ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Case Study

A CASE STUDY ON THE AYURVEDIC MANAGEMENT OF CHILDHOOD ATOPIC DERMATITIS

Lekshmi M K[1]*, Thulasi A[2], Nimmi K[2]

*[1]Associate Professor, [2]PG Scholar, Department of Kaumarabhritya, Govt. Ayurveda College, Trivandrum, Kerala.

Article info

Article History:
Received: 18-03-2023
Revised: 06-04-2023
Accepted: 25-04-2023

KEYWORDS:
Atopic dermatitis, Ayurveda, *Charmadala, Snehapana, Vamana*.

ABSTRACT

Atopic Dermatitis (AD) is a chronic inflammatory skin condition with impaired cell-mediated immune function and compromised skin barrier. It is characterized by erythema, oedema, vesicles, oozing in the acute stage, and thickening and hyperpigmentation (lichenification) in the chronic stage. The incidence of skin diseases is increasing day by day. Other medical systems provide temporary relief but not a complete cure. Ayurveda can contribute remarkably in the management of skin problems. Atopic dermatitis comes under *Twak vikaras* which can be correlated with *Charmadala* described in *Kashyapa samhitha*. This is the case report of a nine-year-old girl with dry, itchy and scaly skin associated with blackish excoriated lesions and oozing. She visited the outpatient department of Government Ayurveda Hospital. Ayurveda medications were administered along with dietary advice for a period of three weeks, followed by inpatient treatment with internal medications along with *Snehapana* (intake of ghee) followed by *Vamana* (emesis) and external procedures like *Dhara* (pouring of medicated liquids) with *Kushtahara* (alleviates itching) and *Kandughna* (anti-pruritic) *Dravyas* along with dietary advice for a period of one month. Encouraging results were observed in the form of a reduction in itching, dryness, and excoriation. The efficacy of the treatment was assessed using SCORAD (scoring atopic dermatitis scale), where the pre-value is 54.7 and the post-value is 17. On POEM (patient-oriented eczema measure) scale evaluation the condition changed from severe eczema to clear or almost clear. Dietary restrictions and internal medication must be continued to prevent the recurrence of the condition.

INTRODUCTION

Atopic dermatitis is one of the most common childhood skin disorders, which may be inherited, presumably autosomal dominant, often associated with either a family or a personal history or other allergic conditions such as asthma or allergic rhinitis. The word "atopy" comes from the Greek word meaning "without place, unusual," described by Coca and Cooke in 1923.[1] It affects about 10-20% of children and 1-3% of adults. It has an earlier onset; approximately 45% of cases begin within the first 6 months of life, 60% during the first year, and 85% before 5 years of age.[2]

Access this article online	
Quick Response Code	
	https://doi.org/10.47070/ijapr.v11i4.2770

In the present era, topical steroids remain the mainstay of atopic dermatitis treatment. There are many challenges regarding topical corticosteroid use, especially concerning steroid abuse, misuse, and phobia. There are many side effects, such as skin atrophy, telangiectasia, steroid acne, hirsutism, contact sensitization to the steroid itself, systemic effects such as suppression of HPA axis, growth retardation etc. While their efficacy is well appreciated, the total increase in steroid burden is less monitored and side effects rarely addressed.[3]

In Ayurvedic literature, the word "*Charmadala*" has been mentioned under the category of *Kushta* (skin disorders), which denotes all varieties of skin disorders. In *Kashyapa samhitha* description of *Charmadala* (dermatitis) closely resembles that of atopic dermatitis. It is characterized by itching, reddish discolouration of skin, peeling, and dryness with papule formation.[4]

Case Report

A nine-year-old girl, a native of Kerala was brought to the Outpatient Department of

Kaumarabhritya, Govt. Ayurveda College, Trivandrum with complaints of dry, itchy, and scaly skin associated with blackish excoriating lesions all over the body along with oozing since the last six months.

History of Presenting Complaints

She is the second child of non-consanguineous parents and was born through full-term normal vaginal delivery (FTNVD). She had a birth weight of three kilograms. The baby cried soon after birth with a normal sucking reflex, and the neonatal period was uneventful. All developmental milestones were attained properly. At one year of age, had a history of fever along with seizures. Medicaments were given and subsided.

