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Ayurvedic perspective of Cerebral Palsy : A Review

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ABSTRACT

Cerebral palsy (CP) is the leading cause of childhood disability affecting cognitive function and developments movement and posture that cause activity limitation, whichare attributed to non-progressive disturbances that occur in the developing fetal or infant brain. The motor disorders of CP are often accompanied by disturbances of sensation, cognition, communication, perception, and/or behavior, and/or by a seizure disorder.The presentation of cerebral palsy can be global mental and physical dysfunction or isolated disturbances in gait, cognition, growth, or sensation. It is the most common childhood physical disability and affects 2 to 2.5 children per 1,000 born in the United States. Complications of cerebral palsy include spasticity and contractures; feeding difficulties; drooling; communication difficulties; osteopenia; osteoporosis; fractures; pain; and functional gastrointestinal abnormalities contributing to bowel obstruction, vomiting, and constipation. Present article aims to draw and interpret the Dosha involvement in cerebral palsy. The primary problems associated with spasticity are loss of balance, strength, and selective motor control of the muscles, and increased muscle tone which leads to problems such as fixed contractures and bony deformities that cause severe motor dysfunctionin patients. Perinatal asphyxia accounts for between 6% and 8% of CP. Prenatal causes are responsible for approximately 75% of all CP cases, although it is impossible to determine the nature and the exact timing of the damage. Postnatal acquired CP ranges in incidence from 10% to 18%.

Keywords:- Cerebral palsy, Osteoporosis,Paralysis, Dosha, Vyadhijanya phakka

INTRODUCTION

Cerebral palsy (CP) is defined as a non-progressive neuromotor disorder of cerebral origin but crippling neurological disorder in children Motor disorders of CP are often accompanied by disturbances of sensation, perception, cognition, communication and behaviour. Cerebral palsy (CP) is one of the most common causes of disability in childhood, leading to functional limitations. It is characterized by the inability to normally control motor functions, which affect the child's ability to explore, speak, learn, and become independent. Cerebral refers to the cerebrum – a major portion of human brain, which is the affected area of the brain in this disease condition3 and Palsy means paralysis which refers to weakness or lack of muscle control Ayurveda defines total health in the aspect of physical, mental, social and spiritual wellbeing. Its holistic approach towards positive life style creates its inevitable importance in the global scenario in recent times. Since it is multifactorial and multi featured disorder so could not be correlated with any single disease or condition mentioned in Ayurvedic texts. An exact correlation to cerebral palsy is not directly available in the Ayurvedic texts. However, considering the Ayurvedic disease classification

and their respective features, Cerebral palsy can be compared with Vatavyadhi or Vatavikar (diseases of the nervous system) which specifically afflict the Shiro-marma which may noticeable in various clinical forms as Pakshaghat, Ekangaroga, Pangu, Sarvangroga, Aakshepka, Ekangaroga, Pangu, Sarvangroga, Aakshepka etc. It is also worth mentioning that just like cerebral palsy, Vatavyadhi too may emerge at any age (before birth, during birth and after birth till old age) i.e. since conception up to old age. According to Ayurvedic texts the cerebral palsy and its features can be covered under following diseases or conditions.

- Phakka roga (Nutritional disorder described in Kashyapa samhita)
- Pangulya (Locomotor disorder) Mukatva (dumbness)
- Jaḍatva (mental disorders)
- Ekangaroga (monoplegia)
- Sarvangaroga (quadriplegia)
- Pakṣaghata (hemiparesis)
- Pakṣavadha (hemiplegia)
- Akshepaka (convulsion disease)

etc. All the above conditions are under the group of Vatavyadhi and the management should be planned according to diagnosis made by Ayurvedic diagnostic tools (Rogi- Roga Pareksha) such as Dosha, Dushya, Srotos, Adhisthana, Vyaktasthana, Prakriti, Asthavidha Pareeksha etc. MATERIALS AND METHODS All the relevant texts of Ayurveda and contemporary science were explored for the present study. A narrative review was done for the present paper. RESULTS According to Ayurvedic texts the cerebral palsy and its features can be covered under following diseases or conditions. ➢ Phakka roga (Nutritional disorder described in Kashyapa samhita)

