



Cost-effective *Siddha* Management of Psoriasis Vulgaris with Special Reference to *Kalanjagapadai* – A Case Report

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Abstract

Psoriasis is a non-infectious and chronic inflammatory skin disorder that is characterized by well-defined erythematous plaques with silvery scales over the epidermis. It significantly affects a patient's social and psychological well-being. Contemporary medicine offers no definitive treatment. However, corticosteroids are the drug of choice for treating psoriasis. Currently, available therapeutics cause severe side effects on the body. In the *Siddha* system of medicine, psoriasis can be compared with *Kalanjagapadai*, because most of the signs and symptoms mimic that of Plaque psoriasis. However, the principle based on the *Siddha* medicine approach has proven to be effective. This article presents a case of psoriasis treated for 3 months with *Siddha* herbo-mineral preparations and dietary restrictions. A 40-year-old male patient presented with complaints of well-defined erythematous itchy skin lesion, burning sensation, and silvery scaling all over the body for the past 3 months. Based on the symptoms *Kalanjagapadai* treatment was adopted here. After giving purgation therapy (*Viresanam*), and internal and external medications, the patient's erythema, itching, and scaling symptoms subsided. The Psoriasis Area and Severity Index (PASI) score was decreased. Although psoriasis is intricate to treat, *Siddha* treatment has proven to be beneficial when using appropriate medications and therapies. In this case report, attempts were given for further scope on Psoriasis in wide-based extensive clinical trials.

Keywords: *Kalanjagapadai*, Psoriasis, Purgation Therapy, *Siddha* Medicine

1. Introduction

Psoriasis is a chronic, non-infectious, inflammatory condition that is mainly affecting the skin and joints at any age of life. Psoriasis deals with autoimmune and strong genetic predisposition pathogenic traits. In India prevalence rate of psoriasis is 0.44-2.8 %¹. Males and females are affected commonly. In the male and female ratio, males are most affected by psoriasis 2 times more than females. There is no permanent cure for psoriasis, and allopathic drugs cause hazardous side effects on long-term administration. but research is moving forward to identify alternative treatment modalities for psoriasis being developed from traditional medicines.

Psoriasis is a multi-factorial genetic disease, and identifying the clinical expression requires both environmental and polygenetic factors. Precipitating factors include psychological stress, drugs, trauma, exposure to direct sunlight, and infection².

Based on the Psoriasis types classification, Plaque psoriasis/Psoriasis vulgaris is the most common form. It is manifested with silvery, dry, itchy, scaly patches and plaques on the elbows, lower back, knees, and scalp located symmetrically. Koebner's phenomenon, Candle grease sign, Woronoff ring, and Auspit's signs are the other clinical features.

Depending on the location and amount of the psoriatic plaques and the psychological well-being of

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the affected persons the treatment modalities should be designed. Pathophysiology of psoriasis includes epidermal proliferation, dilatation of the dermal vasculature, and accumulation of inflammatory cells like T lymphocytes and neutrophils in the dermis and epidermis³.

In the *Siddha* system of medicine, Psoriasis symptoms and signs are directly correlated with *Kalanjagapadai*. *Tridhosham* (*Vatham*, *Pittham*, and *Kabham*) and *Thirikunam* (*Satthuv*, *Raso*, *Thamo*) become imbalanced, which results in *Kalanja gapadai*⁴.

In this present case study, the multimodal *Siddha* treatment approach for psoriatic lesions resulted in early recovery with no recurrence so far.

2. Aim and Objective

To evaluate the therapeutic efficacy of psoriasis treated with *Siddha* intervention and assessed by PASI score (Psoriasis area and severity index).

3. Place of the Study

The present case study was carried out in the Outpatient Department, Department of Gunapadam, National Institute of Siddha, Chennai.

4. Patient Information

A 40-year-old male Patient came to NIS OPD no: 11 with chief complaints of erythematous, skin lesions covered with silvery scales scattered over the whole body, severe itching, and burning sensation for 3 months. The patient had similar complaints for the past 2 years.

