

EFFECT OF KSHEERA VASTI IN THE MANAGEMENT OF SPASTIC CEREBRAL PALSY IN INFANT-A CASE STUDY

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ABSTRACT

Cerebral palsy (CP) is multifactorial, non-progressive neuromotor disorder of cerebral origin and it is the leading cause of childhood disability affecting cognitive function and developments in ~1.5 to 3 cases per 1000 live births. Spastic type of cerebral palsy is one among the types of CP's. Based on Ayurvedic classics CP may be stated as *Janma Bala Pravritta Vyadhi*, & may also be considered as *Shiro Marmabhighata Vata Vyadhi*. Therapeutic management is done according to *Vata Vikara* where the main line of treatment is considered to be *vasti* i.e *ksheera vasti*. **Methodology:** 6 months infant suffering with spastic cerebral palsy selected from O. P. D of Dr. B. R. K. R. Govt. Ayurvedic College, Hyderabad, on the basis of (physical symptoms) motor activities like difficulty in sucking, spasticity of body, poor coordination, delayed milestones, and behavior symptoms like irritability, unusual tenseness, was received *Ksheera vasti* for 7 days in 2 cycles with a gap of 10 days. **Results:** Treatment with *ksheera vasti* proved to be more supportive in improving the motor activities and gross behavioral activity pattern. And results found were encouraging. **Conclusion:** However, till now there is no effective medicine in modern medicine. So, mankind hopes to search the perfect remedy from Ayurveda by its holistic approach. In this present study *ksheera vasti* was tried and significant results were found in case of spastic cerebral palsy.

Keywords: spastic cerebral palsy, *ksheera vasti*, motor activities, gross behavioral activities.

INTRODUCTION

Cerebral palsy (CP) is multifactorial, non-progressive neuromotor disorder of cerebral origin and it is the leading cause of childhood disability affecting cognitive function and developments in ~1.5 to 3 cases per 1000 live births. It is a condition with multiple etiologies which may be antenatal, natal, and postnatal. Adverse intrauterine factors like developmental malformations of brain and intrauterine infections account for some cases. Significant perinatal

damage has been reported in 8-10%, genetic factors 2% cases. Although Birth asphyxia is an important cause of CP, it is now suggested that asphyxia may be a consequence rather cause of the processes that lead to CP, and it accounts for about 10% cases of CP [1]

Spastic CP is most common form among other forms of CP's and accounts for 70-75% of cases. It is characterized by upper motor neurons signs, viz. Clasp knife hy-

per-tonia, exaggerated deep tendon reflexes and extensor plantar responses. This spastic CP has 3 types; Quadriplegia, diplegia, hemiplegia. Spastic quadriplegic patients are severely disabled. All limbs involved. It is secondary to hypoxic ischemic events; often have multicystic encephalomalacia, and cortical/subcortical atrophy. Most of having severe mental retardation, pseudobulbar palsies, microcephaly, growth failure, visual and hearing deficits and often epilepsy. Hip subluxation or dislocation may occur due to severe spasticity. Delayed walking and toe walk due to tightening of Achilles tendon. Arms internally rotated, elbows extended or lightly flexed and hands fistled later flexion contractures develop at ankles, knees, elbows. Hyper tonicity leads to arching of back and sudden lifting of child may produce visible adductor spasm and even "crossing of the legs" the so called *scissoring* which is characteristic of cerebral palsy. This can be diagnosed early in infancy. Delay in attaining motor milestones and persistence of Moro grasp, tonic neck and other primitive reflexes after the age of 3 months should arouse suspicion [2]

In Management of CP till now there is no effective treatment in modern medical science. Current interventions for CP include: Physical therapy for motor development; occupational therapy to help develop daily living skills, such as feeding, dressing, or using the bathroom; speech therapy to help develop communication and language skills; behavioral therapy to promote socially appropriate behaviors; and surgery to treat severe cases of contractures of muscles that cause movement problems or placing a feed-

ing tube in severe cases of swallowing problems and malnutrition [3].

