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Repurposing of traditional Siddha drug for external application in chronic irritant contact dermatitis – A case report

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Abstract:
Siddha system of medicine offers several drugs for managing skin disorders, including contact dermatitis. Hence, a maiden attempt was made to repurpose an internal medicine for external application in chronic irritant contact dermatitis. A 30-year-old tea vendor with an 8-year history was treated with the drug, containing chestnut as its chief ingredient and occupational avoidance for 14 days. Complete resolution of dermatitis and symptoms was observed, with no recurrence during 12 months of drugless follow-up. However, well-designed clinical trials are required to evaluate its efficacy.

Keywords: Dermatology, irritant contact dermatitis, *karappan*, *moolakudara thylam*, case report, Siddha

Background:
The International Classification of Diseases 11th revision code for contact dermatitis is EK02.Z **[1].** It is an inflammatory eczematous skin condition. Contact dermatitis arises from exposure to substances or metal ions that cause damage without eliciting a T-cell response, or from contact allergens, which are small reactive compounds that modify proteins and activate both innate and adaptive immune responses. The condition is classified into two types: allergic contact dermatitis and irritant contact dermatitis. Allergic contact dermatitis is a delayed hypersensitivity reaction (type IV) triggered by external contact antigens, whereas irritant contact dermatitis results from a nonspecific skin response to direct chemical injury, leading to the release of inflammatory mediators predominantly from epidermal cells. Immunological responses are mediated through interactions between cytokines and T cells **[2].** In certain cases, the condition becomes chronic and can have a substantial impact on the patient's quality of life. It should be treated at timely to prevent further complications. Locally applied ointments such as topical antiseptics, local anesthetics and antifungals are used to treat contact dermatitis. Oral medication, such as steroids, antifungals, antibiotics and antihistamines, is necessary. Lesions in this illness frequently recur and the costs of these drugs are unaffordable. Topical steroid application can cause side effects on specific body parts like the face and genitalia **[3].** In India among the patients attending dermatology OPD, the prevalence rate of contact dermatitis is 4.38% **[4].** Hence, there is a need to develop new treatment strategy for alleviating the clinical features of contact dermatitis. Traditional systems of Medicine are gradually getting attention due to their easy availability as well as cost-effectiveness. In the Siddha system of medicine contact dermatitis comes under *karappan noi* **[5].** (National Siddha Morbidity Code-BF) **[6].** It is characterized by the signs of paresthesia, itching, rashes, blisters, fissures, oozing, finally leads to differs from normal skin colour **[7].** And According to sage *yugi, karappan* caused by contact with allergens, psychosomatic and *karappan pathaartthangal* which includes pearl millet, Foxtail millet, kodo millet, little millet, an unripe plantain, bitter guard, fish **[8].** The disease's etiology and symptoms could be related to contact dermatitis. Several preparations for the *Karappan* circumstances are outlined in Siddha literature. This case study examines an 8-year-old case of irritant chronic dermatitis caused by dish washer chemical that was treated with *Elathy chooranam* tablets, *Palagarai parpam* tablets and *Ganthaga rasayanam* as internal medications and external applications of *Moolakudara thylam* and *Arugan thylam*. *Moola kudara thylam* which is mentioned in hospital pharmacopeia indicated for bleeding piles and constipation. *Kadukkai pinju* and castor oil are the ingredients **[9]**. Therefore, it is of interest to report this medicine is used as an external application for the irritant contact dermatitis condition, based on its astringent and emollient effect with other supportive internal medicines.

Patient information:
A 30-year-old male patient presented to National Institute of Siddha with complaints of hyper-pigmented itchy lesions associated with fissures in the dorsum of both hands and foot, occasionally oozing were waxing and waning for the past 8 years. He took conservative management like topical antiseptic applications and intake of oral antibiotics and anti-histamines for that period. His sleep and appetite were normal, Bowel and Bladder habits were normal. He was working in a tea shop as a vessel cleaner for 10 years. The patient did not have any comorbidity like Type II Diabetes Mellitus, Hypertension, Tuberculosis, Bronchial asthma and coronary artery disease.

Clinical findings
On examination, reddish fissured lesions are present over the dorsal aspects of both hands and feet. Sometimes oozing present and found to be VA disability rating was 60% which is an extreme **[10].** The Siddha Eight-fold system of clinical assessment was done and mentioned in (**Table 1).**

Examination of skin:

[1] Site: Dorsum of both hand and foot.
[2] Primary lesion: Plaques present in the dorsum of both hand and foot
[3] Secondary lesion: Fissures present in the dorsum of both hand and foot
[4] Miscellaneous lesions: Atrophy/ Lichenification /Scar – Nil.
[5] Sharpness: Defined
[6] Arrangement: Confluent

Timeline:

The timeline of the symptoms and management is described in (**Figure 1)**.

