CASE STUDY ON VARMA MANAGEMENT OF GLOBAL DEVELOPMENT DELAY

[1]Anpuchelvy S, [2]Sritharan G, [3]Ganesan S

[1]Faculty of Siddha Medicine, University of Jaffna, [2]Herbal Health Care Centre, Jaffna,

[3]Siddha Dispensary, Jaffna Municipal Council, Sri Lanka

ABSTRACT

Background: Developmental delay refers to a slower rate of development in a child across four primary domains: motor, mental, social, and communication skills, compared to peers of the same age. When multiple domains are affected, the condition is termed 'Global Developmental Delay'. Purpose: This case study focuses on the management of children with global developmental delay. Materials and Methods: Data was collected from the inpatient department of a tertiary care Herbal Health care Centre, Kokuvil, Jaffna. Subjects were assessed for growth and development using parameters such as anthropometry and developmental milestones (gross motor, fine motor, social, and language skills). The study utilized various multidimensional Siddha & Varma treatment modalities for the selected case. Results and Conclusion: The subjects showed considerable improvements in the domains of gross motor and fine motor skills. Siddha & Varma therapeutic procedures can be effectively utilized in the management of developmental delay.

Key words: Siddha & Varma treatment, global developmental delay

INTRODUCTION

The three types of human development that occur over the course of a lifetime are physical, cognitive, and psychosocial. It's crucial to recognize that developmental milestones encompass various aspects such as linguistic, cognitive, social, psychological, and motor skills (Choo.et.al.2019). Moreover, these milestones can influence individual domains or have broader effects across multiple areas. This framework effectively highlights the complexity and interconnectedness of human development. Cerebral palsy is indeed a complex neurological condition characterized by difficulties in posture, movement and muscle coordination (Mithyanth.et.al.2017). While it primarily affect, and behavior to varying extents. The condition is not typically inherited, meaning it's not pa ssed down from parents to children genetically. Instead, it usually results from brain injuries or abnormalities that occur during the early stages of brain development, particularly before or during birth (Shevell.et.al.2005) Common causes include premature birth and birth asphyxia, where the baby doesn't receive enough oxygen during delivery. Because the brain's growth is largely complete by the age 2-3 years, cerebral palsy is considered a manifestation of brain injury during this critical developmental coordination, leading to the symptoms seen in cerebral palsy (Scherzer. et.al.20120).

Certainly, the signs and symptoms described are common presentations of cerebral palsy in infants; infants with cerebral palsy may exhibit persistent irritability, which could be due to discomfort or difficulty in coordinating movements. Feeding difficulties are often seen in infants with cerebral palsy, as they may have trouble coordinating the necessary movements for sucking, swallowing and breathing during feeding

(Tewari.et.al.2002) Infants with cerebral palsy may exhibit abnormalities in muscle tone, which can manifest as ether stiffness (hypertonia) or floppiness (hypotonia) in different muscle groups.

1. Dwlayed motor skills: infants with cerebral palsy typically do not reach motor developmental milestones at the expected ages. They may have delays in rolling over, sitting up, crawling and walking.

2. Primitive reflexes: Primitive reflexes, which are automatic movements normally present in newborns that gradually disappear as the nervous system matures, may persist or appear asymmetrically in infants with cerebral palsy.

3. Delayed milestone: As a result of motor impairments, infants with cerebran palsy may experience delays in achieving developmental milestones such as lifting their head. Rolling over, sitting, crawling and walking.

4. Abnormal growth charts: Growth may be affected inn children with cerebral palsy due to factors like difficulty in feeding and reduced mobility. This can result in abnormal growth patterns reflected in growth charts.

5. Impaired muscle tone; In addition to abnormal muscle tone, infants with cerebral palsy may also exhibit impaired muscle tone, affecting their ability to control movements and maintain posture.

Recognizing these sings and symptoms early can be crucial timely intervention and management to optimize the child's development and quality of life. Early intervention services, including physical therapy, occupational therapy, and speech therapy are often initiated to address the specific needs of infants with cerebral palsy and support their development. Siddha Medicine, the ancient Indian system of medicine, indeed has a specialized branch known as Kulanthai Maruthuvam, which focuses on child health care from infancy through adolescence. While Siddha texts may not specifically mention cerebral palsy as a distinct condition, May of the symptoms and causative factors associated with cerebral palsy fine correlations in Siddha principles and diagnosis. Several conditions described in Siddha texts onerlap with symptoms commonly seen in cerebral palsy (Thiyagarajan,1995).

1. Monoplegia: This refers to paralysis affecting one limb, which can resemble the motor impairments observed in cerebral palsy, albeit affecting only a single limb.

2. Quadriplegia; Quadriplegia involves paralysis of all four limbs, and while it may represent a more severe manifestation, it shares similarities with the motor disabilities seen in some cases of cerebral palsy.

3. Hemiparesis and Hemiplegia: These terms refer to weakness (paresis) or paralysis (plegia) affecting one side of the body, which aligns with the unilateral motor impairments often seen in cerebral palsy.

