AAYUSHI
INTERNATIONAL
INTERDISCIPLINARY
RESEARCH JOURNAL
(AIIRJ)

UGC Approved Monthly Journal

Address
• Vikram Nagar, Boudhi Chouk, Latur.
• Tq. Latur, Dis. Latur 413512 (MS.)
• (+91) 9922455749, (+91) 8999250451

Email
• aiirjpramod@gmail.com
• aayushijournal@gmail.com

Website
• www.aiirjournal.com

CHIEF EDITOR – PRAMOD PRAKASHRAO TANDALE
Case report: Ayurvedic management for child with Cerebral Palsy

Vaibhav Jaisawal,
Corresponding Author,
Assistant Professor,
Department of Kaumarbhritya/Balroga,
Faculty of Ayurveda,
Banaras Hindu University,
Varanasi -221005
E-mail:drvaibhav29@gmail.com

Amrita chaudhary
Junior Resident 2nd year,
Department of Kaumarbhritya/ Balroga,
Faculty of Ayurveda,
IMS BHU

Abstract:

A 19 month old female child Avani suffering from cerebral palsy with spastic quadriplegia was admitted in ayurvedic ward with complains of unable to sit without support, unable to hold objects properly, also unable to speak properly.

Patient can only sit in tripod position for few seconds, tries to utter few words that are mostly monosyllables and few bisyllables and used to cry very loud.

The child is having history of severe birth asphyxia with delayed cry and was admitted in NICU for around six weeks under fluid and antibiotic therapy and in ventilator for around six days. This may be the possible cause of cerebral palsy. A patient’s MRI of brain was undertaken which reveals abnormal cystic encephalomalacia which mainly suggests periventricular leukomalacia sequelae of perinatal hypoxic ischaemic brain injury. Patient was on modern medicine in the form of various medications and physiotherapy but didn’t get significant relief. The patient was examined according to the centre for disease control guidelines and gross motor functional classification system guidelines for cerebral palsy. An Ayurvedic treatment plan was made in the form of oral medications and balpanchkarma therapy for 21 days including yogbasti.

Significant improvements were noticed such that now patient can sit without support for few minutes, can stand with support for few seconds, also muscle tone was much reduced than earlier.

Keywords: Birth asphyxia, Balpanchkarma, Periventricularleukomalacia.

Introduction: A 19 month old female child was admitted in ayurvedic ward with following complains, unable to sit without support, unable to hold objects properly, unable to speak properly according to her age. Patient can only sit in tripod position for few seconds, tries to reach towards objects but grasping power is poor (bidextrous), tries to speak many words which are mostly monosyllables but speech is not clear and cries very loudly.

Birth history: A fullterm \Appropriate gestational age baby was born from primigravida mother through spontaneous vaginal delivery with delayed cry for few minutes with APGAR score < 5 at 5 minutes of age. Baby was admitted in NICU on fluid and antibiotics therapy for around six weeks and was on mechanical ventilator for around six days. Vaccination was also properly covered up to age.

On examination of central nervous system, the deep tendon reflexes (biceps jerk, triceps jerk, knee jerk, ankle jerk), were exaggerated. Among the superficial reflexes, i.e. abdominal reflexes was absent, on plantar reflex extensor plantar response was present i.e. Babinski response was positive. Tone was
increased in bilateral upper and lower limbs. Cortical thumb was present and there was scissoring in legs at the level of ankles. The patient was examined according to Centers for Disease Control and Prevention guidelines for motor milestones and Gross Motor Function Classification System guidelines for motor functioning level for cerebral palsy. According to CDC guidelines, head holding grade - 1 i.e. head erect and steady momentarily, in sitting grade - 1 i.e sits momentarily was present and standing was not achieved with or without support. According to GMFCS guidelines, in fine motor milestone grade - 1 is present i.e. try to reach and holds things with crude method, in language grade - 2 is present i.e. can speak monosyllables and much few bisyllables, in personal and social milestones grade - 2 is present i.e recognizes mother.

