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CASE REPORT

Management of Plaque Psoriasis through *Ayurveda* - A Clinical Case Study

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Abstract

Psoriasis is an immune-mediated inflammatory disease that affects the skin and joints and is chronic, non-communicable, painful, disfiguring and disabling. The prevalence of psoriasis in countries ranges from 0.09% to 11.4%. The reported prevalence in India is 0.44 - 2.8%. Even though psoriasis was found long ago, its etiology and treatment are not affirmative. Psoriasis can be correlated to *Ekakushtha* based on the signs and symptoms described in the classical texts of *Ayurveda*. Many herbs have been mentioned in *Ayurveda* to treat psoriasis, however due to the disease's complicated pathophysiology and relapsing nature, there is need to develop a multimodal treatment protocol. We report a case of plaque psoriasis in a female patient aged 18 in this article. The prescribed course of action was created in accordance with the *Ayurvedic*-samprapti (pathology). Therapeutic emesis after improving digestion power was done followed by internal medicine *Patoladigana* decoction, Tablet *Arogyavardhinivati*, Tablet *Gandhakrasayana* and *Mahatiktaka* ghee was given along with *Ayyapal* oil for topical application on patches. During treatment and 1 year after completion of treatment diet and lifestyle modifications were strictly followed by the patient. Compared to earlier allopathic treatment, the efficacy of the treatment was observed substantially sooner. After treatment, there was no recurrence. During treatment, the wholesome diet as a health promoter was important. Time to time photographic documentation was maintained during whole year of treatment. Ayurvedic external and internal treatment can help to rectify the intricate patho-physiology of persistent psoriasis.

Keywords: *Ayurveda*, *Ekakushtha*, *Kushtha*, Plaque Psoriasis, Psoriasis

1. Introduction

Psoriasis is an immune-mediated inflammatory disease that affects the skin and joints and is chronic, non-communicable, painful, disfiguring and disabling. Psoriasis prevalence in various nations ranges from 0.09[1] to 11.4%[2]. The reported prevalence in India is 0.44-2.8 %. Psoriasis can occur at any age but is commonly seen in age groups of 50-69[3]. The reported prevalence in India is 0.44-2.8 % with high incidence found in male double than females[4].

Plaque psoriasis (*Psoriasis vulgaris*), guttate psoriasis, inverse psoriasis, erythrodermic psoriasis, and pustular psoriasis are the four distinct clinical patterns of psoriasis[5]. Psoriasis patients experience severe social, psychological, and physical discomfort because of the visible skin lesions, relapsing and chronic nature of the disease. *Ayurveda* classics described psoriasis by the term *Ekakushtha* which has predominance of imbalance and vitiation of *Vata* and *Kaphadosha* (humors)[6].

2. Materials and Methods

2.1 Patient Information

A female patient, aged 18 years, was diagnosed with plaque psoriasis and received allopathic treatment from a dermatologist for a year. This treatment included antibiotics, local applications, and both external and internal immunosuppressive medications.

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The treatment helped to relieve the symptoms while the patient was on it. However, the patient stopped taking allopathic treatment and sought advice on *Ayurveda* due to short-term relief and frequent relapses. Upon evaluating her history, her general health was found to be good, with no concomitant illnesses. Routine investigations such as CBC and ESR were within the normal range.

2.2 Clinical Findings

When the patient first sought *Ayurvedic* treatment, she had erythematous plaques on her back, scalp, elbows, and shins. Figure 1 shows the affected skin areas, characterized by various shades of red and covered in broad silvery scales. She experienced significant itching, dryness, scaling, and mild burning in the affected areas. Both the Koebner phenomenon and the Auspitz sign were positive. There was no evidence of nail bed psoriasis or psoriatic arthritis. The etiological factors for the disease, as identified by *Ayurveda*, included consuming incompatible food items such as milkshakes, excessive salty and sour foods like pickles and curd, frequent junk food consumption, late-night awakenings, and daytime sleeping.

2.3 General Examination

On general examination, the patient's body temperature (97.4°F), pulse rate (84 beats per minute), and blood pressure (112/72 mm/hg) were all within normal ranges. The results of a comprehensive analysis of the cardiovascular and respiratory systems were normal.

2.4 Diagnostic Assessment

Based on the clinical presentation, the type and location of skin lesions, and a positive auspitz sign, plaque psoriasis was diagnosed. Figure 1 shows finding before starting *Ayurveda* treatment. Tissue biopsy was not done as the patient was not affordable.