Six months before, the mother noticed a reddish macule on the right knee joint in its posterior part, along with itching. On itching, there was bloody discharge. Then it spread to nearby areas and the whole body, including the face, in the right and left elbow joints and knee and ankle joints. Simultaneously, the dryness of the skin also increased. The child had disturbed sleep due to intense itching at night. They underwent allopathic consultation and took medication for three months, but didn't get any considerable relief. So, they came for Ayurvedic management.

On Examination

Integumentary system

Dry, itchy, and scaly skin associated with blackish excoriating lesion along with oozing. Crusts and lichenification along with serous exudates in some lesions of the lower limb were observed which were irregular in shape. The lesions were more present over the flexor and extensor aspect of limbs, chest region and back with pruritis.

Diagnostic Criteria

The diagnosis was based on history, clinical presentation, and Hanafin and Rajika criteria for atopic dermatitis, which consists of a combination of symptoms divided into two categories, major and minor features.[5]

Table 1: Hanifin and Rajika Criteria for Atopic Dermatitis

Major criteria	Present /absent
Pruritis	√
Typical morphology and distribution (flexor and extensor involvement in infants and young children)	√
Chronic relapsing dermatitis	√
Personal or family history of atopy (asthma, allergic rhinitis or atopic dermatitis)	Nil

Minor criteria	Present/absent
Cataracts (anterior subcapsular)	Nil
cheilitis	Nil
Conjunctivitis	Nil
Facial pallor	Nil
Food intolerance	Nil
Hand dermatitis	Nil
Elevated levels of igE	√
Immediate skin test reactivity	Nil
Itching, when sweating	√
Keratoconus	Nil
Keratosis pilaris	Nil
Nipple dermatitis	Nil
Orbital darkening	Nil
Palmar hyperlinearity	Nil
Perifollicular accentuation	Nil
Pityriasis alba	Nil
White dermographism	Nil
Wool intolerance	Nil
Xerosis	√
Early age of onset	√

Number of features present in this case
Major criteria- 3
Minor criteria-3

Therapeutic Interventions

After a thorough examination in the outpatient department, the patient was given internal medicines for three weeks and necessary dietary restrictions. Initially, *Nimbamritadi eranda tailam* (20ml in the morning on an empty stomach with milk and sugar), *Dooshivishari gulika* one tablet thrice daily with honey, *Mahatikthakam Kashaya* (50ml twice daily before food) was administered. *Mahatikthaka ghritha* was given for external application. After three weeks, the child was admitted for inpatient management at Ayurveda hospital. The child was managed with both internal medications and external therapies, along with dietary restrictions. Initially, the child was given *Ashtachoorna* followed by *Achasnehapana* (administration of ghee as such) with *Aragwada mahatikthaka ghritha.*[6] After 3 days of *Abhyanga* (oil massage) and *Usma sweda* (fomentation*), Vamana* (emesis) was done with specifically indicated *Kushtahara dravyas*[7,8.]. Then *Takradhara* (Sudation therapy by pouring medicated butter milk) and *Panchatikthaka ksheera dhara* (pouring of medicated milk) was done.[9] Assessment of the patient was done before and after the treatment.

Time Line

Table 2: Time line of outpatient management

Date/day of visit	Presentation during different visit	Interventions
02/04/2022-16/4/2022	First visit to the outpatient department Dry, itchy, and scaly skin associated with blackish excoriating lesion all over the body along with oozing. Decreased appetite, constipation	1. *Nimbamritadi erandam* 20ml in the morning with milk and sugar in empty stomach 2. *Dooshivishari gulika*- one tablet thrice with honey after food
16/4/2022-21/4/2022	Itching reduced Colour of lesions begins to fade Appetite improved	Above 2 medicines were continued 3. *Maha tikthakam kashayam*-50ml twice before food 4. *Mahatikthaka ghritha*– external application

Table 3: Timeline of inpatient management

Date of admission	Complaints/condition of patient	Intervention
23/4/2022 27/4/2022-5/5/2022	Dry, itchy, and scaly skin associated with blackish excoriating lesion Complaints persist Presence of *Ghritha* in bowel	1. *Dooshivishari gulika*- One tablet twice daily after food 2. *Asthta choornam*- half teaspoon twice daily with honey 3. *Acchasnehapanam* with *Aragwadamahatikthaka ghritm*
6/5/2022-8/5/2022		4. *Abhyanga* with *Suddha durvadi tailam* and *Ooshma sweda*
9/5/2022		*Vamana* *Kutajabeeja* - 5 gram *Madhana phala* - 5 gram *Yashti madhu* - 5 gram *Patola moola* - 5 gram *Nimba swarasa* - 20ml (if needed) *Yashti kashayam* -15-gram *Yashti choorna* with 4 glasses of water – boiled and filtered *Ksheeram* -3.5 litre (for *Aakanta pana*)
10/5/2022 -13/5/2022	Itching reduced considerably; colour of the lesion faded	5. *Aragwadamahatikthaka ghritm* -20ml twice daily 6. *Takradhara*
14/5/2022-18/5/222		7. *Panchatikthaka ksheera dhara*