- Pangulya (Locomotor disorder)
- Mukatva (dumbness)
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etc. According to classification practiced by Acharya Sushruta Disease/Vyadhi is broadly classified in 3 main groups - Adhyatmika, Adhibhautika and Adhidaivika. This is based on etiological factors responsible for the disease. The disease condition of Cerebral Palsy deals with multi factorial etiology. As per contribution of the causative factor the disease phenomenon comes under the broad heading of Adibala, Janmabala and Doshabala. These are described below with their particulars. i) Adibala: Matruja & Pitruja9 Causative factors are contributed from parental side. According to the involvement of the essential reproductive cells Shukra and Shonita, it can be of two types i.e. Matruja and Pitruja. It is suggestive of hereditary type of diseases that arises from Beeja and Beejabhagavayava Dushti arising from Dushti of Shukra (sperm) and Shonita (ovum). ii) Janmabala: Rasa Krita & Dauhradapacharakriti10 It is caused by Apathya Ahara, Vihara and Apachara done by pregnant women during gestational period. During Dauhrida Avastha, Apachara (inappropriate conduct) done by the mother responsible for the diseased condition or deformity in future child. It includes Pangu, Andhatva, Badhirya, Muka, Minmin and Vamana like clinical conditions as per pathogenesis occurred. iii) Doshabala: Sharira & Manasa11 Involvements of the contents i.e. psyche and / or body in the pathology of disease, decide its clinical presentation. Disturbed functions of mind and / or body may have wide variation in their presentation. In CP physical as well as mental impairment contributes to the disability. Patients with CP may have either physical or both physical and mental disablement. Mental retardation or mental sub normality is observed commonly accompanied in many of the patients. Observing other classifications done by different Acharyas, CP can be drawn closers to below mentioned conditions.

(1) Vata / Vayavya type of disease as per Doshika dominancy in the development of the disease and also in the clinical sign and symptoms of the disease,

(2) Marmasthisandhigata due to involvement of Marma (vital organ, here brain) and Asthi – Sandhi (bone and joints),

(3) Nija & Aagantu1 – as per causativity of etiological factors.

According to Acharya Vagbhata it can be considered in the disease categories of Sahaja (Matruja & Pitruja) and Garbhaja (Annarasaja & Dauhradaapacharaja) type of disease. However, considering the classification and individual features of Cerebral Palsy, it can be taken as nearer condition of Vata Vyadhi or Vata Vikara or Vata predominant condition. Different types of Cerebral Palsy Cerebral palsy is characterized according to affected part of the controlling brain and movement. The type of movement in Cerebral Palsy patient depends upon severity of brain injury and its impact on muscle tone.

There are four major types of cerebral palsy.

1. Spastic type

- Monoplegia - Ekangavadha
- Hemiplegia – Pakshavadha
- Quadriplegia - Sarvanga Roga
- Diplegia – Pangu It is caused due to damage of motor cortex and pyramidal tract of the brain. In this type of CP the simple tasks such as walking or holding up small objects becomes more challenging. There is also some coexisting condition like ADHD and epilepsy are present. According to muscle stiffness affected area, spastic CP can be subtypes as spastic diplegia, spastic hemiplegia or spastic quadriplegia.

2. Athetosis or Dyskinetic type - Cheshtavriddhi, Chalatva It is also known as dyskinetic cerebral palsy, caused due to damage to the basal ganglia or cerebellum or both. Basal ganglia co-ordinate voluntary movement and helps to regulate thinking and learning while cerebellum is essential for balance and fine motor skill.

3. Ataxic type - Cheshtavriddhi, Chalatva There is impaired movement due to loss of motor coordination.

4. Hypotonic CP – Saada It contains features of all types of C.P. In another way it can be understood with this illustration.