CP cannot be correlated with any single disease or condition mentioned in *Ayurveda*, as it is a multifactorial disease. However, considering the classification and the respective features of the types, CP may be stated as *Janma Bala Pravritta Vyadhi* (congenital disorder). In some cases, it may also be due to the derangement of Doshas (bodily humors). Consequently, CP may also be considered as *Shiro Marmabhighata VataVyadhi* (diseases caused due to injury to head), as *Marmaghata* (injury to vital organs) is one of the causes of *VataVikara* (disease of Vata, i.e. body humor). *Ayurvedic* classics have mentioned that derangement of bodily humors and/or injury to vital organs during formative stage, fetal life, delivery, and neonatal period produces symptoms like loss of activities, stammering, dumbness, and weakness, including mental derangement due to impairment of motor and sensory activities. The therapeutic management is done according to *Vata Vikara* (disease of Vata, i.e. body humor) where the main line of treatment is considered to be *vasti*[4][5].

In the present Study *ksheeravasti* which is said by *Acharyacharaka* [6] is used to evaluate its effect in spastic cerebral palsy. The drug which are used for preparation of *ksheeravasti* have the properties like *vatahara, sroto shodhanam, bala graha hara, ayushyam, pusti, medhya, vak-swara-smriti-meda-deha-bala-varna vardanam*[7][8]. Having all these properties, *Draavya* of *ksheera vasti* performs *Shodana* by means of the penetration into deeper *Dhatu's* and by its potency draws all the

Doshas accumulated at various parts of the body, expel them, which helps in reducing Signs & symptoms of Spastic cerebral palsy.

Aims & Objectives:

To assess the role of 'ksheera vasti' in spastic cerebral palsy

Case Report:

- Six months baby admitted in I. P. D of P.G Department of Panchakarma, Dr. B. R. K. R. Govt. Ayurvedic College, Er-ragadda, Hyderabad, with following sign & symptoms. Physical symptoms: difficulty in sucking, spasticity of body, poor coordination, delayed milestones. Behavior symptoms: irritability, unusual tenseness. Detailed medical History was taken and physical examination was done in detail according to both Modern & Ayurvedic clinical methods.
- **Past history:** Infant suffered with HIE-2 after Birth. Up to 4 months, baby is on tube feeds only.

Examination: Behavior examination:

The baby is not able to sit comfortably in mother's lap, & not responding to visual objects and sounds, and not smiling, & irritable.

Cranial nerve examination:

- The baby is not able to visually track an object throughout the horizontal and vertical planes.
- visual field defects are present,
- loss of hearing sense,
- Diminished Facial movements are present.

Motor examination:

- *Sitting-* infant not able to sit without support.
- *Hand-* Hand preference before one year of age is always abnormal and indicates

a motor deficit in the non-preferred hand.

- *Head lag* and *hypertonic* in limbs, *spasticity* are present.

Reflexes

- *Deep Tendon Reflexes-* One of the main deep tendon reflexes is catching the extremity at rest. Positioning the extremity is also important. In infant crossed adductor is present. A few beats of ankle clonus can be normal in the first few weeks of life but sustained ankle clonus is present.
- *Plantar Reflex-* The most useful finding is if there is asymmetry in the toe findings. "Babinski sign" is present.
- *Primitive Reflexes* -like Moro reflex-Gras perplex- Asymmetric Tonic Neck are present. Sucking reflex is diminished.
- Postural Reflexes - Support Reflex, Lateral Propping--- diminished.

MATERIALS AND METHOD:

Materials required:

Makshika (honey): 1ml
Sneha- brahmi gritham: 2ml
Phala gritham : 2ml
Ksheeram (stanyam) :4ml [9]

Method

- Initially honey is taken in a bowl, Add Phala grit ham and Brahmi grit ham in the specified ratio and thoroughly mixed. Afterwards Breast milk is added and makes it as Homogeneous mixture.
- To the patient Ksheera vasti is administered in 2 sittings, each of 7 days duration, with a gap of 10 days between each sitting.
- *Vasti karma* is preceded by local *Abhyanga* with *Maha Masha Tail* followed

Sweda(Mrudu) to abdomen, back and thigh regions. And prepared vasti dravya about 9ml is administered to the child with the help of disposable syringe which is connected to a disposable tube. This is done for 7 days. And same procedure is repeated again with a gap of 10 days.