RESULT

The changes observed before and after treatment was assessed by SCORAD (Scoring atopic dermatitis) rating.[10] This tool is used to determine the effectiveness of the treatment.

Table 3: Before and after treatment was assessed by SCORAD

Area	Before Treatment	After Treatment
Head and neck	6	3
Upper limbs	10	5
Lower limbs	18	10
Anterior trunk	16	10
Back	16	7

Table 5: SCORAD Rating Based Intensity of Skin Lesion

Parameters	Before treatment	After treatment
Redness	0	0
Swelling	0	0
Oozing /crusting	2	1
Scratch marks	2	1
Lichenification	1	0
Dryness	2	1

SCORAD Score

A/5+7B/2+C

Before treatment – 54.7 (severe eczema)

After treatment – 17 (mild eczema)

Table 6: Grading According to Subjective Symptoms

Subjective parameters	Before treatment	After treatment
Itch	7	1
Sleeplessness	5	0

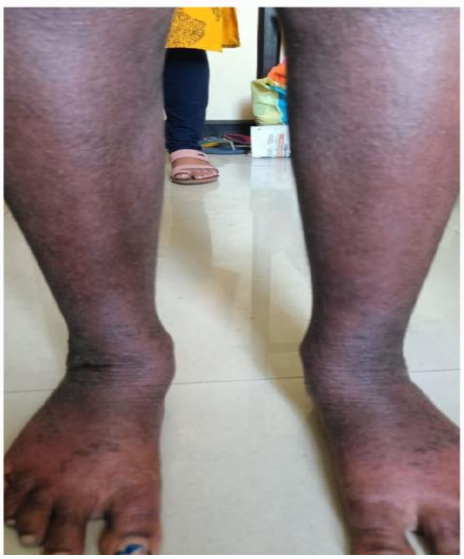
The severity of disease is also assessed using POEM Scale (Patient oriented Eczema measure).[11]

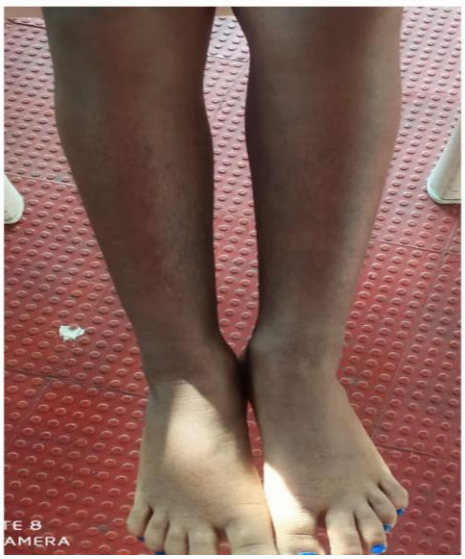
Before treatment- 22 (severe eczema)

After treatment- 3 (mild eczema)

Ige Level- before treatment was 37100 IU/ml and after treatment 20711.0 IU/ml

Before treatment **After treatment**





DISCUSSION

Atopic dermatitis is a chronic or chronically relapsing hypersensitive manifestation of the skin with itching as a predominant feature.[12]. In this case also the child is having severe itching with exfoliation of the skin. Lowered itch threshold in children results in increased levels of cutaneous reactivity in response to stimuli. Hence they may succumb to a vicious itch-scratch-itch cycle, in which pruritus stimulates a bout

of scratching. This increases skin inflammation and triggers a greater sensation of itching, thus exacerbating flares.[13]

In Ayurveda, the condition can be considered as *Charmadala*, which was explained in Kashyapa samhitha. In this case *Vata pitta* and *Kapha* (3 humours) all together has to be considered as the disease was in the chronic stage and symptoms showed *Sannipathika dosha kopa* (vitiation of three humours altogether). So, while choosing the drugs, those having *Dosha samanatwa* (pacifying humour), *Vyadhiharatwa* (pacifying diseases) has to be considered. The drugs having *Kanduharatwa* (anti-pruritic), *Kushtaharatwa* (alleviating skin lesions*), Raktha sodhaka* (blood purifier), along with *Krimiharatwa* (anthelmintic) properties were given prime importance. Internal medicines and external procedures useful in skin diseases were chosen in this case.

