

ROLE OF AYURVEDA IN CEREBRAL PALSY

^{1*}Bhamu Ram Kumar

²Shrimali Veena

³Dixit Mahesh

¹Associate professor & HOD, Department of Kaumarbhritya

²Lecturer, Department of Kaumarbhritya

³Principal & HOD, Department of Shalya tantra, M.M.M.Govt Ayurveda College Udaipur (Raj)

ABSTRACT

Cerebral palsy is one among the most common childhood disabilities, which cripple and hamper the development of a child. It is ubiquitous and it occurs all around the world, causing considerable hardship to affected individuals and their families.

Cerebral palsy is a disorder of movement and posture that appears during infancy or early childhood. It is caused by non – progressive damage to brain before, during or after birth. It is not a single disease but a name given to wide variety of static neuromotor impairments syndrome occurring secondary to a lesion in the developing brain. Cerebral Palsy is not curable, several advances in its management and research are going in various parts of world with goal to improve the physical and functional status of the CP child. Cerebral palsy cannot be co-related with any single disease or condition in Ayurveda as it is a multifactorial condition. All most all major neurological disorders are identified with *Vatadosha*. So, considering the classification and their respective features, Cerebral Palsy can be compared to *Vatavyadhi* or *Vikara*, which may manifest itself in any form like *pakshaghata*, *ekangavata*, *pangu*, *sarvangavata*, *kampavata* etc., and diagnosis is based on the *lakshanas*. In Cerebral palsy, as the main etiology is damage to the brain, so along with *panchakarama procedure (shali sashtic pind sweda & basti)* a group of *Medhya* drugs, *vatahara* drugs are used. Acharya Kashyapa had mentioned many *medhyarasayan* among which *yastimadhu*, *vacha*, *brahmi*, *satavari* etc.

Keywords: Ayurveda, Cerebral palsy, *basti*, *medhya* drugs, *Vatadosha*.

INTRODUCTION: Cerebral palsy is a disorder of movement and posture that appears during infancy or early childhood.¹ It is caused by non progressive damage to brain before, during or after birth. It is not a single disease but a name given to wide variety of static neuromotor impairments syndrome occurring secondary to a lesion in the developing brain. Cerebral Palsy is not curable; several advances in its management and research are going in various parts of world with goal to improve the physical and functional status of the CP child.

Cerebral palsy may also be considered as *Shiro marmabhighataja vatavyadhi* as

charaka while describing *Shiromarmabhighata* had mentioned *vatavikaras* like *chesta nasha* (loss of motor activities), *hanugraha*, *mukatva*(dumbness), *gadgadatva*, *lalarava*, *svarahani*(aphasia) etc., *Marmaaghata* is one of the causes of *vatavikara*.²

The main causative factor is *vata* and all the *acharyas* including *Kashyapa* have mentioned *basti karma* as the best line of treatment in alleviating vitiated *vata*.³*Vasti* provides strength, particularly in children and aged people. *basti* is very important, as it radically expiates the morbid *vata*, the sole *dosha* responsible for the movements

of all *doshas*, *dhatu* and *mala* within the body. Charaka aptly highlighted *basti* - as *Vasti vataharanam shreshtha*. *Basti* indeed is the half of the entire management of diseases. *Basti* increases *Agni*, *Medha*, and *Varna* etc. The *panchakarma procedure* (*shali sashtic pind sweda & basti*) and a group of *Medhya* drugs, *vatahara* drugs are used for treatment of cerebral palsy. Acharya Kashyapa had mentioned many *medhya rasayanas* among which *satavari*, *vacha*, *brahmi*, *mandukparni*, *suvaran*, *madhu*, *ghrita*.⁴

AIM AND OBJECTIVES:

- To assessment the role of Ayurveda in cerebral palsy.
- To assessment the Ayurvedic literature in useful for treatment the cerebral palsy.
- To assessment *nidan*, *samprapti*, *lakshanas*, *chikitsa* (preventive & special measures), certain *vatahara panchakarma* procedures are described which have good role in prevention & cure of the cerebral palsy.