The patient was apparently normal before 2 years. Then the patient developed reddish white patches over elbows, increased Scaling of skin, and itching all over the body. This patient took treatment from different allopathy doctors but got no permanent relief, systemic and topical immunosuppressive treatment resulted in temporary relief during the last treatment. Then the patient skipped allopathic treatment totally and consulted for *Siddha* treatment. The patient came to NIS hospital in Gunapadam department OPD no:11 for further treatment and management.

4.1 Clinical Findings

The patient presented with complaints of erythematous plaques on both upper limbs, lower back, and lower limbs. The patient's affected skin was found with different types of shades of red color and the surfaces are covered with large silvery scales. The patient suffered from a burning sensation and itching all over the body. Auspitz signs and Koebner's phenomenon were found positive at the case presentation. No signs were noted in nail bed and psoriatic arthritis. No effect of Pus discharge/watery discharge from the lesions.

4.1.1 General Examination

The patient's build and nourishment were moderate. Pulse (74 beats/min), RR-21 beats/min, Body temperature (98.6 °F), and Blood Pressure (120/80mm Hg) were within normal limits.

4.1.2 Systemic Examination

In the systemic examination, Cardiovascular system (S1, S2 heard, no murmur), respiratory (NVBS heard, no added sound), and Gastrointestinal system (soft, non tender, no organomegaly), were normal.

5. Diagnostic Assessment

In this patient, all the routine blood investigations were within normal range. Due to the high cost, the patient was not willing to do Tissue biopsy. So, based on the distribution of lesions, clinical presentation, positive Auspitz sign, and Koebner's phenomenon, the case was diagnosed as Psoriasis Vulgaris (*Kalanjaga padai*). The *Siddha* 8-fold diagnostic tools are illustrated in Table 1.

Table 1. Findings on 8-fold diagnostic tools (*Envagai thervu*)⁵

| | | |
|---|------------------|--|
| 1 | <i>Naadi</i> | <i>Pittha kabham</i> |
| 2 | <i>Sparisam</i> | <i>Mitha veppam</i> |
| 3 | <i>Naa</i> | Coated with white colour |
| 4 | <i>Niram</i> | Affected (Erythrodermic skin lesions covered with silvery patches) |
| 5 | <i>Mozhi</i> | <i>Sama oli</i> (Medium pitched voice) |
| 6 | <i>Vizhi</i> | Normal |
| 7 | <i>Malam</i> | Regular (passed stools 2 episodes per day) |
| 8 | <i>Moothiram</i> | Regular (passed urine 5-6 episodes per day) |

The golden standard Psoriasis Area and Severity Index (PASI) is the most used instrument tool clinically in psoriasis that assesses and grades the patient's psoriatic lesion its severity and the response of the patient to treatment. It contains the percentage of affected skin area and severity (Induration, erythema, and desquamation). PASI score has a numeric score ranging from 0-72. Score (1 to 10) – Considered moderate, above 10 - considered severe (Tables 2 and 3).

6. Therapeutic Intervention

All oral and topical applications of allopathic medications were stopped before starting the *Siddha* medicine. In this present case, the involvement of *Pittha* and *Kapha Naadi* derangement was correlated with observing the clinical presentation such as burning sensation (*Ericchal*), redness (*Sivantha niram*), and itching (*ooral*), and nature of the skin lesion. In this case, vitiated *Pittha* and *Kabha* were found involved in the pathological progress of psoriasis vulgaris (*Kalanjagapadai*) treatment. The details of all the prescribed medicines have been mentioned in Tables 4-6.

