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CASE REPORT

Ayurvedic Management of Psoriatic Arthritis- A Case Study

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Abstract

Psoriatic arthritis (PsA) is an inflammatory musculoskeletal disease with both autoimmune and autoinflammatory features characteristically occurring in individuals with psoriasis. The prevalence of PsA in Indian population was reported in 8.47% cases of Psoriasis. The symptoms residing in the skin and muscles, is *Uttana* stage/type. On the other hand, when symptoms spread to all the tissues and manifested severe pain in the joints, swelling, having ulcers is the *Gambhira Vatarakta* which very much resembles to PsA. Even though, the main culprit involved in *Vatarakta* is *Vata* and *rakta*. *Dhatus* like *rasa, mamsa, asthi,* and *majja* are *also* involved in pathogenesis. The treatment principle focuses on controlling inflammation of affected joints to prevent joint pain and further disability. A 46-year-old male patient visited IPD of Kayachikitsa with complaints of pain and swelling in small joints along with skin manifestations like flaky scales and itching over the scalp region, low back, and both lower limbs. The management was done on the basis of following treatment modalities: - *Ama pacana*, *rakta prasadanam, sodhananga snehapanam, virechana,* and *Rasayana*. The assessment was done before and after the treatment by using the PASI score and EULAR criteria. It was observed that there was relief in symptoms and changes in biochemical parameters were also noted. To stabilize the positive response of this treatment, *Samana chikitsa* and *Rasayana* were advised as a follow-up for one month.

Introduction

Psoriatic arthritis (PsA) is chronic inflammatory arthritis associated with psoriasis and is spotted in about 20 to 30% of such patients [1]. It shares many clinical features with other spondyloarthropathies and also rheumatoid arthritis (RA). Commonly, it is seronegative, but a small percentage of patients may be positive for rheumatoid factor (RF) and anti-cyclic citrullinated peptide antibodies (anti-CCP antibodies). The widely accepted definition of psoriatic arthritis proposed by Moll and Wright in 1973 is inflammatory arthritis associated with psoriasis and negative for serum rheumatoid factor [2]. The inflamed synovium in PsA resembles that of RA, although, with somewhat less hyperplasia and cellularity than in RA [3]. Unlike RA, arthritis associated with psoriasis often involves the spine, sacroiliac joints, and the distal interphalangeal

joints of the fingers and shows considerable familial aggregation. The spectrum of arthropathy associated with psoriasis is quite broad. In the original scheme of Wright and Moll, five patterns are described:[3] (1) arthritis of the DIP joints (2) asymmetric oligoarthritis (3) symmetric polyarthritis similar to RA (4) axial involvement (spine and sacroiliac joints) (5) arthritis mutilans.

The etiology and pathology of Psoriatic arthritis can be equated to *Gambhira Vatarakta*[4] mentioned in Ayurvedic classics. According to Sushruta, *Gambhira Vatarakta* is a clinical condition initially manifested as *Uthana Vatarakta* similar to the clinical features of *Kushta* involving *twak* (skin), *rakta* (erythropoietic elements), and *mamsa* (muscle tissues). In chronicity, the dosha invades *asthi* (bone tissue) and *majja* (bone marrow) manifests as Arthritis. *Rakta* vitiation and subsequent *Avarana* of *Vata* by *rakta* and vice versa is the basic pathology. A holistic approach comprising *antahparimarjana*, *bahiparimarjana* (internal-external treatment), and *satwavajaya chikitsa* (psychotherapy) is necessary for the management of Psoriatic arthropathy.

Case presentation

Presenting complaints

A 46-year-old male patient working as an electrician for the past 15 years got admitted to the IPD of Kayachikitsa, on 18 October 2021 with complaints of pain and swelling over both knee joints (left > right), and right ankle joint for 4 months. Pain, swelling, and discoloration of interphalangeal joints of right and left toe and left hand for the last 4 months. Along with these complaints he also presented with flaky scales and itching over the scalp region, low back, and both lower limbs for 2 years.