MATERIAL AND METHODS: The material helpful to this context was collected and compiled from different classical Ayurveda literatures, renowned paediatric textbooks and journals. Its comprise of subsection dealing with prevention and management of cerebral palsy.

PREVALENCE: This condition was described by an orthopedician Ian Little 150 years ago. Unfortunately its incidence has not come down in spite of recent advances in neonatology and imaging technology. Instead it is increased with the survival of premature babies. Its incidence is 2 – 2.5 cases per 1000 live births.⁵

NIDANA: Cerebral Palsy can occur during pregnancy (about 75%), during childbirth (about 5%) or after birth (about 15%) up to

about age three. The causes of Cerebral Palsy remain unclear. Some causes of Cerebral Palsy are asphyxia, hypoxia of the brain, birth trauma, premature birth, and certain infections in the mother during and before birth such as central nervous system infections, trauma, consecutive hematomas, abruption placenta and multiple births.⁶

In Ayurveda it can be interpreted as follows:

1. **Garbhapoorva nidana:** *Tulyagotra vivaha*, *beeja dusti*, *ashaya dusti*, *kala dusti*.
2. **Garbhakaleena nidana:** Improper *garbhini paricharya*, *asatmya* and *ahitkara ahara sevana*, *ahitkara vihara*, *dauhridya apachara*, *jataharinis*, *abhighatas*, *dhumapana*, *vataprapakopa*.
3. **Prasavakaleena nidana:** *Vilambita avi*, *akalpravahana*, *moordhabhigata*.⁷
4. **Prasavottarakaleena nidanas:** Delayed *prana pratyagamana*, effect of *graha*⁸, effect of *nija* and *agantuja* disorders.

SAMPRAPTI: The *ahara* and *vihara* of the parents causing *vikruti* of *vata* is likely to affect *artava* or *Shukra*, which may lead to the vitiation in *panchtanmatras* leading to *khavaigunya* or *sroto dushti* of *mastulunga majja*. This in turn results in *khavaigunya* or *dushti* of *mastulunga majja* of the foetus or *garbha*. This may also occur due to *atma karma* of the past life of developing *garbha*.

Another possibility of vitiation of *garbha mastulunga majja* is by *nidas* like *dauhrudaavamana*, *garbopaghatakara ahara vihara*, *dhumpana*, and *madyapana* etc of the mother during her pregnancy. These can affect *poshaka rasa*, which in turn affect the developing *mastulunga majja* of the foetus. The third possibility of *mastulunga majja* of *shishu* getting afflicted is *vilambitaavi*, *akalpravahana*,

murdhabhigatha during *prasavakala*, *dushta stanya pana* and *jvara* in *grahas* like *skanda* etc. may act as precipitating causes which trigger the site of *khavaigunya* for an early onset of *shiromarmabhighata janya vatavikara*.

Vagbhata is of opinion that if, the child is suffering from fever, deep unconsciousness, does not cry, or his *dhatus* are decreased or unstable, and has too much pain on touching and the child look like almost dead ; he should be irrigated with *Bala tails* and fanning with Winnowing basket (blackened by applying smoke).⁹

Such child, if not revived properly may have various serious complications (cerebral palsy) therefore, proper growth and development is not achieved by the child. By observing this, the *Vagbhata* had mentioned that in these children attainment of youth is doubtful and develop the features of unconscious (asphyxiated) baby like deep unconsciousness, no cry (even after deep stimulation), decreased or unstable *dhatus*, hypersensitivity of pain stimuli, dying like appearance etc.¹⁰

Lakshanas:

Pakshavadha¹¹:- When aggravated *vayu* causes *abhighata* to *indriyas* of one side *mastulunga majja* either on right or left, paralysis of the contra lateral side of the body occurs by causing *karma hani*.

Pangutva: *Pangutva* means paralysis or *karmahani* of both the lower limbs after vitiating part of *mastulunga majja vayu* takes seat in *katipradesh* and constricts *sira*, *snayu* etc. and paralyse the legs. Here again *pranavayu* causes damage to the *karmendriyam* (Legs).