Diagnostic assessment:

The patient had symptoms of irritant contact dermatitis may include burning, itching, stinging, soreness and pain. Glycemic indices were done to rule out diabetic dermopathy. According to the VA disability rating scale 10% – Intermittent dermatitis requires topical medication. 30% – Persistent dermatitis with regular episodes affecting daily activities, requiring systemic medication. 60% – Chronic dermatitis with constant symptoms, affecting a significant body area and requiring systemic steroids or other immunosuppressive treatment. The lesion was chronic, affected the dorsum of both hands and feet and required topical steroid application; hence it was rated as 60%.

Diagnostic reasoning:

In this case, the diagnosis was made through detailed history taking and physical examination. Inspection alone is satisfactory in diagnosing skin conditions substantiated with evidence **[11].** There was no history of exposure to allergens; hence, allergic contact dermatitis was excluded **[12].** Lichen planus was ruled out due to the absence of polygonal, violaceous, flat-topped, pruritic papules measuring a few millimeters in diameter **[13].** No annular lesions had sharp margination with raised erythematous scaly edges that may contain vesicles; hence, tinea corporis was excluded **[14].**

Therapeutic interventions:

The patient was treated with both internal and external medicines for 14 days from 04.09.2023 to 18.09.2023. On the first day, the patient was advised to purgation *Agathiyar kuzhambu* **[15]** 130 mg with ginger juice in the early morning. From the 2nd day onwards patient was treated with the following internal and external medicines. Details of internal and external medicines are listed in (**Table 2 and 3).**

Outcome and follow-up:

The patient was treated in OPD with a follow-up on the 7th and 14th day. On the 7th day, OPD visit patient showed a good prognosis on the VA disability rating scale, reduced to 30% with healed fissures in both hands and foot and hyperpigmented dry lesions present. In the 14th-day visit, lesions are completely healed. Then the patient was followed up for 12 months and there was no recurrence to date. The outcome of the study is mentioned in (**Table 4).**

Table 1: Eight-fold system examination

Siddha Eight-fold system of clinical assessment	
1. *Naadi* (Pulse)	*Pitha vatham*
2. *Sparisam* (Palpation)	Rough skin present in dorsal aspects of both hands and foot
3. *Naa* (Tongue)	Normal
4. *Niram* (Colour of the body)	Hyper pigmented itchy plaques with fissures present in dorsal aspects of both hands and foot
5. *Mozhi* (Speech)	Normal
6. *Vizhi* (Eye)	Normal
7. *Malam* (Stool)	Normal
8. *Moothiram* (Urine)	*Neerkuri* – Normal
	Neikkuri – Ring pattern *(Pitham)*

Table 2: Details of therapeutic interventions

S.No	Medicine	Dosage	Adjuvant	Route
1	*Elathy chooranam* tablet	2 TDS	Milk	Oral
2	*Palagarai parpam* tablet	2 BD	Milk	Oral
3	*Ganthaga rasaayanam*	5 grams BD	Milk	Oral
4	*Moolakudara thylam*	QS	-	External application
5	*Arugan thylam*	QS	-	External application

Moola kudara thylam is applied only in fissures and Arugan thylam is applied throughout the lesions.

Table 3: Indications and procurement details

S.No	Medicine	Indication	Reference	Procurement
1	*Elathy chooranam* tablet	*Arikiranthi, Kuttam*	Siddha *vaitthiya thirattu*	IMPCOPS
2	*Palagarai parpam* tablet	*Visham*	Siddha *vaitthiya thirattu*	IMPCOPS
3	*Ganthaga rasayaanam*	*Kuttam, skin diseases*	Siddha *vaitthiya thirattu*	IMPCOPS
4	*Moola kudara thylam*	*Moolam*	Pharmacopoeia of the hospital of Indian medicine	IMPCOPS
5	*Arugan thylam*	*Pitham* vitiated skin disease	*Agathiyar Paripuranam* 400	IMPCOPS

Table 4: Outcome of the study

S.No	Symptoms	Date of prognosis	Duration of prognosis
1	Symptoms persist	03.09.2023	0th day of treatment-consultation at OPD.

2	Symptoms persist	04.09.2023	First day of treatment-Purgation procedure.
3	Itching	05.09.2023	Reduced from the 2nd day of the treatment after the application of Arugan thylam.
4	Oozing	06.09.2023	Reduced from the 3rd day of the treatment
5	Fissures	11.09.2023	Completely healed on the 7th day of Moola kudara oil application
6	Dryness	18.09.2023	Completely healed on the 14th day of the treatment
7	Hyperpigmentation	18.09.2023	Completely resolved in both hands on the 14th day and mildly present in both dorsa of the foot.