- Ekangavadha - Monoplegia
- Pakshavadha - Hemiplegia / Hemiparesis
- Sarvanga Roga - Quadriplegia
- Pangu - Diplegia
- Saada - Floppiness / Hypotonic CP
- Cheshtavriddhi, Chalatva - Abnormal movement, Ataxic, Athetosis, Dyskinetic type II)

Associated conditions in Cerebral Palsy

- Mukatva, Vakasanga - Speech or language disorder

- Badhirya, Ucchaishruti - Hearing impairment

- Akshivyudasa, Bhruvyudasa - Visual impairment / abnormality

- Bahushosha - Muscle wasting of upper extremity, disused atrophy

- Sankocha - Contracture

- Khanjata - Gait abnormality, limping while walking

- Anavasthita Chittatva - Impaired mental function / instable mind

- Aakshepaka - Seizure / Convulsion / Muscle spasm

- Dandaka - Opisthotonus posture in severe degree quadriplegic

Etiology (Nidana), pathology (Samprapti) and Signs and symptoms of disease may differ to some extent from one to another presentation. As here mentioned the probable similarity or proximity of this disorder with Vata predominant condition, possible pathogenesis and etiological factors as per Ayurvedic conceptual aspects can be explored as below.

NIDANA (Etiological Factors)

Cerebral palsy may result from one or more aetiologies, with the actual cause difficult to determine in all cases. Risk factors for cerebral palsy are consanguinity, history of spontaneous abortion/stillbirth, family history of cerebral palsy, mal-presentation and low socio-economic status. Cerebral palsy is caused by damage to the motor control centres of the developing brain and can occur during pregnancy, during childbirth or after birth up to about age three. Prematurity and low birth weight is most commonly linked to cerebral palsy, due to under development of brain. Birth asphyxia is most prominent cause of cerebral palsy in infants as per research findings.8 Preterm birth entails a high risk for CP, others are several obstetric factors and low Apgar scores are associated with CP Most of cerebral palsy cases are acquired prenatally and from largely unknown causes.Cases of postnatal acquired cerebral palsy are approximately 10%.

1. Prenatal causes of cerebral palsy include congenital brain malformations and infections, vascular events (e.g. middle cerebral artery occlusion), maternal infections during the first and second trimesters of pregnancy (TORCH e.g. rubella, cytomegalovirus, toxoplasmosis). Less common causes of cerebral palsy include metabolic disorders (sever hypoglycaemia etc.), maternal ingestion of toxins and rare genetic syndromes, chromosomal abnormalities, rhesus incompatibility, maternal diseases during pregnancy.

2. Perinatal causes (or problems during labour and delivery) causes include asphyxia, prematurity and various obstetric emergencies (e.g. antepartum haemorrhage, obstructed labour or cord prolapse which may compromise the foetus causing hypoxia) etc. Severe hypoglycaemia, untreated jaundice and severe neonatal infection (CNS) may be responsible for cerebral palsy.

3. Postnatal causes mainly are brain infections (e.g. bacterial meningitis, viral encephalitis), septicaemia, traumatic brain injury (head injuries caused by motor accidents or fall) and toxins (drugs) etc.

A) Garbhakaleen Nidana (prenatal factors)

1. Marriage as in Sa-gotriya (consanguineous) - Some studies also noticed that consanguineous families showed an apparent genetic form of spastic CP with microcephaly and mental retardation. Other studies also showed genetic aetiological role in cases of cerebral palsy in Asian families. Ataxic cerebral palsy accounts for 5–10% of all forms of cerebral palsy and it is estimated that approximately fifty percent of ataxic cerebral palsy is inherited as an autosomal recessive trait

2. Conception in early (first three days) or late days of Ritukala (proliferative phase including ovulation) can give birth to child with gross defects.

