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AYURVEDIC MANAGEMENT OF SPASTIC DIPLEGIC CEREBRAL PALSY" - A CASE REPORT

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ABSTRACT Cerebral palsy (CP) is defined as a non-progressive neuromotor disorder of cerebral origin. It is a group of movement disorders that appear in early childhood. Population-based studies from around the world report prevalence estimates of CP ranging from 1.5 to more than 4 per 1,000 live births. In India, it is 3.8% of the population. The Signs and symptoms vary among over time. It include poor coordination, stiffness of muscles, weakness of muscles, and tremors. The topographic classification of CP is monoplegia, hemiplegia, diplegia and quadriplegia. Diplegia is the commonest form at 30-40%. Most frequently associated handicaps are learning difficulties, epilepsy, visual impairments, hearing loss, speech disorders, behavioural disorders and orthopaedic problems. The associated problems are eye (strabismus, cataract, coloboma), ear (partial or complete loss of hearing), speech (aphasia, dysarthria) and borderline intelligence. A 4year old girl was brought to the OPD with the history of delayed walking milestones. Mother had noticed that all the developmental milestones where also delayed. For that the patient was advised admission and treated in the IPD of Rajiv Gandhi Ayurveda Medical College, Mahe. This condition was diagnosed as spastic diplegic cerebral palsy (Pangu). After a thorough clinical examination and evaluation, a single course of treatment which comprises of Udvarthana, Abhyanga, Pathrapottaliswetha, Upanaha, Shirodhara and Matrabasti was given. Followed by Shamana Chikitsa was given for a period of 6 months. There were significant improvements in the condition of the patient.

KEYWORDS : Cerebral Palsy, Pangu, Upanaha, Matrabasti

INTRODUCTION

Cerebral palsy (CP) is defined as a non-progressive neuromotor disorder of cerebral origin. It is a group of movement disorders that appear in early childhood. The Signs and symptoms vary among over time. It include poor coordination, stiffness of muscles, weakness of muscles, and tremors. There may be problems with sensation, vision, hearing, and speaking. Most of the cases have multiple neurological deficits and variable mental handicap. The term does not include progressive, degenerative or metabolic disorders of the nervous system.

It is difficult to estimate the precise magnitude of the problem since mild cases are likely to be missed. Population-based studies from around the world report prevalence estimates of CP ranging from 1.5 to more than 4 per 1,000 live births. In India, it is 3.8% of the population. Nearly 15-20% of physically disabled children are affected by CP. In India, the estimated incidence is around 3/1000 live births. CP is the most common motor disability in childhood.

There are different types of cerebral palsy. They are pyramidal, extrapyramidal and mixed CP. The topographic classification of CP is monoplegia, hemiplegia, diplegia and quadriplegia. Monoplegia and triplegia are relatively uncommon. There is a substantial overlap of the affected areas. Diplegia is the commonest form at 30-40%, hemiplegia is 20-30%, and quadriplegia accounts for 10-15%. In an analysis of 1000 cases of CP from India, it was found that spastic quadriplegia constituted 61% of cases followed by diplegia 22%. Spastic CP is the commonest and accounts for 70%-75% of all cases, dyskinetic for 10% to 15% and ataxic for less than 5% of cases.

The most common form is spastic CP. This is due to involvement of motor cortex and pyramidal system. Early features include abnormally persistent of neonatal reflexes. Spasm of adductor muscles can lead to scissoring of the lower limbs. The tendon reflexes are brisk. There may have variable degree of mental, visual handicaps and behavioural problems. Extrapyramidal CP may be present with athetosis, choreoform movements, dystonic, tremor and rigidity, mental retardation and hearing deficits.

Most frequently associated handicaps are learning difficulties, epilepsy, visual impairments, hearing loss, speech disorders, behavioural disorders and orthopaedic problems. The associated problems are eye (strabismus, cataract, coloboma), ear (partial or complete loss of hearing), speech (aphasia, dysarthria) and borderline intelligence.

There is no direct reference of cerebral palsy in Ayurvedic classics by name, as well as by its pathophysiological views. Many works have been carried out on cerebral palsy to evaluate the perfect diagnosis and mode of treatment on the basis of ayurvedic principles. Different nomenclatures are adopted by ayurvedic scholars to denote different types of cerebral palsy. They are Spastic hemiplegia as Pakshaghata, Spastic diplegia as Pangu, monoplegia as Eakangaroga, Spastic quadriplegia as Sarvangaroga, choreoathetosis as Kampavata.