2.5 Therapeutic Interventions

As the disease condition was predominant of vitiated *Vata* and *Kahpha*, the first treatment protocol planned was therapeutic emesis. The protocol is mentioned in Tables 1 and 2.

2.6 Diet Restrictions

Patients were advised to avoid milkshakes, curd, eggs, meat, fish, pickles, junk food, bakery products e.g., bread, pastries, muffins, cookies, etc. fermented food e.g., idli, dosa, etc.

2.7 Lifestyle Modification

The patient was told to strictly stop late night awakening and daytime sleeping.

Along with diet medicinal interventions given were tabulated in Table 3.

All internal medications were continued during the following six months at half of the previously prescribed doses, with the same frequency, time frame, and adjuvant.



Figure 1. Patches of psoriasis in patients before treatment.

Table 1. Protocol of therapeutic emesis

Day	Treatment protocol	Dose	Diet
Pre-emesis procedure			
1-5	Tablet *chitrakadi*	500 mg, BD with lukewarm water (LW)	1 liter of freshly prepared buttermilk added with rock salt per day with light diet of vegeTables and *bhakari*
6	*Mahatiktaka* ghee	30 ml with LW, early morning empty stomach (EMES)	Rice and green gram dal curry or sorghum roti with green gram dal curry
7	*Mahatiktaka* ghee	60 ml with LW, EMES	Rice and green gram dal curry or sorghum roti with green gram dal curry
8	*Mahatiktaka* ghee	90 ml with LW, EMES	Rice and green gram *dal* curry
9	*Mahatiktaka* ghee	120 ml with LW, EMES	Rice and green gram *dal* curry
10	Oleation and fometation	Therapeutic massage with sesame oil (warm) for 20 minutes and mild fomentation for 10 minutes (TM-20F10)	Curd-rice, black gram fried balls, sugarcane juice, jiggery
11	Oleation, fomentation followed by emesis	(TM-20F10)Administration of one liter of warm milk, Administration of *phanta* (hot infusion) of powder of two emetic nuts (*Randiadumetorum*; *Madanaphala*) in quantity approx. 5-6 grams. Give a wait for 30 minutes and decoction of *Glycyrrhiza glabra* (*Yashthimadhu*) roots up to 5 liter was administered step by step. After administration of infusion, patients started vomiting.	Warm milk at a night before emesis and on the early morning; day of emesis.

Table 2. Post emesis *samsarjana krama* (diet sequence protocol)

Day	Diet
12	lemon tea, green gram soup, rice water
13	Green gram soup, drumstick soup, green gram curry, rice
14	*Sambara*(lentil-based vegeTable stew),rice, *khichadi,* pomegranate
15	Buttermilk, *Sambar*, *khichadi*, sorghum roti, orange
16, 17, 18	Curry of bottle guard/ snake guard/ rigged guard/ bitter guard/ drumstick, wheat roti, sorghum roti, *khichadi*, Rice
After 18	VegeTables like drumsticks, rigged guard, snake guard, bottle guard, bitter guard, potato. Fruits like apples, grapes, watermelon, muskmelon, plum, cherry, guava, pomegranate

Table 3. List of medicines with their dose, frequency, time, and duration

S. No.	Medicine	Dose	frequency	Time	Adjuvant	Duration
1	*Patoladigana*decoction (PGD)	20ml	BD	Before meal, daily	50ml lukewarm water	6 months
2	Tablet *Arogyavardhinivati* (ARV)	250mg	BD	After meal, daily	Lukewarm water	6 months
3	Tablet *Gandhakrasayana* (GR)	250 mg	BD	After meal, daily	Lukewarm water	6 months
4	*Mahatiktaka*ghee (MTG)	10 ml	OD	EMES	Warm water	6 months
5	*Ayyapala*oil	Quantity sufficient	BD	Daily	-	1 year



Figure 2. Shows changes in patches during follow up.

Table 4. Timeline of events

Timeline of follow-up (FU)	Dates	Treatment	Clinical outcome
Onset of treatment	15/3/2019	*Chitrakadigutika* 500mg twice daily before meal with lukewarm water	*Agnideepan* (increased digestive power)
FU1	21/3/2019	*Abhyantarasnehana*(taking medicated ghee internally)with *Mahatiktakaghrita*in increasing order dose from 30 ml to 120 ml with lukewarm water	During *Snehapana* itself psoriatic lesions started to decrease
FU 2	28/3/2019	*Vamana karma*	-
FU 3	5/4/2019	PGD, ARV, GR, MTG, *Ayyapala* oil application	Lesions itching and dryness started decreasing
FU 4	6/6/2019	PGD, ARV, GR, MTG, *Ayyapala* oil application	Considerable improvement in psoriatic lesions (as shown in figure 2)
FU 5	7/8/2019	PGD, ARV, GR, MTG, *Ayyapala* oil application	Lesions continuously improving, no itching, no new lesions
FU 6	8/9/2019	PGD, ARV, GR, MTG, *Ayyapala* oil application	Recovered completely (Figure 3)
FU 7	9/10/2019	PGD, ARV, GR, MTG	No recurrence observed
FU 8	8/4/2020	Only diet plan was continued	No relapse found
FU 9	7/4/2021	Only diet plan was continued	No recurrence in signs and symptoms



