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Single Case Report of Siddha Traditional Medicine Ulunthu Thylam (Internal) and Chukku Thappalam (External) for the Management of Ataxic Telangiectasia in Children

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Abstract: Ataxic telangiectasia describes a poor muscle contraction and small dilated blood vessels present on the sclera of eyes. It is a progressive and neurodevelopment disorder. This is a autosomal recessive, multi system involvement. It's characterized by cerebellar degeneration, immuno deficiency and cancer predisposition. The congenital symptoms depends upon severity of A - T mutation (ATM gene). It occurs equally in male female ratio. The main and first symptom of this disorder is unsteady gait and it is followed by dilated blood vessels in eye and skin. This deficit is a rare inherited disorder. Ulunthu thylam is a siddha medicine that will manage the coordinating movement very well. Chukku thappalam also help to activate the brain neurons and strengthen the cerebellum. The aim of this study was to evaluate the efficacy of Ulunthu thylam (Internal) and chukku thappalam (External) in the management of Ataxic telangiectasia and to explore a new pathway to management of Ataxic telangiectasia patient using siddha therapeutic management. Ulunthu thylam was given orally in a dose of 1-5 drops twice daily with milk for a period of 2 months to evaluate the effect on clinical symptoms and measure the changes using Scale for the Assessment and Rating of Ataxia (SARA) scale and the patient were selected from OPD at A.A.G.H.I.M. Classical formulations of Siddha drug Ulunthu thylam has been used in many children and it showed good responses in the symptoms, improves strength and immunity, nervous debility, and improve musculature. It also act as a nervine tonic. Chukku thappalam works as a nervous stimulant. It seems satisfactorily good improved scores of SARA in children. Nowadays children affect like this congenital disorders more than infectious disease it is all causes about life style modification and dietary change. We will not gain complete recovery from this disorder, so simply a child to do regular activity without struggle with the help of Siddha treatment.

Keywords: Ataxic telangiectasia, Siddha, Ulunthu thylam, Chukku thappalam, ATM gene

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Introduction

Ataxia Telangiectasia (AT) also known as Louis-Bar syndrome, cerebello-oculocutaneous telangiectasia, or immunodeficiency with ataxia telangiectasia is a rare inherited childhood neurological disorder that affects the part of the brain that controls motor movement (intended movement of muscles) and speech. AT also affects the spine and immune system. It usually begins in early childhood before age 5 (Rothblum-Oviatt *et al.*, 2016). AT is caused by mutations in the ATM (ataxia-telangiectasis mutated) gene. The responsible gene (ATM gene) has been mapped to band 11q22-23. Some children with AT develop cancer, most frequently acute lymphocytic leukemia or lymphoma. Unsteady walking and lack of balance, Lack of coordination of movement, Slurred speech, difficulty swallowing, unintentional movement, such as tremor or jerky movement, difficulty coordinating eye movement and other symptoms may include Frequent respiratory infections, Red “spider” veins around the eyes, ears, or cheeks (telangiectasias), Increased sensitivity to ionizing radiation (such as X-rays or gamma rays), Diabetes, Premature graying of the hair, Fatigue, Delayed physical development. Siddha Medicine is one of our AYUSH department (Amirifar *et al.*, 2019). The main origin place is Tamil Nadu and it is developed by the writings of 18 siddhars. It is an ancient system and it speaks not only about diseases and medicine, it also explores the way of living from childhood to death. The ultimate aim was to attain disease free life. The medicine always divide the body into three dhosam named vatham, pitham and kabham. Any changes occur in three dhosas will cause diseases. Siddha Medicine has many branch to cure the disease in a separate manner. Likewise, pediatric department and pediatric literature had a huge list of medicine. One of them is Ulunthu thylam, it regularly used in internal application but also it had a wonderful activity in pediatric age people. Ulunthu thylam improves brain function and enhance memory and concentration. It mainly works in immune system. It promotes physical growth and it also have antihyperglycemic

activity. Multiple clinical and experimental studies have been conducted on Ulunthu thylam which has shown its results in improved nerve strengthening activity. Chukku thylam has a strong anti-inflammatory and antioxidant activity.

The aim of this study was to evaluate the efficacy Ulunthu thylam (Internal) and chukku thappalam (External) in the management of Ataxic telangiectasia.

Materials and Methods

Method of Study: Single case study; Study place: OPD of PG Kuzhandhai Maruthuvam in A.A.G.H.I.M. ; Study design: 2 months; Sample size: Single child

Experimental formulations and procedures:

Internal Medicine: Ulunthu thylam (Twice a day with milk); Dose: 5 drops; to 3 years child; Route of Administration: Oral administration.

Ingredients of Ulunthu thylam (Internal): (i) Vigna mungo; (ii) Sesamum oil; (iii) Goat milk; (iv) Mucuna pruriens; (v) Anethum sowa; (vi) Alpina galangal; (vii) Zingiber officinalae; (viii) Piper cubeba; (ix) Piper longum; (x) Wrightia tinctoria; (xi) Glycyrrhiza glabra; (xii) Acrous calamus; (xiii) Himalayan salt.