Table 2. Lesion score

| Erythema(E) Induration (I) Scaling(S) | No symptoms | Mild | Moderate | Marked | Very marked |
|---------------------------------------|-------------|------|----------|--------|-------------|
| Score | 0 | 1 | 2 | 3 | 4 |

Table 3. Area score

| Area | 0 | 1%-9% | 10% - 29% | 30% - 49 % | 50% - 69 % | 70 % - 89% | 90 % - 100% |
|-------|---|-------|-----------|------------|------------|------------|-------------|
| Score | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

Table 4. Details of *Siddha* treatment given to the patient^{6,7}

| S. no. | Type of medication | Name of the formulation | Dose with adjuvant, frequency, and time | Duration |
|--------|---|----------------------------|---|----------|
| 1 | Purgative medicine (<i>Viresanam</i>) | <i>Agasthiyar kuzhambu</i> | i) 1 st day: 200mg with <i>Sangankuppi</i> leaf juice once in the morning on an empty stomach. ii) 2 nd day: 100mg with <i>Sangankuppi</i> leaf juice iii) 3 rd day: 50mg with <i>Sangankuppi</i> leaf juice | 3 days |
| 2 | Internal medicines (<i>Ul marunthukal</i>) | <i>Mahavallathy Ilagam</i> | 5 grams with milk, twice daily, after food. | 48days |
| | | <i>Irunelli karpam</i> | 200 mg with ghee, twice daily, after meals. | 48 days |
| 3 | External medicines (<i>Puramarunthukal</i>) | <i>Thiriphala chroonam</i> | External application on the affected part, twice a day | 1 year |
| | | <i>Arugan oil</i> | Local applications on the affected area, twice a day. | 1 year |

7. Screening Assessment

The screening assessment before and after treatment was depicted in Table 7.

7.1 PASI Score

Before treatment - PASI Score = H+T+UL+LL = 37.1

After treatment - PASI Score = 04

8. Timeline

Table 8 shows the details of the timeline, treatment strategy, and clinical outcome.

9. Follow-up and Outcome

The periodic clinical outcome after *Siddha* treatment has been shown in Figure 1. After receiving *Siddha* treatment for one month, significant changes have been noticed in the patient. Itching, scaling, and erythematous patches were reduced all over the body. After 48 days of treatment, the patient was completely cured of itching and had significant relief

Table 5. Therapeutic uses of prescribed medications and possible effects

| S. no. | Medicine name | Indication | Possible effects |
|--------|----------------------------|--|---|
| 1 | <i>Mahavallathy Ilagam</i> | <i>Kiranthi</i> (Chronic wound), <i>Arayappu</i> (Lymphadenitis), <i>Soolai</i> (Pain), <i>18 vagai kuttam (Thol noigal)</i> (Leprosy), <i>Vellai</i> (Leucorrhoea), <i>Pakkavatham</i> (Hemiplegia), <i>Kai kaal mudakku</i> (Limbs disability) <i>Vedikarappan</i> (Eczema), <i>Pilavai</i> (Deep ulcer), <i>Putru</i> (Cancer), <i>Sori Sirangu</i> (Scabies) <i>Ushna vaayu</i> , (Excessive heat) <i>Powthiram</i> (Fistula in ano), <i>Sagala vidangaal</i> (Various poisoning). | Regulates <i>vatha, pittha, kabha</i> derangement. According to <i>Siddha</i> concept, this medicine is particularly used for all types of chronic diseases. |
| 2 | <i>Irunelli karpam</i> | <i>Sori, sirangu neengi rattham sutthiyagum.</i> (Scabies) and blood purifier. | Pacifies <i>Pittha</i> dosham. and prescribed as a blood purifier. |
| 3 | <i>Arugan oil</i> | <i>Udal ericchal</i> (Burning sensation), <i>sori sirangu</i> (Scabies), <i>pittham seerkedadaintha thol noigal</i> (Skin diseases caused by increased <i>pittha</i> dhosham), <i>pungalai vevu viravil atril antha paguthigalil thisukkal viraindu valarvathai ukkuvikkum</i> (Enhance new tissue formation in chronic non healing wound). | It controls itching and pacifying <i>vatha, pittha kabha</i> in wound surface. used as a good topical application for chronic skin diseases. |
| 4 | <i>Thiriphala choornam</i> | <i>Vaaippun</i> (Mouth ulcer), <i>nunnuyirkolli</i> (Anti-microbial) | it reduces the redness, itching, and burning sensation. |