Patient’s MRI of brain was undertaken which reveals abnormal cystic encephalomalacia with white matter volume loss in bilateral parieto-occipital, peririgonal and perirolandic region and in bilateral dorsal thalami with thinning of corpus callosum and cerebral white matter. Imaging finding suggests periventricular leukomalacia sequelae of perinatal hypoxic ischaemic brain injury.

Material and methodology:
Patient was examined according to above mentioned guidelines:

Assessment components:

<table>
<thead>
<tr>
<th>Grading</th>
<th>Head Holding</th>
<th>Sitting</th>
<th>Standing</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Head holding at all</td>
<td>Not sitting at all</td>
<td>Does not stand at all</td>
</tr>
<tr>
<td>1</td>
<td>Head erect and steady momentarily</td>
<td>Sits momentarily</td>
<td>Stands holding furniture momentarily</td>
</tr>
<tr>
<td>2</td>
<td>Supine lifts head when pulled up by arms</td>
<td>Sits 30 seconds or more leaning forward</td>
<td>Takes a few steps, both hands hold</td>
</tr>
<tr>
<td>3</td>
<td>Prone elevates self by arms and chest</td>
<td>Sitting straight</td>
<td>Without support, can stand alone</td>
</tr>
<tr>
<td>4</td>
<td>Holds head steady when moved around</td>
<td>While sitting, can manipulate a toy</td>
<td>Stands up, all by himself by throwing weight on arms</td>
</tr>
<tr>
<td>5</td>
<td>Head balanced always</td>
<td>Raises self to sitting position</td>
<td>Takes a few steps without support</td>
</tr>
</tbody>
</table>

GMFCS Level

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fine Motor</th>
<th>Language</th>
<th>Personal and Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No grasping at all / absent palmer grasp</td>
<td>Unable to speak or produce sound at all</td>
<td>Absent social smile and recognition</td>
</tr>
<tr>
<td>1</td>
<td>Try to reach and holds thing with crude method</td>
<td>- Marked cooing</td>
<td>Social smile and recognition</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Syllable Type</td>
<td>Recognition/Behavioral Response</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Try to reach and holds things with good grip</td>
<td>Monosyllable</td>
<td>Recognizing mother</td>
</tr>
<tr>
<td>3</td>
<td>Transfer object from one hand to another hand</td>
<td>Bisyllables</td>
<td>Anxiety to stranger</td>
</tr>
<tr>
<td>4</td>
<td>Uses thumb and index finger and holds small object</td>
<td>Two words with meaning</td>
<td>Attracts towards toy and displeasure on taking it away</td>
</tr>
<tr>
<td>5</td>
<td>Uses end of thumb and index finger / Neat pincer grasp</td>
<td>Makes simple sentence</td>
<td>Resist if toy is pulled</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td>Mimicry, understand spoken words and responds in appropriate manner</td>
</tr>
</tbody>
</table>

Assessment criteria include **CDC grading** for motor milestones and **GMFCS Level** for motor function level. Suitable scoring pattern was prepared.

A total of 21 days treatment plan was made, which includes oral medications and balpanchakarma. On 10th day of balpanchakarma therapy a yogbasti was planned.

**Oral medications:** Jatamamsiphanta 20 ml B.D., Jatamamsichurna 1 gm B.D. with water, Bittervachamool rubbed 30 times on stone with milk and one almond with honey, Mahanarayan oil 1 ml per orally, Brahmi churna 1 gm B.D.

**Panchkarma therapy:** Snehana with Mahanarayan oil and Mahamashadi oil for 5-10 minutes, Shalishastipindiswedana with dashmool decoction for 5-10 minutes. Avagahan with dashmool decoction for 10-15 minutes, Shiropichu with Jyotishmati oil and Mahanarayan oil.

A YogBasti was planned on 10th day of treatment which consists of five anuvasanbasti and three niruhabasti.

Anuvasanbasti was given 20 ml which includes mahanaryan oil 10 ml and mahamashadi oil 10 ml.

Niruhabasti was given with dashmool decoction 40 ml, mahanarayan oil 15 ml, kalka 5 ml which consists of ashwagandha, vacha, bala, erandmoolchurna, andmadhu, saindhavlavan in very small amount i.e. a total of 60 ml.