3. Acharyas also described various results of Garbhadana (impregnation) in Atibala (very young or below sixteen years age) or Ativridha (old woman or above sixty years age by Acharyas Charaka, Vagbhata, and above 70 years age by Acharyas Sushruta, Kashyapa and Bhel) as Alpaayu (short life), ill health, deformed body parts etc.. Teenage mothers between 15–19 years were more likely to have anaemia, preterm

delivery, and low birth weight than mothers between 20–24 years old. It is noticed that development disabilities and behavioral issues are increased in children born to teen mothers. During pregnancy, the women over 35 years are at increased risk of gestational diabetes, placenta praevia, preeclampsia, miscarriage and pregnancy induced hypertension as well as caesarean sections. Induction of labour, augmentation with primiparae and assisted deliveries are also associated with women of advanced maternal age. Perinatal mortality, perinatal and neonatal death, and intra-uterine fetal death also increase with increasing age. The paternal age effect was also detected in athetoid/dystonic cerebral palsy and congenital hemiplegic patients.

4. Vata vitiation during the time of fertilization resulting in Yugma Garbha (twin pregnancy). Twin pregnancy is associated with more pregnancy complications and poorer pregnancy outcome than singleton pregnancy as well as perinatal mortality and foetal growth retardation. Perinatal morbidity is at least six to seven times among twins as compared to singletons. Twin pregnancy is considered also more prone to get asphyxia especially during the birth of second baby. It is also noticed that babies of multiple birth are at increased risk of cerebral palsy. Within twin pregnancy, there is also an increased risk of cerebral palsy if the co-twin has died in utero. 5. Couple having grossly detectable vitiation of Sukra (sperms) or Artava (ovum) result in abnormality in new-born. According to Bhavaprakasa, sperm vitiated with Vata (Vatadushit Sukra) is prone to cause a Vikrita (deformed), Kubja (hump backed), Kuni (deformed armed), Pangu (lame), Muka (dumb) or Minmina (speech defects) child.

6. Lady with Dosha vitiated Artava (ovum), who do not follow Garbhini Paricharya (month wise specified dietetic protocol) and with Aashya dusti or Dusti of Garbhashya (abnormalities of uterus) may lead to deformity in child. Maternal infection is a risk factor for CP in both term and preterm infants, posing a twofold increased risk. Maternal genitourinary infection occurring in the first two trimesters was associated with increased risk of CP in preterm or lowbirthweight children. Marked increase in risk of cerebral palsy in infants noticed when intrauterine exposure of foetus to maternal infection. Chorioamnionitis during pregnancy is a risk factor for both cerebral palsy and cystic periventricular leukomalacia. On other side, study confirms that maternal infection, acidosis at birth and meconiumstained amniotic fluid increase the risk of periventricular leukomalacia in preterm infants.

7. Dauhridavimanana (Neglecting the desires of pregnant lady) in the first trimester of pregnancy is said to deliver a child with gross anomalies. In this context Acharya Sushruta comments that suppression of desires related to a specific Indriya (means specialized sense organ) can produce abnormally of the corresponding Indriya of the foetus.

8. Lady consuming food capable of vitiating Vata Dosha will give birth to an inactive child with deformed limbs and neurological deficits.

9. Effect of Nija (internal) and Aagantuja (external factors e.g. traumatic injuries and accidents) disorders of mother on baby e.g. various maternal diseases like TORCH infection may affect foetus and result to CNS manifestations. The relative risk of cerebral palsy increased approximately fourfold with a neonatal history of sepsis.

10. Acharyas described various physical strains which causes harm to mother and foetus such as excessive exercise, coitus, sleeping during daytime, travelling by vehicles or animals, abnormal body postures like squatting, suppression of natural urges causing excessive jerks, trauma etc. 11. Following dietetics and mode of life contraindicated for pregnant woman (Garbhopaghatkara Bhava): According to Charaka, use of excessive Guru (heavy), Ushna (hot) and Tikshana (pungent) substances, use of Madakaraka Dravyas (intoxicated substances) and Madya (wine), running on uneven path etc. According to Acharya Sushruta, pregnant woman should not eat Sushka (dried up), Parushita (stale), Kuthita Kleena (putrefied or wet or moistened food) because these things likely to harm the foetus (or affects the foetal nutrition). Similar description is also given by Vagbhata. Various complications of alcohol abuse are known during pregnancy as stillbirths or spontaneous abortions, poorer pregnancy outcome or neonatal deaths etc.