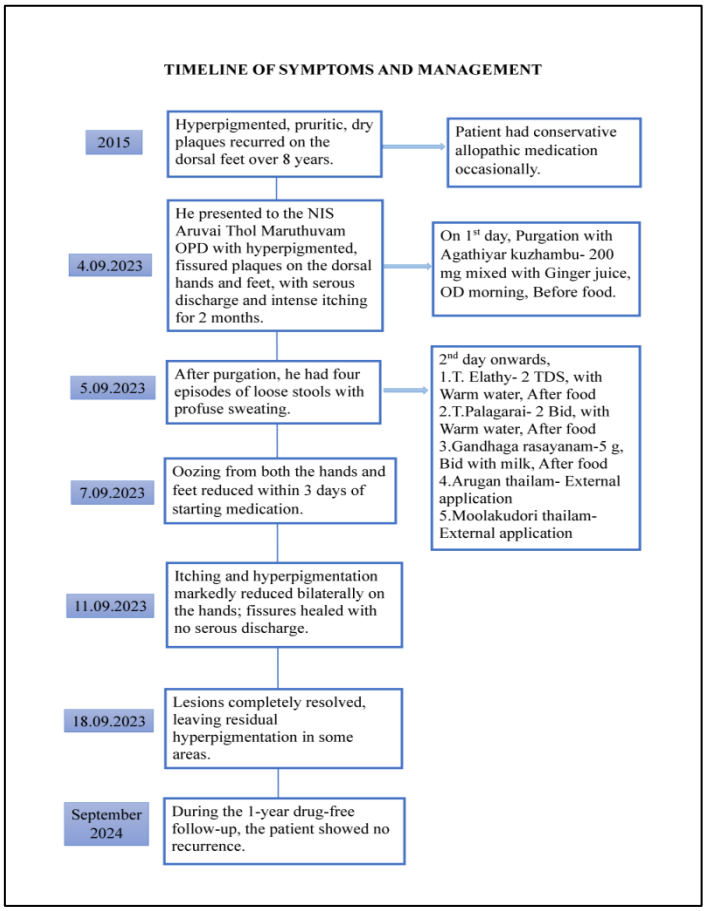


Figure 1: Timeline of symptoms and management

Intervention adherence and tolerability:
Since the patient was treated with the OPD procedure at Ayothidoss Pandithar Hospital of the National Institute of Siddha, regular follow-up visits helped facilitate adherence to and tolerability of the intervention.

Adverse and unanticipated events:
No adverse and unanticipated events occurred.

Discussion:
The majorities of contact dermatitis cases are self-limiting and can be effectively managed with basic supportive care. However, in certain individuals, the condition may become chronic, significantly impacting their quality of life. This report deals with a case of chronic contact dermatitis of eight duration, which did not respond to Conventional Allopathic treatment and in due course opted for the Siddha System for management. The main treatment instituted was an external application of *Moolakudara thylam* **[16]** and *Arugan thylam* **[17]** internally *Ganthaga rasayanam, Elathy choornam* tablet *and Palagarai parpam* tablet. This condition may come under *pitha vatham* condition due to its character. *Varatchi* (dryness) is caused by vitiated *vatham;* in addition to this condition hyperpigmentation and oozing occur due to vitiated *pitham*. As the taste of the *Elathy chooranam* tablet is *Inippu* (sweet), it can pacify the altered *pitham* and *vatha* humours and it comes under *seetha veeriyam* which is suitable for the vititated *pitham* condition. All the ingredients of *Elathy chooranam* have immune-modulatory and anti-inflammatory properties that inhibit the production of interleukins and cytokines which play a key role in skin diseases **[18]**. *Palagarai parpam* tablet is used for its antihistamine activity **[19]** the main ingredient of the tablet is the marine shell (*Cryprae montea Linn*) and it has the taste of *kaippu*. In Ganthaga rasayanam, the main ingredient is *Gandhagam* (sulphur), the taste of it is *kaippu* (bitter) and *thuvarppu* (sour). These tastes can pacify the vitiated *pitham* and the literature indicates skin diseases. Sulfur exhibits antifungal, antibacterial and keratolytic properties. When used alone or combined with agents like sodium sulfacetamide or salicylic acid, sulfur has proven effective in managing various dermatological conditions **[20].** *Arugan thylam* is used for itching and its main ingredient is *arugan ver* (*Cyanodon dactylon)* having the property of *inippu suvai* and *thatpa veeriyam* and also has anti-microbial, anti-inflammatory, wound healing activities **[21].** *Moolakudara thylam* is used in the basis of its ingredients. *Kadukkai pinju* (*Terminalia chebula* tender fruit) and castor oil are the ingredients. *Kadukkai pinju* is an astringent and it can reduce the oozing and castor oil is an emollient in action. This combination suits for dry and fissured skin lesions. Irritant contact dermatitis usually clears up in 2–4 weeks if the cause is identified and avoided **[22].** However, it may return if the substance that caused it. Choi *et al.* conducted a study on chronic contact dermatitis recovery time in men. In that study, they reported that complete recovery of skin function after chronic irritant contact dermatitis induced by 1% sodium lauryl sulfate needed longer than 10 weeks **[23].** But in this case, prognosis was achieved within 14 days, from the 3rd day of treatment by the reduction in oozing and the VA score was improved to 30% at the 2nd visit and healed at the 3rd visit. In contact dermatitis conditions relapses are very common. But in this patient, there has been no recurrence of lesions till now which is one year.