Ekanga roga¹²: Aggravated *vata* may cause injury to the part of *mastulunga majja* and cause constriction of *sira*, *snayu* with contractures of either one leg or one

hand or may produce such conditions like *viswachi* and *avabhauka*.

Sarvanga roga¹³: This condition is due to severe and extensive injury to the *moolasthanas* of *indriyas* in ‘*siras*’ by causing constriction of the vessels and ligament. The contractures occur in all the four limbs and the morbidity pervades entire body.

KampaVata: Generalized involuntary movements of all parts of the body are called *kampa vata* and may be produced due to injury to subcortical neurons that is *shiromarmas*; hence, based on the etiopathogenesis and clinical features cerebral palsy can be correlated with *shiromarmabhighata vata vyadhi*.

Chikitsa: As such perfect or definite cure is not there for this condition so preventive measures play important role in the management, “Prevention is better than cure” proverb holds good for cerebral palsy condition. As cerebral palsy is due to many etiological factors starting from the time of conception to first 2-3 years of life Ayurveda holds a high position in explaining in detail the now so called Preventive pediatrics or the do’s and don’t’s. It can be considered in two ways:

- a) Preventive measures
- (b) Special measures

Preventive measures:

Preventive Measures can be subdivided into following heads:

- a. Before conception
- b. During pregnancy
- c. During labor
- d. During neonatal period

a. Before conception:

• By avoiding consanguineous marriages the congenital anomalies can be minimized. Both Caraka & Sushruta¹⁴ stressed over this point.

Acharya Bhela had clearly mentioned that to prevent diseases related to *medha*, the consanguineous marriages should be avoided.

- By following the rules & regulations during *ritukala* as laid down in texts and the male by observing *brahmacharya* and eating *masha* etc as described in texts. The object is to keep both sperm and ovum *shuddha*.

- By avoiding pregnancy in very young and elderly women.

b. During pregnancy: By following the principles of antenatal care (*garbhini paricarya*) i.e., *masanumasika pathya*, this may further lead to the timely delivery of an excellent healthy child possessing all the qualities with expected long life without complications.

- Avoiding of *Garbhopaghatakarabhavas* as stated earlier.

- Honoring of *dauhrida* (desires of pregnant lady):- If the longings happen to be harmful, then it can be modified by neutralizing their injurious effects through processing or by adding wholesome substances.

- Avoiding *madya*, *dhumapana* etc. as prescribed in the texts of *Ayurveda*.¹⁵

C. During labour¹⁶:

- The education regarding bearing down efforts is very much important, because undue straining by woman may exhaust her. So in absence of labor pains she should not bear down and during labour pain she should bear down properly.

- By avoiding any *moordh abhigata* (cranial injury) & infections during labor.

d. During Neonatal Period:

- **Prana pratyagamana:** By ensuring timely *prana pratyagamana*

(resuscitation)¹⁷ to the neonate. All resuscitative methods should be followed quickly, which prevent birth asphyxia, which is one of the most important causes of cerebral palsy by providing sufficient amount of *Ambarapeeyusha* to the neonate. One should even avoid excess oxygenation also to prevent ICH.

- **Jatakarma¹⁸:** *Jatakarma* is a *samskara*. It should be performed after establishment of respiration to a neonate. During this *samskara*, a blend made of *madhu* and *ghrita* is administered to the neonate while chanting *Vedic mantras*. This is said to promote the *medha* and *bala* in the new born.

- **Rakshakarma¹⁹:** To prevent from infections certain *raksha karma* are prescribed in the texts and should be followed. Broadly by using *rakshoghna dravyas* and by ensuring perfectly washed and sterile clothes.

- **Dhupanakarma:** *Rakshoghna dravyas* are prescribed to be burnt in the room and *dhupana* is done over the linen used for the baby. *Agni* is lit in one corner of the room continuously.

