

SIDDHA MANAGEMENT OF BALAKARAPPAAN -A CASE STUDY

K. Rajakumar^{1*}, M. K. Sangeetha² and I. Nithyamala³¹⁻³Siddha Consultant, No.266, GST Road, MIT Gate Bus Stop, Chrompet, Chennai – 600044.

Article Received on
12 July 2022,

Revised on 01 August 2022,
Accepted on 21 August 2022

DOI: 10.20959/wjpr202212-25261

Corresponding Author*Dr. K. Rajakumar**

Siddha Consultant, No.266,
GST Road, MIT Gate Bus
Stop, Chrompet, Chennai -
600044.

ABSTRACT

Balakarappaan is a Siddha medical terminology for Atopic dermatitis among pediatric age groups. The present study was a case report of a 12 year old boy who visited the out-patient department of a private Siddha clinic at Chennai during march-2021. He complained of papular eruptions on both cheeks and face one month ago with itching and oozing that has affected his mental health and school going. The diagnosis was primarily made as *Balakarappaan* using the diagnostic criteria as mentioned in Siddha text *Balavagadam* and the simultaneous comparison with modern parameters were also made which correlated well with Atopic dermatitis (AD). The humoural imbalance in *Vatham* was managed with therapeutic purgation with

Murukkanvithai Tablet followed by other classical internal and external medicines such as *Parangipattai Chooranam*, *Palagarai Parpam*, *Gandhagarasayanam*, *Punganthylam* and *Kuliyal Chooranam*. The outcome assessment was done from base line at 0 day, 15th day, 30th day and 45th day and documented. The results revealed the effectiveness of Siddha therapy for the management of *Balakarappaan* (Atopic dermatitis) in Children.

KEYWORDS: *Balakarappaan*, Atopic Dermatitis, Natural medicines, Herbal medicines, traditional medicines.

INTRODUCTION

Atopic dermatitis (AD) is the most common chronic inflammatory skin disease that typically start in infancy or childhood in 80% of cases and develop during adulthood.^{[1][2]} Siddha uses the term '*Karappaan*' for eczema or atopic dermatitis.^[3] Atopic dermatitis in children is known as '*Balakarappaan*'.^[4] Subsequently, according to the Siddha system, eczema is the inflamed skin condition due to various internal bodily triggers and external triggers.

‘*KarappanPandangal*’ or consumption of food items, allergens, and physiological issues leads to ‘*Karappan*’.^[5]

According to Siddha system the human body originally consist of five basic universal elements called as earth, water, fire, air and ether called as *panchaboothams* that maintain the integrity of the body. Any alteration in these basic elements is said to be the root cause of all diseases.^[5]

Dry, sensitive and highly permeable skin is one of the hallmarks of atopic dermatitis. There are dual mechanisms responsible for this skin disorder. A dynamic immune response is the hallmark in AD, but the role of potential pathogens such as *Staphylococcus aureus* in triggering AD and the stage at which this occurs are unclear. The epidermal barrier function is subjected to dual regulation: first, an intrinsic genetic mechanism whereby genes encoding structural elements such as filaggrin (FLG) are subjected to mutations or variants and, second, an underlying inflammation that modulates the expression of epidermal structural components and thereby further aggravates the barrier dysfunction.

Genetic cause with mutations in genes encoding functionally important structures such as filaggrin (FLG); and second, an inflammatory origin with key mediators such as IL-13 negatively impacting epidermal barrier function.^[2] Hence there are two therapeutic approaches to restore the epidermal barrier function in AD such as firstly to develop products specifically addressing the biochemical alterations. But the lack of understanding of the functional genetics of the multiple structures involved in these defects remains a major hurdle. Secondly effective control of the underlying inflammatory reaction although this may not lead to full correction of barrier function. The Siddha management of *Balakarappaan* focuses on humoral balance thereby addressing the key issues of AD such as biochemical alterations, anti-inflammatory actions and immune boosting effects. For this case of *Balakarappaan*, purgation was induced with *Murukkanvidhai* tablet followed by internal medicines such as *Parangipattaichooranam*, *palagaraiparpam*, *Gandhagarasayanam*. *Punganthylam* was used as external medicine daily for a period of 50 days. The prognosis has been documented and evaluated in this case report.