B) Prasvakaleen Nidana (related to intrapartum period)

1. According to Acharya Sushruta, birth injuries occurring as a result of Moodhagarbha (malpositioning or abnormal presentation of the foetus).

2. According to Sushruta, Akalpravahana (or bearing down efforts made in absence of labour pains) may results in new-born with abnormalities as deafness (Badhira), dumbness (Muka), Hanuvyasta (dislocation of mandible), Murdhaabhighata (injury to head), Kasa (cough), Shwasa (dyspnoea), emaciation and Vikat (abnormal location of body parts).

3. According to Acharya Charaka, Akalpravahana (or bearing down efforts made in absence of labour pains) or Vilambhit Pravahana (delayed bearing down efforts) may results in newborn with abnormalities (because of hypoxic injury due to obstructed labour). There is high risk of cerebral palsy, mental retardation and seizures in the survivor which is depend on the duration and severity of perinatal hypoxia.

4. Acharya Charaka and Vagbhata also gives more stress for immediate Pranapratyagamana (neonatal resuscitation) . It is well known that delayed/improper neonatal resuscitation may result hypoxic conditions which may result in brain damage etc.

5. Acharya Sushruta has advocated against the use of surgical instruments in cases of Jivitmoodhagarbha (obstructed live foetus). During difficult or obstructed delivery, there are chances of birth trauma due to application of vacuum extraction and forceps which results in damage to the tissues and organs of an infant caused by mechanical forces during childbirth accompanied by impaired blood circulation and organ functioning. The most frequent and significant birth injuries may include injuries to the skull, brain and spinal cord, extremities etc. Head trauma during delivery may results in number of conditions which includes haemorrhage (subgaleal, subarachnoid, intraventricular etc.), cephalohematoma etc.

C) Prasvotterkaleen Nidana (related to postpartum)

1. Improper care of the umbilical cord (Nabhinala) causes umbilical sepsis or septicaemia.

2. Breast milk vitiated by Vata when taken by new-born results in emaciation and various Vataj disorders in the infant. According to Acharyas Madhava and Bhavprakasha, milk vitiated by Kapha Dosha (one of the three Doshas i.e. humour) result in disorders of Kapha and infant become Nidralu (sluggish) and Jada (numb or idiot) etc. Acharya Kashyapa described that milk vitiated with Tridoshas when consumed by child results in Panguta (diplegia), Jadata (numb or dullness), Mukata (aphasia) and Charmdala or allergic dermatitis

3. Avoiding of prescribed Rakshakarma (protective measures) to safeguard the child and mother from infections.

4. Effect of Nija (internal) and Aagantuja (external) disorders e.g. Vyadhija Phakka (or marasmic protein energy malnutrition), Graha Rogas (Graha word means seizing, holding. So Graha Rogas are various demons or diseases which influences or attacking the foetus and neonates or childhood age), traumatic head injury in infancy (Siromarmabhighata). Unconjugated hyperbilirubinemia during neonatal period may lead to kernicterus which further have various sequelae as athetoid cerebral palsy, choreoathetosis, deafness and various grades of intellectual retardation and learning disabilities etc. if not treated early. Neonatal sepsis may also contribute to the development of cerebral palsy and delayed development. In Ayurvedic texts following causative factors are described related to cerebral palsy or cerebral palsy like disorders –

➢ Dauhrid Avamanana (Not fulfilment of longings of the pregnant woman)

➢ Vata Prakopa during pregnancy (aggravation of vata during pregnancy)

➢ Use of Garbhopaghatakara Bhava (dietary and behavioural regime causing foetal anamaly or fetal loss) These are:

✔ Use of Atiguru (very poor digestible food items), Atiushna (excessive Ushna/hot food items), Atiteekshna food items.