- **Dharana²⁰:** *Dharana* of various drugs like *mani* etc. which are said to possess magical effect in protecting from the evil spirits have been mentioned to improve *ayu*, *medha*, *smrithi* etc.

Special Measures:

a. Use of Medhya Rasayanas:

- Acharya Charaka mentioned 4 *medhya rasayanas*.²¹ These are *mandookaparni*, *yastimadhu*, *guduchi* and *shankhapuspi*. These *rasayana* drugs may help in preventing both physical & mental disabilities.

- Acharya Kashyapa has described *swarna prasana*²² and varieties of *medhya* drugs administration in *lehanaadhyaya*

and described the benefits of its usage. *Medhya* drugs described by Kashyapa are *mandukaparni, brahmi, vacha, triphala, chitraka, trivrit, danti, nagabala* etc.

- *Lehana* of *medhya ghritas- kalyana ghrita, brahmi ghrita, panchagavya ghrita, samvardhana ghrita* etc. were indicated to improve proper mental and physical growth and thereby preventing and promoting the normal developmental activities.

- *Swarna with ghrita, vacha & kustha.*
- *Matsyakshi, swarna, vacha, ghrita & madhu.*
- *Shankhapuspi, ghrita, swarna, vacha & madhu.*
- *Swarna, kaidarya, shvetadurva, ghrita & madhu.*

Administration of any of these *yogas* quoted above may promote the *medha, smriti* & general vigor in a child.

Certain Vatahara Panchakarma Procedures:

Abhyanga: *Abhyanga* with *balataila, mahamasha tailam, lakshadi Taila* etc. is said to be beneficial. *Rajataila abhyanga* is advised in *phakka*. *Rajataila* is indicated to cure *pangu, jadata* etc. *Abhyanga* is advocated to reduce the effect of vitiated *vata*.

Swedana: This helps in relieving the *stambhana* (stiffness) and *gaurava* (heaviness) in limbs and body. This is a good procedure essential in conditions like *jada, pangu* etc. *Shastikashali pinda sweda* is one, which does *brumhana*.

Basti²³: *Basti* is the best treatment to vitiated *vayu*; *basti* may destroy the seed of all the diseases moving in *madhyamamarga*. In *shiromarmabhogata vata vyadhi basti* can be administered. In general *basti* is said to be administered to a child by one year of age.²⁴

Physiotherapy: Acharya Kashyapa is the first among the ancient scholars, who had made the provision for physiotherapy and considered its importance in rehabilitation of crippled child. Practice of walking should be encouraged with the help of specially prepared tricycle (*Phakkaratha²⁵*) –Stand with three wheels. Similarly in Cerebral Palsy we can advocate use of a four wheeler made in a round shape (a walker) to assist and inculcate the faculty of walking.

CONCLUSION: Cerebral palsy is one among the most common childhood disabilities, which cripple and hamper the development of a child. Cerebral palsy is a disorder of a movement and posture that appears during infancy or early childhood. It is caused by non progressive damage to brain before, during or after birth. It may be due to asphyxia, hypoxia of brain, trauma, premature birth²⁶ etc. Cerebral palsy is a group of permanent movement disorders that appear in childhood, sign and symptoms include poor coordination, stiff muscles, weak muscles and tremors. Cerebral palsy may be considered as *shiramarmabhogat vata vyadhi* and for treatment of *vata vyadhi 'Basti'* is the important treatment that increases *agni, bala* and *medha* also along with these treatment *abhyanga, swedana, physiotherapy, medhya rasayana* is also very useful. Cerebral palsy is partly preventable through proper nutrition of mother, antenatal care, and proper care at a time of delivery; prevent hypoxia in intrauterine life and just after birth in newborn and efforts to prevent head injuries in children. There is no permanent cure for cerebral palsy.

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Corresponding Author: Dr.Bhamu Ram Kumar, Associate professor & HOD, Department of Kaumarbhritya, M.M.M.Govt Ayurveda College Udaipur (Raj)

Email:drbhamuramkumar@gmail.com

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