Chukku thappalam (External):

SARA (Scale for the Assessment and rating of Ataxia):

SARA is a clinical scale developed by Schmitz-Hubsch which assesses a range of different impairments in cerebellar ataxia. The scale is

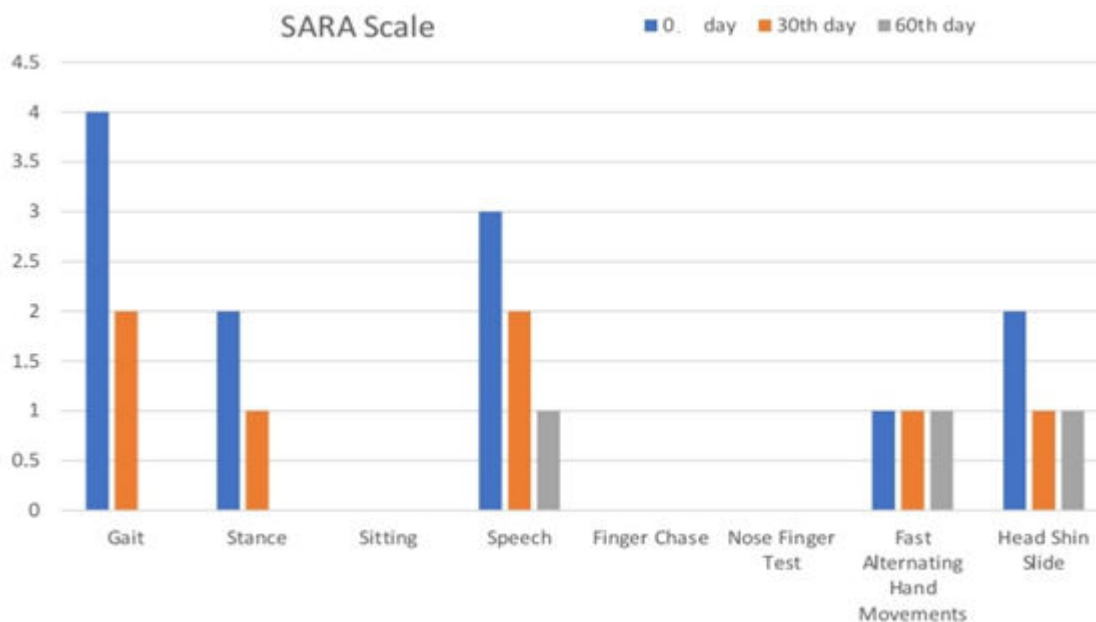


Fig. 2: SARA scale summary.

made up of 8 items related to gait, stance, sitting, speech, finger-chase test, nose-finger test, fast alternating movements and heel-shin test. The SARA is a tool for assessing ataxia. It has eight categories with accumulative score ranging from 0 (no ataxia) to 40 (most severe ataxia). When completing the outcome measure each category is assessed and scored accordingly (Prakash Rao *et al.*, 2017).

Scores for the eight items range as follows: Gait (0-8 points), Stance (0-6 points), Sitting (0-4 points), Speech disturbance (0-6 points), Finger chase (0-4 points), Nose-finger test (0-4 points), Fast alternating hand movement (0-4 points), and Heel-shin slide (0-4 points). Once each one the 8 categories have been assessed, the total is calculated to determine the severity of ataxia.

For motor activities of the four extremities (items 5-8), assessments are performed bilaterally, and the mean values are used to obtain the total score.

Results and Discussion

Case Study patient name: Mast Avinesh –OP No – 8882 is a 3 years old male Child which was born by normal vaginal delivery. Birth weight is 3 kg.

Child had cried immediately after birth. There was no history of Seizure. But Global developmental Milestone is present. All development Milestones are slowly attained. But parent noticed one day he had a clumsy walk. Unable to walk in a proper manner (Kim *et al.*, 2011).

SARA scale summary of scoring from 0 to 60th day:

Figure 2 shows great change present in gait the major co-ordinating movement. So after the treatment the symptoms slowly decreases. The scoring has zero in SARA scale, it resembles the symptoms is reduced. Above chart also describes other co-ordination of speech, stance are mildly improved.

Conclusion

The case of Ataxic telangiectasia is challenging to study in children. The disorder has a group of symptoms and it increases day by day in life. The disease can be understood and treated in siddha. Classical formulations of Siddha drug Ulunthu thylam and it showed good responses in the symptoms, improves strength and immunity, nervous debility, and improve musculature. It also acts as a nerve tonic and chukku

thapphalam works as a nervous stimulant. It seems satisfactorily good improved scores of SARA in the child. Nowadays children affect like this congenital disorders more than infectious disease, it is all causes about life style modification and dietary change. A complete recovery from this disorder is impossible but simply a child can do regular activity without struggle can be achieved with the help of Siddha treatment. We can assure to continue proper medication, so that a good improvement can be seen in that patient. Further research can be initiated by researchers and pediatrician to overcome from this disorder to avoid it for future younger generations.

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