✔ Daruna Chesta (excessive hard work)

✔ Rakta Vastra Dharana (use of red cloths/cloths mixed with blood)

✔ Use of Madya(alcohol) or intake of Madakarak (drunkenness/intoxication producing) food item Yanamadhirohana (riding over especially excessive shaking)

✔ Intake of meat

✔ Use Sarvendriya Pratikula Ahara Vihara (diet or behaviour which are harmful for sensory organs)

✔ Not following proper Garbhini Paricharya (the optimum guideline followed during pregnancy as prescribed in Ayurvedic texts or others)

✔ Incompatible Garbha Vriddhikara Bhava (factors responsible for fetal growth)- these are Matraja, Pitraja, Atmaja, Satmaja, Satvaja and Rasaja Bhava.

✔ Intake of Dusta Stanya (vitiated mother milk) especially due to Tridosha or Vata Pitta in Vatapitta Prakriti mother.

✔ Akala Pravahana (producing force by the mother in inappropriate time during labour),

✔ Shiromarmabhighata (head injury)

✔ Not performing proper Prana Pratyagamana (neonatal resuscitation),

✔ Ulbaka roga (aspiration of amniotic fluid).

✔ Nabhi Nadi Vikara (diseases of umbilical cord), Graha Roga (infectious diseases),

✔ Improper Shishu Paricharya (not using proper neonatal/infant care).

SAMAPRAPTI (PATHOGENESIS)

The various causative factors like Prasvaporva (antenatal), Prasvakaleen (during labor) and Prasavotara (postpartum) results in pathogenesis of cerebral palsy by different steps, but at last all they cause derangements of Shiromarma (brain). Likewise, dietetics and mode of life contraindicated for pregnant woman (or Garbhopaghatkara Bhavas) works by various routes as: 1. Improper nourishment and growth of the foetus or

2. Precipitating the maternal general diseases or

3. Favouring the attack of infectious diseases in mother or foetus or

4. By increasing the chances of pregnancy complications or

5. Harming the foetus directly Various maternal diseases like TORCH infection may affect foetus and result to CNS manifestations. Both Akalpravahan and delayed extraction of obstructed foetus by surgeon results in traumatic head injury and hypoxic insults which may damage the Mastulunga (brain) by way of Shiromarmabhighata. Prematurity should be considered as a complication of improper care of pregnant woman or improper Garbhini Paricharya. Delayed PranaPratyagama also result to hypoxic ischemic enancephalopathy. After birth, various disorders squeals may manifest into cerebral palsy such as cases of kernicterus, meningitis, intrauterine or acquired infections, mal developed brain etc.

CLINICAL MANIFESTATIONS

Cerebral palsy may invoke muscle stiffness (spasticity), poor muscle tone, and problems with speech, swallowing, balance, coordination, posture, walking, and many other functions. Skeletal deformities, seizures, breathing problems, bowel and bladder control problems, dentition problems, eating difficulties, digestive problems, hearing and vision problems, learning disabilities, mental retardation and are often linked to cerebral palsy. The severity of these problems varies widely, from mild and subtle to very profound. Depending upon the severity of Dosha-Dusya Sammurcchana (complex of abnormal body humour and body component), clinical presentations may vary in vatic disorders, but clinical presentation present in cerebral palsy can be equated with certain disorders of Vatic Vyadhi as: - Pakshaghata: hemiplegia, Pangulya: diplegia, Ekangaroga: monoplegia, Sarvangroga: quadriparesis, Kubjatva : kyphosis,

Aaksepaka : convulsion / involuntary shaking movements, Ardita : facial palsy. Common associations are as Mukatva: aphasia, Vaksanga: dysarthria, Badhirya: sensory neural hearing loss (deafness), Anavasthika chitta: behavioural disorders, Apasmara: epilepsy/seizures and Khanjatva: lameness.