Case report

A 4year old girl was brought to the OPD with the history of delayed walking milestone. Mother had noticed that all the developmental milestones where also delayed. The girl was the second sibling of non-consanguineous marriage. The girl was born at preterm, weighing 1400gms.The girl cried immediately but soon developed respiratory distress syndrome. The baby was stabilised with mechanical ventilation. She was kept in NICU for 20days and there she developed neonatal hyperbilirubinemia, was treated with phototherapy. Apart from this the child become normal and recovered from postnatal events. She was breastfed exclusively till the age of 6months and gradually brought to the family food at the age of 13 months. During the time he never had any major health problems.

On examination the girl was moderately built and nourished. She was alert and her anthropometric measurements included, her hight 93cms, her weight 14kgs, the head circumference was 49cms, she was afebrile, pulse rate was 102 per minute, the respiratory rate was 20 per minute. There was no pallor, no icterus, no lymphadenopathy and no oedema. She was having hypertonicity and there was scissoring of the lower limbs. Not attaining walking milestone become the present concern and was brought to the hospital. For that the patient was advised admission and treated in the IPD of Rajiv Gandhi Ayurveda Medical College, Mahe.

CASE AT A GLANCE

Basic findings

Hight	: 93cm
Wight	: 14kg
Temperature	: 98.4F
Pulse rate	: 102 per minute
Respiratory rate	: 20 per minute

Positive findings

History

Respiratory distress syndrome

Asphyxia
Delayed motor development -Neck holding attained in the age of one year
Sit with support in the age of one and a half year
Sit without support in the age of 2years
Stand with support in the age of 3years
Walking milestone not attained

Examination
Hypertonicity
Scissoring of the lower limb
Delayed milestone

Investigation
MRI- Thinning of corpus collosum, Features of periventricular leukomalacia

TREATMENT GIVEN: This condition was diagnosed as spastic diplegic cerebral palsy (Pangu). The line of management in Vatavyadhi was adopted. After a thorough clinical examination and evaluation, a single course of treatment which comprises of Udvarthana, Abhyanga, Pathrapottaliswetha, Upanaha, Shirodhara and Matrabasti was given.

Treatment given:

SI No	Procedure	Medicine	Days
1	Udwarthana	Kolakulathadi Choorna	First 3 days
2	Sarvanga Abhayanga	Dhanvantharam Taila	Next 5 days
3	Pathrapottaliswetha		
4	Upanaha over lower limbs	Kolakulathadi Choorna	Next 7 days
5	Shirodhara	Ksheerabala Taila	
6	Matrabasti	Prasarani Taila	Next 7 days

Advise at the time of discharge:

SI No	Days	Medicine	Dose	Time
1	30	Sahacharadi Kashaya	25ml BD	7am,7pm before food
2	30	Mahishadravaka	10ml BD	After food
3	30	Kalyanakam Ghrita	5ml BD	Before food

Discharge medicines were given for a period of 1 month and again proper evaluation was done. It was advised to continue the same medicine for a period of 6 months.

OUTCOME OF THE TREATMENTS: As per the mother's statement, appetite has improved considerably well and in general health status of the child has improved. There was significant improvement in the tone and power of lower limb muscles. Child is able to walk with the help of walker and heels touches the ground while walking. There was improvement all the motor milestones.

DISCUSSION

In this case study the patient was not able to walk and looking into the history and examinations the case was dragonised as spastic diplegic cerebral palsy. There is no direct reference of cerebral palsy in Ayurvedic classics, so looking into the presentations the condition was understood as Pangu and the line of management in Vatavyadhi was adopted. Astanga Hridaya explans for vitiated Vatadosha Bhahya and Abhyanthara Snehana, Swedana, Sodhana, Brihmana procedures to be followed. Initially the patient was given Rookshana with the help of Udvarthana with Kolakulathadi Choorna for a period of 3 days, followed by Bhahya Snehana and Swethana with Sarvangaabhyanga and Pathrapottaliswetha for 5days. There was increased muscle tone in the lower extremities, so Upanaha bandaging was done for a period of 7 days. It was followed with Shirodhara for 7 days and Matrabasti for next 7 days. After 22 days of treatment significant improvement was seen in the muscle tone and muscle power. Discharge medicines like Sahacharadi Kashaya, Mahishadravaka, Kalyanakam Ghrita, were given for a period of 1 month and again proper evaluation was done. It was advised to continue the same medicine for a period of 6 months. The treatment procedures and the oral medications improved the motor and sensory functions in this patient. Child is able to walk with the help of walker and heels touches the ground while walking. There was improvement in all the motor milestones too. It was advised to continue the treatment once in six months till the child achieves all the mile stones.

CONCLUSION

Present case by the end of 6 months of treatment, child attained walk with support milestone and there was marked reduction in the hypertonicity in lower extremities were observed. There was improvement in all the motor milestones too. Panchakarma compounded with Medhya Rasaayana and training in day-to-day life becomes comprehensive. An early detection, early intervention with planned multi-disciplinary management may show better improvement.

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