The state of *Agni* (digestive fire) and *Ama* has to be considered in the treatment aspect. Since it is a chronic condition*, Agni (*digestive fire) is compromised, thereby causes an *Aama avastha* in *Dhatus* (toxins in interstitial tissues). In the outpatient management *Nimbamritadi eranda taila* was given, which has *Amapachana* property (enhances digestion of undigested food/toxins/metabolic waste), and *Anulomana* (downward movement of *Vata*) effect, especially indicated in skin diseases.*[14] Dooshivishari gulika* was given since it has a *Vishahara* (destroys toxins) property and helps pacify *Dhatugata ama*.[15] After that, when the *Agni* becomes normalized *Mahatikthaka Kashaya* specifically indicated in skin disease was given.[16]

Under the IP management, treatment was started with internal medications such as *Ashtachoorna.*[17] The formulation *Ashta choorna* enhances the digestive fire. *Dooshivishari gulika* was continued since it acts on *Dhatu* level. So, in the first phase of the disease, both these medications are very effective.

After the first line of *Rookshana*, *Acha Snehapana*, was planned (intake of medicated ghee as such). The choice of drug was *Aragwadha mahatikthaka grutha*, which was specifically indicated for skin diseases where *Kapha pitha* symptoms are predominant. *Achasnehapana* continued till *Samyak snigdha lakshana[18]* (proper oleation symptoms) was obtained. The *Sodhana* (purificatory methods) procedure adopted was *Vamana* (emesis) since it was a *Kaphothara vyadhi.* The *Vamana yoga* chosen here was mentioned in *Charaka samhitha kushtachikitsa*. The *Vamana yoga* includes *Kutaja beeja (Holarhena antidysentrica), Madanaphala (Randia dumetorum), Madhuka (Glycerrizha glabra), Patola (Trichosanthes diodica)* and *Nimba rasa (Azadiracta indica).* This *Yoga* is specially indicated for *Vamana* in *Kushtaroga chikitsa.* After removing excessively accumulated *Doshas* the residual *Doshas* remained in the skin was considered. *Takradhara* was done and the patient got much relief from itch all other symptoms. For the residual *Dosha samana* and *Twak prasadana* (skin cleansing) *Panchatikthaka ksheera dhara* was also done. The spread of the lesions considerably reduced and got relief from symptoms such as itching, oozing, and exfoliation of the skin.

After all the internal medications and external procedures patient got relief not only from symptoms but also from the other associated comorbidities, such as disturbed sleep due to itching, stress due to the cosmetic issues of the disease. Here we considered the concept of *Amadosha (*toxins or undigested metabolic waste*), Gara visha (*artificial poison) and *Rakthavaha srotho dushti (*blood flowing channels), *Twakgata dosha dushti* (humors in skin*)*.[19,20,21] The management was based on all the above-mentioned concepts and adequate results were obtained, evident from the assessment done with SCORAD rating (pre value- 54.7, post value 17) and POEM scale (the condition changed from severe eczema to almost clear).

CONCLUSION

By the treatment modalities of Ayurveda, we managed the case of atopic dermatitis, which is a chronic relapsing skin condition. Considering *Tridosha sidhantha* (three humoral theory) through *Samana* (pacification) and *Sodhana* (purification) procedures we managed the disease successfully. The quality of the life has improved and hypersensitivity reactions of the skin were reduced with Ayurvedic interventions, hence it can be considered as an alternative to the steroids.

ACKNOWLEDGEMENT

The authors are grateful to the head of the department Dr.Anilkumar M.V, all teaching staff, postgraduate scholars, internees, nursing staff, and Panchakarma therapists, of Govt. Ayurveda College for Women and Children, Thiruvananthapuram, Kerala, for their support in the management of the case.