Figure 3. Disappearance of patches of psoriasis after treatment.

2.8 Timeline

The overall therapy time in the present case was one year. The *pathyaaahara* and *vihara* (diet and lifestyle modifications) for the next year after the completion of the treatment was advised.

2.9 Follow Up and Outcomes

Figure 2 shows the changes in patches during follow up. Table 4 covers the follow-ups and clinical outcome, including the timeframe, the course of treatment, and the regular clinical outcome.

3. Discussion

Psoriasis, an autoimmune condition, is influenced by both genetic and environmental factors[7]. Additionally, the inflammatory cascade, keratinocytes, and cytokines all play crucial roles in the pathogenesis of psoriasis[8]. Due to its autoimmune nature and tendency to relapse, psoriasis is difficult to treat. Therefore, *Shodhana* (cleansing/purification) treatments like *Vamana* (therapeutic emesis) combined with *Shaman* (palliative) treatments are important for managing this disease.

In the present case, there was predominant vitiation of *kapha*, *Vata*, and *Rakta* doshas, which vitiated dhatus like *rasa* (plasma/lymph/interstitial fluid), *Rakta* (blood), and *Mamsa* (muscles) at the skin site (*sthansamshraya*). This pathological sequence (*Samprapti*) resulted in symptoms such as itching (vitiated *kapha*) and burning (vitiated *Pitta*). The Auspitz sign, observed due to the vitiation of *Kapha*, *Pitta*, and *Rakta*, further confirmed the diagnosis. The treatment protocol aimed to break the pathogenesis (*Samprapti bhedana*) and prevent recurrence. It involved *Shodhana* (bio-purification) processes like therapeutic emesis and medicinal management. The prescribed medications were *Kushthahara* (corrects skin ailments), *Vata-kaphahara* (alleviates *Vata* and *Kapha*), *Vata raktahara* (alleviates *Vata* and *Rakta*), and *Rasayana* (immune modulator) treatments.

Vamana (therapeutic emesis) is the best treatment for *Kaphadosha*. It is the foremost *Kayashodhana* (body cleansing/purification) process, conducted in *Vasantritu* (spring season), which is the period of *Kaphaprakopa* (aggravation). During *Snehapana* (intake of medicated ghee), it was noticed that dryness and itching of skin lesions decreased by up to 30%. After *Vamana* (therapeutic emesis) and *Sansarjana karma* (graduated dietetic protocol after cleansing treatment), these symptoms decreased considerably, and after one month of *Shaman* and *Nidana parivarjana* (avoidance of etiological factors), excellent remission was achieved.

PGD possesses *Tiktarasa* (bitter taste) drugs, which help absorb *Amadosha* from *Rasa*, *Rakta*, and *Mamsa dhatus*. *Ama* (undigested or semi-digested metabolic waste) is a responsible cause for the vitiation of *Rasa* and *Rakta*. PGD possesses *Kushthahara* (corrects skin disorders), *Jwarahara* (antipyretic), and *Vishahara* (anti-poison) properties, making it helpful for detoxification and blood purification[9]. PGD aids in removing impurities from the liver, the site of *raktavahasrotasa*[10].

MTG is a ghee fortified with bitter astringent herbs that are *Krumihara* (antibacterial, antifungal, antiviral) in nature. *Krumi* is one of the causes of skin disease outbreaks. The administration of MTG helps pacify *Doshas* and nourishes *Saptadhatus* (*Rasa, Rakta, Mamsa, Meda, Asthi, Majja*, and *Shukra*). Since lipids are major constituents of the skin, a medicine with a lipid base reaches the affected skin components effectively[11]. GR is a sulfur-containing formulation treated with various medicinal herbs. They are *Kushthaghna* (corrects skin ailments), *Amapachana* (digestion of metabolic toxins/undigested waste), *Raktaprasadana* (ability to soothe *Rakta*), and *Rasayana* (immune modulator, rejuvenating)[12]. According to *Ayurveda*, sulfur possesses *Kushthaghna*, *Kandughna*, *Garavishahara* (anti-poisonous), and *Rasayana* properties. *Garavisha* is a cause of *Kustha* as it leads to *Agnimandya*[13]. These properties help cure *Kushtha*. The anti-inflammatory and antioxidant properties of sulfur are crucial in treating autoimmune illnesses, including psoriasis and psoriatic arthritis[14].