Table 6. List of dietary restrictions to be followed for the management of Psoriasis⁸

| Regimen | Do's | Don't |
|-------------------|--|--|
| Vegetables | Fenugreek seed, pointed gourd, Ridge gourd | Brinjal, Tomato, Lemon, Ladies finger, Radish, Bitter gourd, Onion |
| Cereals | Rice, Wheat, Barely, Millet | Black Gram, Rice Ball, Jaggery, Red Lentil |
| Fruit | Fig, Cashew, Walnut Almond | Sour fruits |
| Others | Ghee, Milk, Honey | Ice cream, Fast food, Curd, Cold drinks |
| Activities | <i>Pranayama (Breathing exercise)</i> Warm-up exercise External Use of <i>Thiriphala</i> chooranam to wash the skin | Alcohol and smoking, tobacco, Controlling natural urges, Day sleep |

Table 7. PASI score assessment before and after treatment

| Lesion Score | Head (H) | Trunk (T) | Upper limb | Lower Limb (LL) including buttocks |
|--|----------|-----------|------------|------------------------------------|
| Erythema (E) | 1 | 2 | 3 | 4 |
| Induration(I) | 1 | 3 | 3 | 3 |
| Scaling(S) | 1 | 3 | 3 | 3 |
| Sum: E+I+S | 3 | 8 | 9 | 10 |
| Percentage of the affected area | | | | |
| Area score | 1 | 4 | 4 | 5 |
| Subtotal: Sum× Area score | 3 | 32 | 36 | 50 |
| Body area: subtotal ×amount Indicated | 3 × 0.1 | 32 × 0.3 | 36×0.2 | 50×0.4 |
| Total | 0.3 | 9.6 | 7.2 | 20 |

Table 8. Follow-up history, treatment protocol, and clinical outcome

| Timeline | Dates | Treatment plan | Periodic Clinical outcome |
|---------------------------|------------|-----------------------------------|---|
| Onset of treatment | 20.12.2021 | As per Table 2 | <i>Siddha</i> treatment (Purgation) started. |
| Follow-up 1 | 23.12.2021 | As per Table 2 | After purgation Itching reduced slightly. |
| Follow-up 2 | 22.01.2022 | As per table 2 | Significant improvement in signs and symptoms. Erythematous patches decreased all over the body. Itching reduced. The burning sensation reduced slightly. |
| Follow-up 3 | 19.02.2022 | As per table 2 | Marked changes in signs and symptoms. Auspitz signs and Koebner's phenomenon were negative. |
| Follow-up 4 | 19.03.2022 | Dose of medicines reduced to half | No burning or itching sensation. Recovered completely. |
| Follow-up 5 | 23.09.2022 | Only a strict dietary regimen | No recurrence was found. |
| Follow-up 6 | 21.03.2023 | Only a strict dietary regimen | No relapse in any signs and symptoms |

from previous complaints. Then it was calculated by using the Psoriasis Area and Severity Index (PASI) score. No adverse effects were observed during the treatment. The patient was instructed to practice regular pranayama, exercise, and a strict dietary regimen for a couple of months, but no recurrence was noticed. *Siddha* medicines are cost-effective for psoriasis treatment in this entire treatment period spending cost was Rs. 3000 (Three thousand rupees only).

Itching : Severe to subsided

Scaling : Severe to subsided

Thickness : Severe to subsided

Redness : Severe to mild

PASI Score : 37.1 to 04

10. Discussion

Psoriasis is a lifelong inflammatory autoimmune skin disease that is influenced by both environmental and genetic factors. Cytokines, keratinocytes, and the inflammatory cascade play a major role in the pathogenesis of psoriasis. Among the various types of psoriasis, Plaque psoriasis/Psoriasis vulgaris is the most common form of psoriasis. Psoriasis vulgaris was characterized by well-defined raised erythematous patches with silvery white scales mostly on extensor surfaces. Treatment for autoimmune disorders is challenging. Therefore, treatment protocols like *Viresana sigicchai*, internal medicine (*ulmarunthugal*), external medicine (*veli marunthugal*), and *Yogasanam (Pranayamam)* must be implemented together.