REFERENCES

1. Mallory S B, Bree A, Chern P. Illustrated manual of pediatric dermatology: 1st ed. London and New York: Taylor and Francis; 2005; p. 60-61.
2. Johnson ML, Johnson KG, Engel A, editors. Prevalence, morbidity, and cost of dermatologic diseases. J Am Acad Dermatol. 1984 Nov; 11 (5 Pt 2): 930-6. doi: 10.1016/s0190-9622(84)80017-1. PMID: 6501612.
3. Puterman A, Lewis H Topical and systemic pharmacological treatment of atopic dermatitis: Samj: [serial online]. OCT 2014 Vol 10(10): 150. Available from: putall@global.co.za

4. Tewari PV, Kashyapa Samhita or vriddha jeevakeeya tantra, English translation, Ch.15, ver.4. Varanasi, choukamba Vishwa Bharathi, reprint 2013.p.622.
5. Ghai Om Prakash,Vinod k paul,Aravind Bagga, Essential pediatrics; New Delhi, CBS Publishers, 8th edition, 2013; 681.
6. Dr T Sreekumar, editor. Ashtanga hridaya of Vagbhata, Sutrasthna; chapter 16, verse. 16-17. Mannuthy, Thrissur; 31.
7. Dr T Sreekumar, editor. Ashtanga hridaya of Vagbhata, Sutrasthna; chapter 18 verse. 1-2. Mannuthy, Thrissur; 59.
8. Sharma P V, editor. Charaka Samhita of Agnivesa, Chikitsa Sthana. chapter 7, verse 43-44. Varanasi: Chaukhambha Orientalia, 129.
9. Krishnan Vaidyan A K, Gopala Pillai S. Sahasrayaogam (Malayalam). 35th ed. Alappuzha: Vidyarambham publishers; 2017, 472.
10. Severity scoring of atopic dermatitis: the SCORAD index. Consensus Report of the European Task Force on Atopic Dermatitis. Dermatology. 1993; 186(1): 23-31. doi: 10.1159/000247298. PMID: 8435513.
11. CR Charman, AJ Venn, and HC Williams, British journal of dermatology, vol 169, issue 6, 1326-1332.
12. Sehgal VN, Khurana A, Mendiratta V, Saxena D, Srivastava G, Aggarwal AK. Atopic dermatitis; Etio-pathogenesis, An overview. Indian J Dermatol [serial online] 2015 60: 327-31.
13. Robert a Schartwz. pediatric atopic dermatitis. windle, editor. emedicine. medscape.com/ article/ 911754. American academy of pediatrics; 2022.
14. Murthy SK, Editor. Ashtanga hridaya of Vagbhata, chikitsa sthana; chapter 21, verse.58. vol 2. Varanasi: Choukamba krishnadas academy, 2014; 508.
15. Murthy SK, Editor. Ashtanga hridaya of Vagbhata, Utharasthana; chapter 35, verse 39. Varanasi: Choukamba krishnadas academy, 2014; 334.
16. Murthy SK, Editor. Ashtanga hridaya of Vagbhata, chikitsasthana; chapter 19, verse 8-10. Varanasi: Choukamba krishnadas academy, 2014; 473.
17. Murthy SK, Editor. Ashtanga hridaya of Vagbhata, chikitsasthana; Chapter 14, verse 35. Varanasi: Choukamba krishnadas academy, 2014; 406.
18. Dr. T Sreekumar, editor. Ashtanga Hrudaya of Vagbhata, Sutrasthana; chapter 16, verse 30-31. Mannuthi, Thrissur; 38.
19. Dr. T Sreekumar, editor. Ashtanga Hrudaya of Vagbhata, Sutrasthana; chapter13, verse 25. Mannuthi, Thrissur; 344.
20. Cheppatt Achutha Variyar, Ashtanga Hrudaya of Vagbhata, Utharasthanam; chapter 35, verse 49-50. Devi Book Stall Kodungallur, Reprint 2013; 35.
21. Sharma RK, Dash B, Editors. Charaka samhitha of Agnivesh, sutra sthana; chapter 28 verse 9-12 Varanasi: Choukhamba Sanskrit Series 2016;19.

Cite this article as:
Lekshmi M K, Thulasi A, Nimmi K. A Case Study on the Ayurvedic Management of Childhood Atopic Dermatitis. International Journal of Ayurveda and Pharma Research. 2023;11(4):20-25.
https://doi.org/10.47070/ijapr.v11i4.2770
Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**
Dr. Lekshmi M K
Associate Professor,
Department of Kaumarabhritya,
Govt.Ayurveda College,
Trivandrum, Kerala.
Email: lekshmimk@gmail.com