MATERIALS AND METHODS

The Siddha literature was searched for the diagnostic criteria for *Balakarappaan* and the specific formulations were derived to treat the patient. The drugs *Murukkanvidhai* tablet and

Parangipattai chooranam was purchased from certified SKM Pharmacy, Chennai. Biomedical ethics was followed and informed consent was obtained from the subject after explanation about the disease and its line of treatment. Several published literature on atopic dermatitis was also searched in Google, scopus, embase and other databases to compare and evaluate the prognostic features.

CASE HISTORY

The case was a 12 year old boy who visited the out-patient department of a private Siddha clinic at Chennai during march-2021. He complained of popular eruptions on both cheeks and face one month ago with itching and oozing. On scratching, new lesions developed and remained as hyperpigmented rashes. He had intense itching since 15 days and was sleepless. This has also affected his mental health and school going.

On examination there were reddish brown popular eruptions on skin. The itching was intolerable and the child was in an irritable state and scratching. The itching was greatly aggravated at night which made him sleepless. The child did not have any other medical history such as Asthma. There was also no family history of Asthma or dermatitis.

Biotyping (*Thegailakkanam*)

The subject was a *kaba* predominant with fair complexion, charming looks, pulse diagnosis was *kabavatham*.

Symptom evaluation for Siddha management

Reddish elevated popular eruptions over cheeks, forehead and chin of face

Intolerable itching

Extremely irritable child

Child unable to sleep at night

Line of treatment

Every Siddha drug is administered with a unique line of treatment. This is done to pacify the deranged humour. Initially a purgative, therapeutic vomiting or a combination of both may be used to normalize the deranged *Kabam* and *Vatham*. The significance of giving such a therapy before administering the main drug is to remove excess of phlegm from the respiratory tract.

Table 1: Internal medicines.

Day	Medicines	Dosage and duration
Day-1	Tablet <i>Murukkanvidhai</i>	Once a day in early morning with ginger juice
Day-2	No medicines	No medicines
Day 3 to Day 50	Tablet <i>parangipattaichooranam</i> with water Tablet <i>palagaraiparpam</i> with water <i>Gandhagarasayanam</i> 3grams with milk	Twice a day

Table 2: External medicines.

Day	External Medicines	Dosage and duration
Day1- Day 50	<i>PunganThylam</i>	External application twice a day
Day1- Day 50	<i>Kuliyal Chooranam</i>	Regular application during bath

Table 3: Case Prognosis.

DAY	PRESENTING SYMPTOMS AND PROGNOSIS
DAY-1	Intense itching with dry, red eruptions elevated papular eruptions over cheeks, forehead and chin of face
DAY-15	Itching slightly reduced. Eruptions reduced with no new eruptions.
DAY-30	Itching better than before. Eruptions reduced. Child is less irritable and can sleep at night
DAY-45	Itching occasional. Eruptions very much reduced. Child is no more irritable and sleeps well at night

**Figure 1: Dermatological Outcome Assessment of The Patient.**

DISCUSSION

The present case was a 12 year old male child presented to the clinic after developing diffuse pruritis that began 15 days prior. The patient was awake, alert, oriented to self, time and place. Vital signs were within normal limits. Physical examination revealed a rash that was

inflamed, reddish brown and dry, excoriated located on both cheeks, forehead and chin. All other body systems are negative for irregularities. The subject had no past medical history of eczema and no associated family history was available. His immunizations were upto date till present.