KG is a polyherbal preparation containing mainly *guggulu* (*Commiphorawightii*) and *guduchi* (*Tinospora cordifolia*). *Guggulu's* therapeutic effects on conditions such as psoriasis, dermatitis, skin disorders, infectious diseases, arthritis, and more are due to its terpenoidal components, sugars, guggultetrols, steroids, flavonoids, lignans, and amino acids[15].

According to *Ayurveda*, *Guggulu* possesses synergistic (*Yogavahi*) properties. The anti-infective and

antibacterial capabilities of *Guggulu* are demonstrated by the fact that the gugulipid it contains is as effective as tetracycline in managing nodulocystic acne[16]. Due to these properties, *Guggulu* is used in the treatment of psoriasis. *Guduchi* possesses *Tiktarasa*, which aids in the digestion of *Ama*. It is *Raktashodhana*, which helps purify the blood. Being *Rasayana* (rejuvenating, immune modulator), *Vranashodhana* (wound healing), *Sandhana* (skin repair), *vedanasthapana* (analgesic), etc[17]. *K. guggulu* is recommended in *Vatarakta* and is well-known as *Kantikara* (restores skin's natural brightness and suppleness) in *Ayurveda*[18]. By cleansing the blood, it reduces *Vatarakta*-associated pain and inflammation. Additionally, *K. guggulu* has antibacterial, antiallergic, and blood-purifying properties[19]. As a result, it aids in reducing psoriasis-related redness and inflammation and serves as a natural blood purifier. ARV is recommended for *Kustha* (skin disorders), *Medodushti* (obesity), *Yakritvroga* (liver diseases), as well as *Jirnajwara* (chronic fever)[20]. *Katuka (Picrorhizakurroa), Triphala, Nimba (Azadirachta indica), and Gandhaka* (sulfur) are the main components of *Arogyavardhinivati*, all effective in treating various skin conditions.

Triphala is astringent and anti-inflammatory. *Nimba* is an antiseptic that aids in skin scale shedding and guards against secondary infections[21]. It helps digest toxins called *Amavisha* and balances the body's vitiated *Rasa dhatu. Arogyavarhinivati* contains herbo-mineral drugs with *Kusthanasaka* (alleviates all types of skin disorders) action, balances *Tridoshas*, and is also a good antioxidant and hepatoprotective. It is also an immune modulator. Therefore, it is effective in psoriasis, promoting early healing and preventing recurrence[22].

In the present case, *Ayyappal keratailam* (Proprietary Medicine of Aryavaidya Shala Kottakal Ltd.) was used for external application. It contains *Shwetkutaja* (*Wrightia tinctoria* R. Br.), *Nimba* (*Azadirachta indica* A. Juss.), and coconut (*Cocos nucifera* (L.) Kuntze) oil. *Shwetkutaja* is beneficial in the treatment of psoriasis, possessing anti-inflammatory and anti-dandruff qualities, both crucial for treating psoriasis[23]. *Nimba* has *Kushthaghna* (alleviates all types of skin disorders), *Krimidhna* (antimicrobial), and *Jwarghna* (antipyretic) properties,[24] making it beneficial for treating psoriasis with its anti-inflammatory and antibacterial effects[25]. The hydrating, calming, and emollient qualities of coconut oil alleviate the signs and symptoms of skin diseases. It possesses anti-inflammatory activity. In the pathophysiology of psoriasis, cytokines, the inflammatory cascade, and keratinocytes all play significant roles[26]. The external application of coconut oil inhibits various cytokine levels, such as TNF-α, IFN-γ, IL-5, and IL-8, making it effective in treating psoriasis[27]. The combination of the Ayurvedic medications, *Pathyasevana* (a diet plan), and routine patient follow-ups has produced positive outcomes in the current case.

4. Conclusion

In this case, the treatment plan was based on the *Ayurvedic samprapti* (pathology), and the results were observed considerably sooner than with the previous allopathic therapy. No relapse was reported after the course of treatment. Maintaining a healthy diet was crucial during treatment to improve overall health. The complex pathophysiology of persistent psoriasis can be corrected through Ayurvedic external and internal interventions.

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