4. Nutritional Disorders: Nutritional factors can contribute to overall health and development of a child and nutritional deficiencies may exacerbate conditions like cerebral palsy or contribute to similar symptoms.

5. Locomotor Disorders: This term encompasses a range of locomotor abnormalities which can include difficulties with movement and coordination similar to those seen in cerebral palsy.

These conditions are typically categorized under Vatha Vyathy, which refers to diorders primarily involving the Vatha those, one of three fundamental energies or humors in Siddha Ayurveda associated with movement and nervous system function(Thiagarajan,1976). While Siddha Ayurveda texts may not provide specific treatments or protocols for cerebral palsy as we understand it in modern medicine, Siddha ayurveda principles can inform holistic approaches to managing symptoms, promoting overall health and addressing underlying imbalance that may contribute to neurological disorders. Siddha Ayurvedic

treatments may include herbal remadies, dietary modifications, lifestyle recommendations and therapies duch as Panchakarma (Purification therapies) and Yoga to support the child's physical, mental and emotional well-being.

Case Study

The case report presents a 4 year old male patient from a Hindu middle –class family with no history of consanguinity marriage. The patient's father is employed in a private company, while the mother is a homemaker and they have a total of three family members. The chief complaints, the patient is unable to perform basic motor functions independently and requires assistance for activities such as sitting, standing and walking. The patient has not achieved developmental milestines at the expected ages. This delay in motor skil acquisition is indicative of potential underlying issues affecting physical development and coordination. These symptoms align with characteristics commonly associated with cerebral palsy, a neurological condition that affects movement and posture. Given the age of the patient and the reported symptoms, further evaluation and assessment would be warranted to confirm the diagnosis and determine appropriate management strategies.

Diagnosis

C.B.C, C.T.Scan / MRI, Audiologic testing Hip or spine X-ray. EEC.

History of Present Illness:

The patient's medical history indicates a complex of challenges since birth. Being born preterm and experiencing birth asphyxia and neonatal jaundice likely contributed to initial health complications. These early issues may have hindered the child's normal growth and development. Around the age of five months, spasticity and involuntary movements became noticeable, indicating potential neurological involvement. Despite seeking treatment from multiple doctors, the parents haven't observed significant improvements, prompting them to seek further management options. Given the complexity of the case and lack of improvement with previous treatments, a thorough evaluation and multidisciplinary approach may be necessary to address the Childs's needs effectively. This could involve specialists in pediatrics, neurology, physical therapy, and other relevant fields to develop a comprehensive treatment plan tailored to the child's specific challenges and needs.

Past history: Patient was suffered from Birth asphyxia, Neonatal Jaundice

Family History: Nil

Birth history: mother has taken folic acid in the first trimester. No H/o any fever, rashes, vaginal bleeding, ect. Mother had taken inj. Tetanus toxide (2 doses) in second trimester. NoH/o hypertension.

Perinatal: Baby did not cry soon after birth. Birth weight was 2.5kg. liquor was clear. No any congenital anomalies were seen.

Postnatal: Baby had suffered from bith asphyxia, Neonatal jaundice.

Immunization History: patient has taken at the proper age for schedule.

Personal History: Patient was totally dependent for food intake and was eating only semi solid and solid food.

Local and Systemic Examination:

Respiration: Air entry equal in both sides. R.Rate-18/min

CVS: Pulse- 74/min,

CNS:

Higher function test; Conscious, alert, Co operative, Oriented

Speech Assessment: difficult to speech

Gait : Scissoring gait

Muscle tone –normal

Nutrition –Normal

Treatment protocol

Varma stimulation

Fig-1 Thilatha varma stimulation

Fig-2 Kondaikolly varma stimulation

Fig-3 Ner Varmam stimulation

Fig-4 Perumal kalam Varmam stimulation

RESULT

Table -1
Comparison of Before and After Treatment:

Sign & Symptom	Before Treatment	After Treatment
Scissors gait	Present	Absent
Muscle-Tone	Hyper tonicity	Improvement
Sitting	Unable	Easily sit
Standing	With support	Without support
Walking	With support	Without support
Forward bending	For 120 degree	For 170 degree
Dropping of foot	Dropping of foot	Improvement
Appetite	Normal	Normal
Stool	Normal	Normal

DISCUSSION

Thilatha varma stimulation and Kondaikolli varma stimulation of the head stimulate the Pituitary gland and Phenyl gland. These Varma is indeed a profound Siddha Varma therapy known for its ability to induce deep relaxation and promote overall well-being. The process involves gently pouring warm oil other liquids over the forehead in continuous stream, typically pouring warm oil or other liquids over the forehead in continuous stream, typically for a prolonged period. This steady stream of oil has a soothing effect on the nervous system and can induced a state of deep relaxation.