From *Siddha's* perspective, *Kalanjagam* is one of the 80 kinds of rheumatism. It is characterized by boring pain in the limbs, and inability to walk or move about owing to the stiffening of the leg. These are the signs and symptoms of psoriasis in its advanced stages. Psoriasis that is left untreated or chronic psoriasis will eventually lead to psoriatic arthritis because of autoimmune-mediated inflammatory changes. According to Tamil literature, *Padai* is correlated with the spreading of skin diseases. *Kalangapadai* was primarily treated as an auto-immune skin disorder according to the *Siddha* concept. Our entire body's mechanism is regulated by *Muthathukal (Vaatham, Pittham, and Kabham)*, and *Mukkunam (Satthuva, Raso, and Thamo)*, both physiologically and pathologically. Therefore, untreated *Kalanjagam* will have a significant impact on both *Mukkunam (Satthuva, raso, and thamo)* and *Mukkkutram (vatha, pittha, and kabha dosha)*.

Food regimens for *Satthuva, Raso, and thamo guna thegis* were mentioned in *Siddha* literature. The altered dietary regimen causes derangement of *vatha, pittha, and kabham*, and the derangement of doshas results in illness to the body. As per *Siddha*, dietary regimen plays a crucial role in treating autoimmune diseases. In the present case, the patient had been following excessive amounts of sour and salty, spicy, and fried foods, as well as consuming milk and green leaves at the same time. The patient was taking allopathic treatments without avoiding the underlying causes. So, during the allopathic treatment, the patient experienced only temporary relief from psoriatic vulgaris symptoms and is noted to have a recurrent pattern. Therefore, the

| | |
|--|--|
| <p>Onset of Treatment</p> |  |
| <p>Prognosis on the 15th day</p> |  |
| <p>Prognosis on the 30th day</p> |  |
| <p>Prognosis on the 45th day</p> |  |

Figure 1. Periodic clinical outcomes in response to *Siddha* treatment.



Figure 1. Continued...

patient has been recommended to follow a strict diet (*Pathiyam*) while administering *Siddha* medicines.

The Indian System of Medicine focuses on both curative and preventive measures to promote the wellness of human beings. To deliver healthcare in the best possible way to every individual, both in India and around the world, it will be helpful to mainstream the Indian System of Medicine (ISM) combined with allopathic medicines and a healthy lifestyle. The pathological changes in psoriasis were corrected by *Siddha* medicines such as *Agasthiyar kuzhambu*, *Mahavallathy Ilgam*, *Irunelli karpam*, and topical applications like *Arugan oil* and *Thiriphala choornam* as bath powder. All the patho mechanisms in psoriasis vulgaris were taken into consideration when adopting the multimodal *Siddha* treatment approach. Following the administration of *Siddha* medicines, the patient's signs and symptoms were significantly reduced.

Agasthiyar kuzhambu is a potent purgative drug (*Viresanam*) used in *Siddha* medicine to cure all human ailments with various adjuvants. *Sangankuppi* leaf juice was administered to patients with skin conditions like psoriasis.

In the *Siddha* concept, an adjuvant enhances the therapeutic potency of a purgative drug without causing any illness to the body. Its bitter flavour and nauseous propensity help in pacifying vitiated *vatha*, *pittha*, and *kabha dhosham*. The internal organs, particularly the liver, are detoxified during purgation (*Viresanam*) therapy. The liver is a key organ in the *Siddha* approach for regulating *pittham* derangement. Following purgative therapy, the digestive fire (*udal thee*) was

improved, which helped the drug to be absorbed, utilized, and worked properly. *Serankottai* (*Semecarpus anacardium* L.) is a key component of the polyherbal formulation *Mahavallathy Ilgam*. Various scientific studies revealed the promising effects of *Serankottai* (*Semecarpus anacardium* L.) against different types of chronic diseases such as psoriasis, rheumatism, anthelmintic infection, neuralgia, asthma, cancer, etc.⁹. It is mainly due to its anti-cancer, anti-inflammatory, antioxidant, and anti-psoriatic effects by targeting different signalling pathways (Figure 2).