The Patient denied any exposure to allergens. The chief differential diagnosis related to this problem is seborrheic dermatitis.^[6] Atopic dermatitis (AD) was considered to be the diagnosis as he was presented with three major criteria such as intense pruritis, facial involvement and chronic relapsing nature of dermatitis and four minor criteria such as Facial pallor/facial erythema, Pruritus when sweating, food hypersensitivity and influenced by environmental and/or emotional factors. *Murukkanvidhai Maathirai* (MV Pills) – a Siddha poly herbal formulation which containing important plant materials, such as *Milagu*- Piper nigrum, *Thippili*- Piper longum, *Chukku*- Zingiber officinale, *Seeragam*- Cuminum syminum, *Katugurohini*-picrorhizakurroa, *Murukkanvidhai*- Buteamonosperma, *Nervalam*- croton tiglium. *Murukkanvidhai Maathirai* (MV Pills) commonly used Siddha medicine especially for worm infestation and also well known for their tremendous therapeutic potential, since from the ancient times.^[7] *Parangipattai Chooranam* and the same were subjected to molecular docking analysis against SAP enzyme target along with standard fluconazole. Results of the present in silico investigation signify that the compounds such as beta-sitosterol, afzelin, apigenin, quercetin and rosmarinic acid of the herbal formulation *parangipattai chooranam* ranked first by demonstrating potential binding affinity with active amino acid residues by occupying the respective binding sites (Asp 32, 83 Lys, Asp86, Gly220, Thr221 and Thr222) in comparison with standard drug fluconazole thereby substantiating its antifungal activity.^[8] *Palagarai parpam* is regarded as one among the resources of marine known as *Kadalpaduthiraviyangal*. The High content of calcium and sodium helps in bone formation, regulation of plasma volume, acidbase balance, nerve and muscle contraction, hemopoiesis, control of infection and cell mediated immunity.^[9] The drug *Gandhaga rasayanam* was found to be effective as antidermatohytic agent with antifungal activity when compared with standard drug fluconazole.^[10] Research studies have also shown that since cutaneous and intestinal fungal colonization that may trigger AD, antifungal agents can be optimized for the effective management in AD patients.^[11]

The same scientific fact can be applied to Siddha antifungal therapeutics and they have two way action based on Siddha humoral aspect as well as scientific antifungal agents and immunomodulatory agents.

CONCLUSION

The Present case study highlights the therapeutic safety and effectiveness of Siddha regimen towards the management of Atopic dermatitis in pediatric age groups. The symptoms of AD reduced with remarkable improvement and no relapse on follow up to 6 months of treatment. Thus commonly used classical Siddha formulations have been scientifically evaluated and can be further applied for large scale studies.

REFERENCES

1. Weidinger S, Novak N. Atopic dermatitis. *Lancet*, 2016; 387: 1109–1122.
2. Bieber T. Atopic dermatitis: an expanding therapeutic pipeline for a complex disease. *Nat Rev Drug Discov*, Jan, 2022; 21(1): 21-40.
3. Pavithra S, Naga Lakshmi M, Nandhini M, Gnanavel IS. Literature review on the Siddha treatment for Karappan (Eczema). *Int. J. Curr. Res. Biol. Med.*, 2018; 3(8): 1-5. DOI: 10.22192/ijcrbm.2018.03.08.001.
4. BalaKarappan (Atopic Dermatitis) In Children with The Evaluation Of Siddha Trial Drug PoovarasuNei (Internal). Dissertation submitted to The Tamilnadu Dr. MGR Medical University. Available at: http://repository-tnmgrmu.ac.in/9611/1/320401517bharathi_sri.pdf).
5. ShanmugaveluM. Noinadalnoimudhahnadalthirattu part-I (in Tamil) 1st ed. Directorate of Indian Medicine & Homeopathy, Chennai, 2014; 159.
6. Ji-Hye Park et al., Histopathological Differential Diagnosis of Psoriasis and Seborrheic Dermatitis of the Scalp. *Ann Dermatol*, 2016; 28(4): 427-432.
7. Ravichandran M., Nihar, Sulfin S, Murugan V. Anthelmintic activity of murukkanvidhaimaathirai (mv pills) – a siddha poly herbal deworming formulation. *World journal of pharmacy and pharmaceutical sciences*, 2014; 3: 1471-1478.
8. Pushkala, V, Sulekha S, Mathukumar S, Ragavi B, Sowmiya U. Molecular Docking Analysis of Siddha Formulation Parangipattai Chooranam Against Vaginal Candidiasis. *Applied Biochemistry and Biotechnology*, 2022; 194: 1-12. 10.1007/s12010-022-03813-y.

9. Mubarak H, Masilamani G. Siddha marine drug Palagarai (*Cypraeamoneta* Linn.) - A review. *Indian Journal of Geo-Marine Sciences*, 2012; 41(2): 121-123.
10. MeenaR, Punithavathy P, Ramasamy R. MIC of a Siddha formulation Kandhaga Rasayanam against dermatophytes. *Int. J. Pharm. Sci. Rev. Res.*, 2018; 50(2): 37-40.
11. Nikkels AF, Piérard GE. Framing the future of antifungals in atopic dermatitis. *Dermatology*, 2003; 206(4): 398-400. doi: 10.1159/000069968. PMID: 12771497.