprash avelaha* had property of strengthening & rejuvenation. It provides nutrition to body & mind with adapto-immuno-neuro-endocrine-modulator properties. *Arvindasav* improves appetite & increases physical & mental strength, thus promoting optimum growth & development of a child. *Shiropichu* with *chandanbala lakshadi taila* was done. *Shiropichu* helps to treat the ailments of head, spine & disease of cranial nerves caused by *vata* disorder.

CONCLUSION-

Cerebral palsy is difficult to cure completely but quality of life may be improved to somewhat extent. By following above mentioned treatment protocol, child condition had been improved. Stiffness decreases in both legs. *Panchkarma* therapy had been proved to be effective in case of cerebral palsy. Previously, it was believed that neurons do not repair or rejuvenate after any injury, but the new concept of neuroplasticity says that CNS have the ability to repair their neurons by axonal sprouting to take over the function of damaged neurons. Child shows considerable improvement in gross motor functions & certain social & language milestone.

REFERENCES-

1. IAP textbook of paediatrics, by A Parthasarathy, 6th edition, pg-464
2. Nelson textbook of paediatrics, by Kliegman, Stanton, St Geme, Schor, vol.-3, first south asia edition reprinted 2016, pg-2896
3. Gupta KA, Vrudha Vagbhata, Ashtanga Samgraha. Varanasi: Chaukambha Krishnadas Academy; 2005. Sutra Sthana 22/3; p. 172.
4. IAP text of paediatrics, by A Parthasarathy, 6th edition, pg-464
5. Ghai essential paediatrics by Vinod K Paul, Arvind Bagga, 8th edition, pg.no.581
6. IAP text of paediatrics, by A Parthasarathy, 6th edition, pg-464
7. IAP text of paediatrics, by A Parthasarathy, 6th edition, pg-464
8. Ayurvedic management of spastic cp-a case study by Shailaja U & Mangala Jyothsana et al
9. Faizzehra R Vakil, K. S. Patel, V. K. Kori, Sagar M. Bhide. Ayurvedic Approach in the Management of Cerebral Palsy- A Case Study. AYUSHDHARA, 2019;6(1): 2070-2074