- Overall , the study conducted for a duration of 24 days

Observation-based assessment criteria: Assessment of results based on observation of signs and symptoms before and after treatment.

RESULTS:

- Symptomatically Significant improvement was observed with this study.

Signs & symptoms	Before treatment	After treatment
Sucking	absent	Improved gradually from spoon feed to bottle feed after 1 st cycle. and it gradually increased to Breast feed on 20 th day of treatment.
Hearing	diminished	improved
Verbal sounds	diminished	Slightly improved
Activity	less	improved
recognition	absent	improved
weight	4.8kg	5.7 kg(increased upto 1 kg)
Spasticity	100%	50%
Sleeplessness	present	decreased
excessive crying	present	decreased
irritability	present	decreased
unusual tenseness,	present	decreased

DISCUSSION:

CP is a not a single disease entity with a known causal pathway, but in fact a heterogeneous group of disorders with etiological differences, brain injury patterns, and associated health complications, the choice and response to intervention is further complicated. Cure for CP is not yet available [11].The present mode of care in CP in-

cludes regular physical therapy, followed by medical and surgical interventions if needed, mostly in early childhood through pre-adolescence.

CP is a *Vata Vyadhi*; therefore, The therapeutic management is done according to *Vata Vikara* where the main line of treatment is considered to be *vasti*[4][5]. In the present Study *ksheeravasti* which is said by *Acharyacharaka* [6] is used. Prior to vas-

tiAbhyanga and Sveda done, which soothe the sensory nerve endings, thereby causing relaxation? They produce a hyperemic effect causing the arterioles to dilate, limbs, and make the body strong with well-developed musculature, and reduce stiffness. The main therapy *vasti* is producing a widespread systemic effect which is specifically indicated in vatika disorders.

In ksheera vasti the dravya's having following properties,

Madhu- Deepanam -varnyam-swaryam(promote appetite, complexion, and voice); *laghu* (light), soft, *lekhanam* (reduces fat),*vagikaranam*(afrodisiac), *hrudiyam* (cordial), *sandhanam* (union-promoting), *shodhanam* (cleaning), *ropanam* (Healing),*chakshusyam* (whole some for eyes), *prasadnam* (pleasing), *sukshmamarganusari* (permeates through rough channels) [10].

Brahmigritham-*vak*(speech)-*swara*(voice) - *smriti* (memory) -*meda* (intelligence)-increases[7].

Phalagritham, -*dehavardanam* (body development),*ayushyam* (increase life span), *pusti*(strength), *medyam*(promotes intelligence), *bala graha haram*[8]. **Sanyam** has *madhura*(sweet)rasa, *kashaya* (astringent)*anurasa*, *shitam*(cold), *jivanam*(promotes life), *pathyam*(suitable to body),*dipanam*(promotes appetite)[12], *Bruhmanam* (nourishment),*satmyam*(whole some),*snehanam* (oleating)[13],increase intelligence, and it also contains immune factors which protect the body from pathogens, helps in decreased risk of developing psychological disorders, and occurrence of many diseases like cancer,diabetis, obesity ,developing allergies[14],

By having all these properties,*ksheeravasti* Dravya enters into enteric circulation and performs *Shodana* by means of the penetration into deeper *Dhatu's* and by its potency draws all the *Doshas* accumulated at various parts of the body, expells them, and which helps in reducing signs & symptoms of *Spastic cerebral palsy*.

CONCLUSION

- However the outcome of the present study definitely gives an inspiration with rays of hope bestowed upon by Ayurveda for the crippled children to have meaningful and improved quality of life. So that new horizon may open up for children suffering from CP who are otherwise leading a long miserable life for no fault of their own.
- Further clinical trials must be carried out to evaluate and validate the maximum effect of *Ksheera vasti*, used in the present study, on a large sample with repetition of the courses for longer duration.

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