The benefits described align with the principles of Siddha Varma and the reported effects of Varma. By calming the

nervous system and slowing down brain waves, Varma therapy can help reduce stress and promote a sense of tranquility(Chidambarathanupillai.1991). This state of relaxation allows for improved blood circulation to the brain, which can enhance cognitive function, memory and mood stability. Regular Varma therapy are belived to have cumulative benefits further supporting overall brain health and emotional well-being. Additionally, the relaxation induced by Varma therapy can contribute to better sleep quality, which is essential for overall physical and mental health. While individual experiences may vary, many people find Varma therapy to be a deeply rejuvenating and restorative practitioner to ensure that Varma therapy is appropriate for your specific needs and health condition.

It's fascinating to see how Siddha Varma therapy, with its holistic approach to health and well- being, can contribute to improving the quality of life for individuals with certain disorders, even when they are considered incurable by conventional medicine. While Siddha Varma therapy may not offer a cure in the conventional sense, it focuses on restoring balance and harmony to the body and mind, which can lead to significant improvements in symptoms in overall quality of life(Kanan rajaram.2007). The concept of neuroplasticity has revolutionized our understanding of the brain's ability to adapt and recover from injury or disease. This concept suggests that the central nervous system indeed has the capacity to repair and regenerate neurons through processes like axonal sprouting. By supporting the body's innate healing mechanisms and promoting neuroplasticity, Varma therapy can potentially enhance the recovery and functioning of individuals with neurological disorders. Improvements in quality of life observed in patients undergoing Varma therapy for neurological disorders provide compelling evidence of the effectiveness of these holistic approaches. By addressing not only the physical symptoms but also the emotional, mental, and spiritual aspects of health, Varma therapy offers a comprehensive frame work for promoting well-being and resilience in individuals facing chronic or degenerative conditions.

While it's essential to approach Varma therapy with an understanding of its principles and practices, including consulting qualified practitioners and contribute to a more holistic approach to healing and well-being. Massage therapy exercises offer numerous benefits for the body, particularly in enhancing the range of motion (ROM), flexibility, and strength of various muscle groups. Here's a breakdown of these benefits:

1. Increasing Range of Motion of Lower Limbs (22):

o These exercises help in improving the flexibility and mobility of the lower limbs, allowing for a greater range of movement.

2. Strengthening Leg Muscles (23):

o Targeted exercises help to strengthen muscles in the legs, including the quadriceps, calves, glutes, and hamstrings.

o Improved muscle strength contributes to better body balance and stability.

3. Strengthening Quadriceps, Legs, Lower Back, and Knee Joint (24):

o Exercises focused on these areas help in building muscle strength and support, reducing the risk of injury and enhancing overall performance.

o Strengthening the lower back and knee joint is crucial for maintaining proper posture and reducing back pain.

4. Strengthening Hip Flexors and Quadriceps (25):

o Specific exercises target the hip flexors and quadriceps, which are essential for movements such as walking, running, and jumping.

o Strengthened hip flexors and quadriceps improve stability and mobility in the hip region.

5. Strengthening Hamstrings and Gluteal Muscles (26):

o Exercises targeting the hamstrings and gluteal muscles (minimus, maximus, and medius) enhance strength and functionality.

o These muscles are vital for activities that involve leg movement and support, such as squatting and lifting.

6. Increasing Range of Motion of Elbow and Shoulder (27):

o Exercises aimed at the upper body help in improving the ROM of the elbow and shoulder joints, which is important for activities that require arm movement.

o Enhanced ROM in these areas can help in performing daily tasks more efficiently.

7. Increased Flexibility and Range of Motion of Muscles:

o Regular massage therapy exercises help in maintaining and improving the flexibility and ROM of muscles throughout the body.

o Increased flexibility reduces muscle stiffness and the risk of injuries, contributing to overall physical well-being.

These exercises collectively help in strengthening muscles, enhancing flexibility, and increasing the range of motion, leading to improved physical performance and reduced risk of injuries.

Massage Therapy Exercises

1. Lower Limbs:

o Increase Range of Motion (ROM): Enhances flexibility and movement in lower limbs (22).

o Strengthening Leg Muscles: Targets squads, calves, glutes, hamstrings, quadriceps, and lower back (23, 24).

o Body Balance: Improves overall stability (23).

o Knee Joint: Strengthens muscles around the knee joint (24).

o Hip Flexors: Focuses on hip flexors and quadriceps (25).

o Hamstrings and Glutes: Strengthens hamstrings, gluteus minimus, maximus, and medius (26).

2. Upper Limbs:

o ROM of Elbow and Shoulder: Increases flexibility and movement in elbow and shoulder (27).

o Overall Flexibility and ROM: Enhances flexibility and range of motion in muscles.

CONCLUSION

In the reported case, the total impact of these exercises was observed to be around 25–30%. While the condition is incurable, this improvement rate significantly enhances the patient's quality of life. This case illustrates the effectiveness of Siddha medicine in controlling neuroblastoma complications and developmental delays. Treatment based on Siddha principles and Thokkanam treatment regimens demonstrates a stable and advantageous position in managing developmental delays.This structure provides a clearer understanding of the specific benefits of the exercises and the overall conclusion regarding Siddha medicine's role in patient improvement.

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