DISCUSSION

An exact correlation to cerebral palsy is not directly available in the Ayurvedic texts. However, considering the Ayurvedic disease classification and their respective features, Cerebral palsy can be compared with vatavyadhi or vatavikar (diseases of the nervous system) which specifically afflict the shiro-marma which may noticeable in various clinical forms as pakshaghat, ekangaroga, pangu, sarvangroga, aakshepka etc. ekangaroga, pangu, sarvangroga, aakshepka etc. The management should be planned according to diagnosis made by Ayurvedic diagnostic tools (Rogi- Roga Pareksha) such as Dosha, Dushya, Srotos, Adhisthana, Vyaktasthana, Prakriti, Asthavidha Pareeksha etc. According to Vagbhatta it can be included under Sahaja, 30 . Etiology (Nidana), pathology (Samprapti) and Signs and symptoms of disease may differ to some extent from one to another presentation. As here mentioned the probable similarity or proximity of this disorder with Vata predominant condition, possible pathogenesis and etiological factors as per Ayurvedic conceptual aspects can be explored. Causative factors like Garbhakaleen nidan (prenatal factors), Dauhridavimanana (Neglecting the desires of pregnant lady), Effect of nija (internal) and aagantuja (external factors e.g. traumatic injuries and accidents), Prasvakaleen Nidan (related to intrapartum period), akalpravahan (or bearing down efforts made in absence of labour pains),) Prasvotterkaleen nidan (related to postpartum), Vata Prakopa during pregnancy (aggravation of vata during pregnancy), Use of Garbhopaghatakara bhava (dietary and behavioural regime causing foetal anamaly or fetal loss) etc may play role as causative factor, during and after birth. These hamper normal growth and development of child and cause many diseases, deformities and even death. It gives an idea about some factors or events that give rise to the occurrence of these co-morbid conditions. Clinical presentation present in cerebral palsy can be equated with certain disorders of vatic vyadhi as:- Pakshaghata : hemiplegia, Pangulya: diplegia, Ekangaroga : monoplegia, Sarvangroga : quadriparesis, Kubjatva : kyphosis, Aaksepaka : convulsion / involuntary shaking movements, Ardita : facial palsy. Common associations are as Mukatva: aphasia, Vaksanga: dysarthria, lalling speech, Badhirya: sensory neural hearing loss (deafness), Anavasthika chitta: behavioural disorders, Apasmara: epilepsy/seizures and Khanjatva: lameness. Though cerebral palsy may not be fully cured, Ayurvedic treatment can definitely help to reduce disability and improve the functioning of the affected individual to a great extent. According to Acharya Sushruta, nidanparivarjan (prevention from etiological factors) and vatadipratighata (specific measures against particular diseases) are two important measures for treatment of diseases. Application of Taila Pichu (cotton soaked with medicated oil over bregma) and balataila abhyanga (massage the newborn's body with Bala taila). The treatment plan should be that of vatashamana, vata being dominant dosha involved. Management of vata disorders includes snehana (oleation), swedana (sudation) and vasti (medicated enema). According to Vagbhata, snehana is more important while treating vatika disorders. Vasti is said to be the best treatment for vata roga. Vasti chikitsa is restricted till the child has attained a crawling age.

CONCLUSION

CP Mainly caused by any of the Prenatal, natal and postnatal factors. Pathologically any type of injury to the developing brain.It is Non progressive Irreversible Neuromotor disorder course but more complicated as child grows and not achieving normal developmental milestones that has to be achieve by the developing child.Clinical expression and site of brain injury, growth of child and other co-existing problems will vary.Though the treatment modalities available, but unable to give good quality of improvement and rehabilitation. Very limited role with muscle relaxants, AED (antiepileptic drugs) physiotherapy and some operative procedures in modern treatments.

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