**Result:** When patient was further examined after 21 days of panchkarma therapy a significant changes were noticed.

- According to CDC guidelines, in head holding from grade -1 i.e. head erect and steady momentarily to grade -4 i.e. holds head steady when moved around.
- In sitting from grade -1 sits momentarily to grade -3 sits straight.
- In standing, grade -0 does not stand at all to grade -1 stands holding furniture momentarily.
- According to GMFCS guidelines, in fine motor from grade -1 tries to reach and holds things with crude method to grade -4 uses thumb and index finger and holds small objects.
In language from grade-2 monosyllables to grade-4 bisyllables.
In personal and social milestones, from grade-2 recognise mother to grade-4 attracts towards toys and displeasure on taking it away.

Discussion:

Cerebral Palsy is a diagnostic term used to describe a group of permanent disorders of movement and posture causing activity limitation, that are attributed to non-progressive disturbances in the developing fetal or infant brain. The motor disorders are often accompanied by disturbances of sensation, perception, cognition, communication and behavior as well by epilepsy and secondary musculoskeletal problems. The incidence of CP in developed world is 2-2.5 per 1000 live births. The incidence of CP in India is 1.5 to 3.5 per 1000 of all live births.

Considering the signs and symptoms of CP, the disease entity seems to be very close to the presentation of vata-vyadhi (disease caused due to predominance of vata dosha). Treatment of vata dosha consists of a variety of modalities among which Basti (enema) is said to be prime one.

According to Vagbhatta, it is classified in the disease categories of sahaja (hereditary), garbhaja (congenital) and jataja (psychosomatic disorders) type of diseases.

There is no any correlation available in Ayurvedic classics with CP, but there are many conditions and some causative factors linked to etiopathology for such type of disease condition described in many chapters in different texts. Some conditions which find an overlap of symptoms of CP include phakka (a kind of nutritional disorder), pangulya (locomotor disorders), mukatva (dumbness), Jadatva (mental disorders), ekangroga (monoplegia), sarvangaroga (quadriplegia), Pakshaghatana (hemiparesis), pakshavadha (hemiplegia), etc., under the group of vatavyadhi (neurological disorders). Contributory factors like inappropriate ritu (ovulation cycle), kshetra (uterus), ambu (amniotic fluid and fetal nutrition) and bija (sperm and ovum), dauhrdaavamanana (neglect of urges during daulhrid stage of pregnant women), presence of garbhopghatkarbhava (substances which can cause defects or death of fetus), incompatible garbhvriddhikarbhava (normal requisites for growth and development of fetus) and improper garbhiniparicharya (antenatal regimen) may have undesirable effects on the fetus hampering its normal growth and development consequently leading to many diseases, deformities, and even death.

Considering all the above, Ayurvedic therapy has a good effect on CP patients.

Cerebral Palsy is caused by a broad group of developmental, genetic, metabolic, ischaemic, infectious, and other acquired etiologies that produces a common group of neurologic phenotypes. Intrauterine exposure to maternal infection (Chorioamnionitis, inflammation of placental membranes, umbilical cord inflammation, foul smelling amniotic fluid, maternal sepsis, temperature > 38 degree celsius during labor, urinary tract infection) was associated with a significant increase in the risk of Cerebral Palsy in normal birth weight infants. Fewer than 10% of children with cerebral palsy had evidence of intrapartum asphyxia.

Conclusion:

Cerebral Palsy is a non progressive neuromotor disease which has very limited improvement from current modern medicine. Patient attendant are very much furious and disheartened about this disease. Patient becomes liability for family and society. He cannot perform normal day to day work in a society where remaining children are running, walking, playing whereas a child of CP remain like a plant. They are not like object whom to be ignored. They need our love and care as well as support of society so that they live happily. Ayurvedic therapy has a much fruitful effect on this disease as in this patient.
References:-


7. Sushrut Samhita by Dr. Ambika Datta Shastri, Part-1, Chaukhambha Sanskrit Bhawan reprint 2006, Sharir Sthana, Shukrashodit Suddhi Sharir Adhyaya, 2\33.