In vitro anti-cancer activity revealed that the *Mahavallathy ilgam* can induce apoptosis through the caspase-3 intrinsic signalling pathway in the oral cancer cell line due to its anti-oxidant property¹⁰. Phenols, flavonoids, amino acids, quinines, glycosides, steroids, protein, and carbohydrates are present in *Serankottai* which is responsible for its therapeutic effects. Butein, a compound isolated from *Semecarpus anacardium* L. is responsible for its anti-oxidant activity. *Semecarpus anacardium* L. possesses anti-cholesterol activity. In the *in vivo* model, it prevented cholesterol-induced atheroma in hypercholesterolemia rabbits. This study reveals that the *Semecarpus anacardium* L. acts on the liver and its mechanism¹¹.

Irunelli karpam is a herb-mineral formulation that contains Sulphur (*Kanthagam*) and is processed with the juice of *Phyllanthus emblica* L. (*Nellikai*). It is commonly used to treat skin disorders. The two ingredients used in this formulation are *nellikai kanthagam* and *nellikai*, hence the name *Irunelli Karpam*. *In vitro* study revealed that *Irunelli karpam* possesses anti-oxidant activity¹².

Purified sulphur treated with *Nellikai charu* improves the therapeutic efficacy of this formulation. This medication normalizes the *vatha, pittha, and kabha* derangements in addition to rejuvenating the body. In *Siddha (Gandhagam)* Sulphur has been recommended for all types of skin diseases due to its anti-toxic activity and rejuvenating properties. Sulphur has anti-oxidant and anti-inflammatory properties, which, in the view of modern research, are vital in the treatment of autoimmune illnesses including psoriasis and psoriatic arthritis¹³.

Coconut oil-based medicine *Arugan oil* used extensively in *Siddha* medicine provides soothing, moisturizing, and emollient effects to the affected skin when used as a topical application. Coconut oil enhances epidermal barrier function and protects

the skin by suppressing inflammatory markers such as prostaglandins, Cytokines, and leukotrienes. In psoriasis, pro-inflammatory cytokines such as Tumor Necrosis Factor (TNF) and Interferon (IFN) cause epidermal keratinocytes. Epidermal hyperplasia (Increased cell production in epidermal tissue) in the psoriatic epithelium was caused by interleukin 6 (IL-6). Due to its ability to reduce the release of IL-6, coconut oil has anti-inflammatory properties. Unchecked cytokine expression can cause the epidermal barrier to become dysfunctional, as seen in psoriasis. By using this oil, TNF, IFN, IL-6, IL-5, AND IL-8 levels are reduced¹⁴.

The anti-psoriatic activity of phytochemicals found in *mahavallathi lehiyam* and *irunelli karpam* provides a positive function in the management of psoriasis. External applications such as *Arugan thylam* and