Conclusion:
Chronic irritant contact dermatitis external application of *Moolakudara thylam* and other internal medicines helped in healing with a short duration of 2 weeks. The patient whose condition did not respond to Conventional Allopathic treatment improved after Siddha medication. Hence, this case report

concludes that the Siddha system can be considered for treating such cases after safety and efficacy studies.

Key points:
Conditions like chronic irritant contact dermatitis, which results in poor quality of life and many other complications, can be subjected to the Siddha treatment modality.

Limitations of the study:
As this case report focuses on a single instance with a positive outcome, the findings cannot be generalized. Additional well-designed clinical trials are necessary to evaluate its efficacy. A patch test is the standard diagnostic method for contact dermatitis was not done. The diagnosis was made through the symptoms and history of the lesions.

Patient perspective:
The patient started to relieve the symptoms within the days after the initiation of treatment. Fissures were completely healed itching was reduced within 1 week and normal skin texture was achieved within 2 weeks of treatment. Now the patient is doing his routine and his job regularly. There has been no recurrence of lesions to this date.

Informed consent:
Proper informed consent was obtained from the patient.

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During the preparation of this work the author used ChatGPT in order to paraphrasing. After using this tool/service, the author reviewed and edited the content as needed and takes full responsibility for the content of the published article.

References:
[1] https://icd.who.int/browse/2026-01/mms/en
[2] http://www.ncbi.nlm.nih.gov/books/NBK459230/
[3] Coondoo A *et al. Indian Dermatol Online* ***J***. 2014 **5**:416. [PMID: 25396122]
[4] Ghosh S *et al. Indian J Dermatol*. 2020 65:269. [PMID: 32831366]
[5] https://archive.org/details/dli.jZY9lup2kZl6TuXGlZQdjZI3lZxy
[6] https://namaste.ayush.gov.in/
[7] https://www.ijhsr.org/IJHSR_Vol.13_Issue.4_April2023/IJHSR11.pdf
[8] Thiyagarajan R, *Siddha Maruthuvam Sirappu, 1st ed*, Department of Indian Medicine and Homeopathy, Chennai-106, India, 1985.
[9] Murugesa Mudhaliyar K S, *Gunapadam Mooligai Vaguppu, part- 1*, Department of Indian Medicine & Homeopathy Department, Chennai-106, 2013.
[10] https://www.hillandponton.com/va-disability-skin-conditions/
[11] Neena Khanna. *Illustrated Synopsis of Dermatology and Sexually Transmitted Diseases. Fourth*. New Delhi: Elaevier, a division of Reed Elsevier India Private Limited; 03p.
[12] https://www.ncbi.nlm.nih.gov/books/NBK532866/
[13] https://www.ncbi.nlm.nih.gov/books/NBK526126/
[14] https://www.ncbi.nlm.nih.gov/books/NBK544360/
[15] https://archive.org/details/dli.jZY9lup2kZl6TuXGlZQdjZQ8l0Yy
[16] Uthamarayan C S. *Pharmacopoeia of hospital of Indian medicine. Second. Vol. Part II*. Madurai-625007: Government Branch Press; 1995. 142p
[17] IMPCOPS Siddha marunthugalin seimurai. 17th ed. Indian Medical Practitioners Cooperative Pharmacy and Stores; Chennai-600041; 2013.
[18] https://www.wjpr.net/abstract_file/14910
[19] https://www.ijam.co.in/index.php/ijam/article/view/3638
[20] Gupta AK & Nicol K. *J Drugs Dermatol*. 2004 **3:**427. [PMID: 15303787]
[21] Muralidass SD *et al. Sch J Med Case Rep*. 2020 **8**:854.[DOI: 10.36347/sjmcr.2020.v08i09.012]
[22] https://www.mayoclinic.org/diseases-conditions/contact-dermatitis/symptoms-causes/syc-20352742
[23] Choi JM *et al. Contact Dermatitis.* 2000 **42**:264. [PMID: 10789840]

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