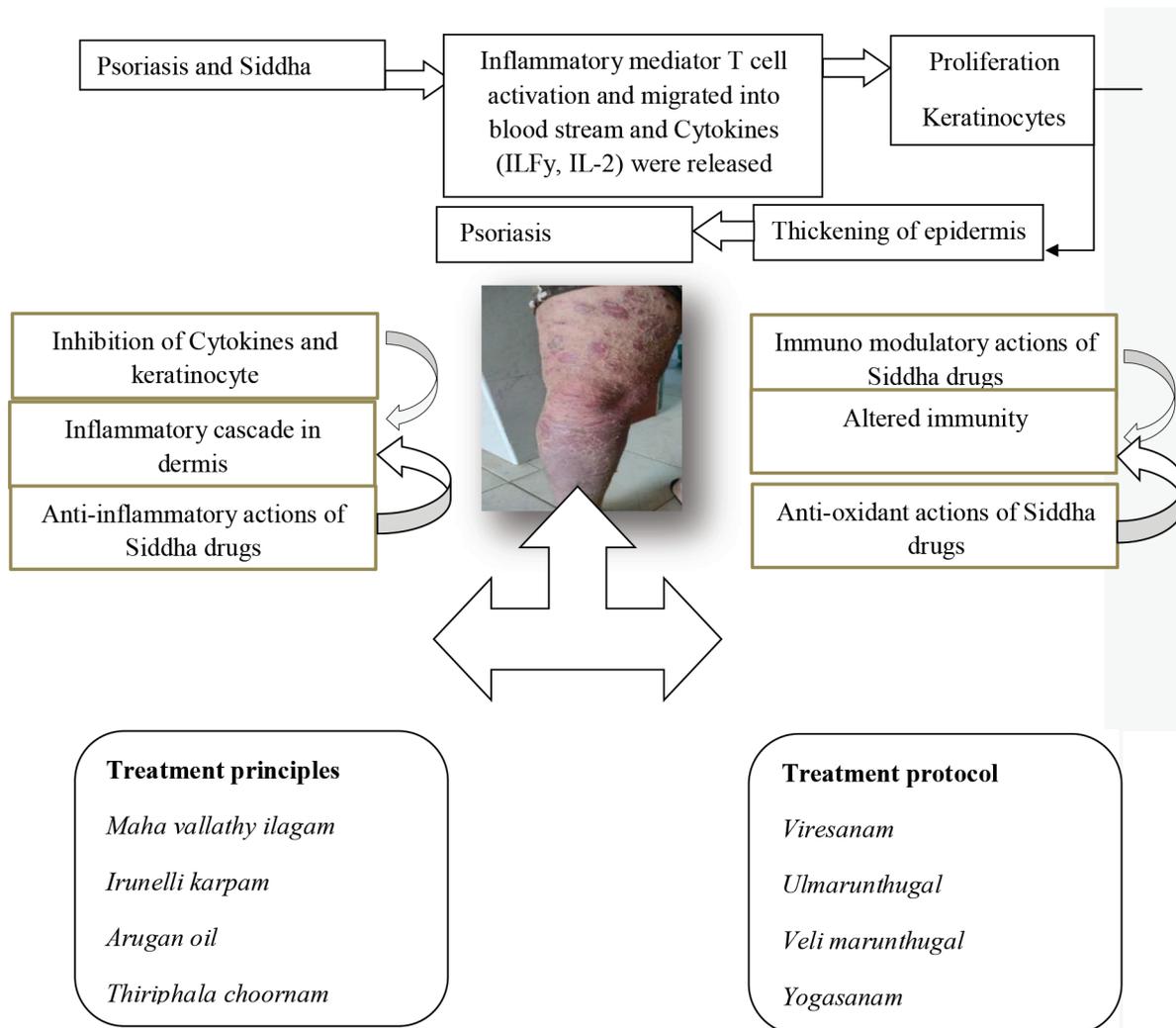


Figure 2. The possible actions of *Siddha* medicines on psoriasis.

thriphala choornam were employed to treat this case to reduce the Psoriatic scales.

When compared to allopathic treatment, the *Siddha* treatment provided to this patient was more affordable at INR 3,000. No adverse effects were reported to the patient during the treatment. Since psoriasis requires lifelong treatment. *Siddha* treatment is considerably more affordable for poor patients.

In this present case, the outcome measures are a combined effect of all the *Siddha* medicines, *Pathiyam* (Strict diet plan), and regular follow-ups by the patient. Further clinical trials, if conducted on an extensive scale, will undoubtedly aid in the development of a better therapeutic strategy for the effective management of Psoriasis vulgaris for the betterment of humanity worldwide.

11. Patient Perspective

The patient shared his perspective about *Siddha* treatment in a good manner. He had psychological stress, scales, severe burning sensation, Itching, and redness all over the body at the time of presentation, while he was free from physical and mental stress and all the signs and symptoms of psoriasis at the end of the treatment. The patient expressed that he had never experienced this level of cure in previous years.

12. Conclusion

In the current case study, it is evident that 3 months of *Siddha* treatment alone resulted in complete healing from psoriasis symptoms. Proper food habits, breathing techniques, and meditation worked here with internal and external medicines. Wide-based clinical trials must be conducted in the future to develop a better treatment strategy for Psoriasis management employing *Siddha* medicine.

13. Informed Consent

The written informed consent was obtained from the patient before and after treatment, as well as for the photo images taken before and after treatment for publication.

14. Acknowledgement

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