The patient was apparently healthy before 2 years. Gradually developed flaky scales and itching over the scalp region, low back, and both lower limbs. He consulted a Dermatologist and was diagnosed with Psoriasis. He got considerable relief with topical antibiotics and steroids. Later in 2021, he gradually developed pain, swelling, and blackish discoloration over the left foot followed by the 4^{th} and 5^{th} toe of the right foot (right>left) and also pain and swelling over the left big toe and left knee joint. Pain aggravates during cold exposure, climbing stairs, walking, exertion, and getting relieved by taking rest.

There is no significant past history.

Personal history

Revealed increased intake of *guru* (heavy food: -fish, egg*), abhishyandhi* (produces excess secretion in the tissue pores and causes blockage)*, vidahi ahara* (causing burning sensation: - fried fish). Mostly prefer spicy food items *(katu rasa* ~ pungent taste). *Masha* (black gram)*, anupa mamsa* (marshy land meat), *matsya* (fish – daily), beef and pork weekly twice or thrice, daily intake of 2-3 eggs.

He stopped the intake of alcohol (occasional) and smoking before 1 ½ years. All other aspects of personal history were normal.

Psycho-social history revealed the presence of Mental stress due to financial and personal issues concerned with an ailment of his wife (Cancer patient).

Clinical findings

Examination of the integumentary system

Revealed flat, pinkish-red color, rough, dry, thick silvery scaly lesions on erythematous base (plaque psoriasis), distributed symmetrically over the scalp, bilateral knee joint, and extensor surfaces of bilateral hand and lower limb, and at the sacroiliac joint with well-defined margins and circinate configuration. Sweating and edema were absent.

The *Auspitz sign* and *Koebner phenomenon* which is specific for Psoriasis was positive. Nail also presented peculiar features of Psoriasis like Onycholysis and subungual hyperkeratosis. The Oil drop sign was absent.

Examination of the Musculoskeletal system

Exhibited swelling, and grade 1 tenderness over left metacarpophalangeal joints and bilateral knee joint with restricted range of movement. The right ankle joint showed swelling and grade 2 tenderness with painful dorsiflexion, and plantarflexion. He also had swelling and grade 2 tenderness over the interphalangeal joints of the bilateral foot.

Laboratory investigation -

ASO titer and RA factor were negative. ESR was 52mm/hr and CRP was 35.7 ng/L and other remaining reports were within normal limits.

Ayurvedic clinical examination revealed the involvement of *Sapta Dhatu* of *Kushta* (*Vata, Pitta, Kapha, Twak, Lasika, Asrk, Amisha*) along with *asthi* and *majja dushti* as evident from the symptoms like joint pain, swelling, and difficulty in walking. At the time of admission, *vyadhyavastha* was in the *ama* stage whereas *jatharagni* was *manda*.

Examination of *Roga* (*Nidana and Samprapti*)

Etiological factors can be divided as follows:

Aharaja

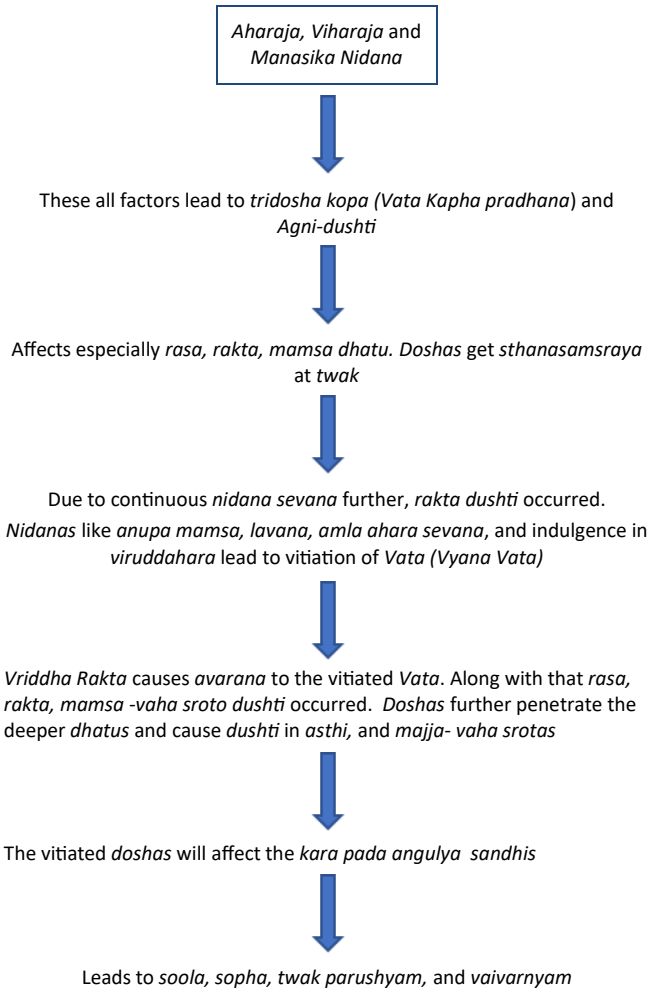
Viruddahara, Raktadushtikara ahara (excessive intake of fish, egg, salty and sour foods like pickles) resulted in *rakta dushti.*

Viharaja - -

Due to occupation, he frequently got exposed to dust and cement. Since his job demands prolonged standing it further led to *Vata kopa*. Prolonged years of intake of smoking and alcohol caused *rakta dushti* and *Vata kopa*.

Manasika

Prolonged Mental stress cause further aggravation of *Vata-pitta* and also hampers the *vyadhi kshmatwa*.



Materials and Methods

Ama pacana (elimination of metabolic wastes), *rakta prasadanam* (blood purifier), *sodhananga snehapanam* (oleation for the elimination of doshas), *virechana* (purgation), *Rasayana* (Rejuvenation therapy). *Samanaoushadhi* (internal medicines), *Pathya- palana* (wholesome diet).(Table.1)

Table 1: internal medications given

SL. No	INTERNAL MEDICINES	DURATION	REMARKS
1	*Punarnavadi Kashaya, Kaisora guggulu, Shaddharana gutika*	14 days	*Ama pacana*
2	*Patoladi gana Kashaya* *Manibhadragula* 15gm HS	15 days 14 days	Lightness of the body
3	*Rasnaerandaadi Kashaya* along with *Mahthikthaka ghrita* 10ml and *Kokilaksham Panam*	15 days.	20 % pain reduced in both knee joints.

After *shodhana* (purificatory therapies)- internal medications were changed to-

After attaining appropriate *agnibala* (strength of digestive fire) and *amapachana, Sodhananga Acha Snehapana* was done in the *Arohana matra* (increasing dose) until *samyaksnigdha lakshana* (signs of proper oleation) was attained. As the patient has *sandhi-asthi- majjagata* involvement along with *Kushta, Gugguluthiktaka ghrita* was selected for *snehapana* (oleation).(Table.2)

Table 2: procedure and medicines

SL. No	PROCEDURE AND MEDICINES	DURATION	REMARKS
1	*Acha Snehapana* with *Guggulu thiktaka ghrita* Dose- 25ml, 50ml, 100ml, 150ml, 200ml, 200ml, 250ml	7 days	*samyaksnigdha lakshana* seen.
2	*Virechana* with *Manibhadra gula* 60gm was given along with *Triphala Kashaya* and honey after *Kapha Kala*. *Samsarjana krama* (graduated diet) was advised	3 days	10 *vegas* were attained.
	As per the classics, in *Kushta chikitsa bahiparimarjana chikitsa* should be done only after *abhyantara shudhi* (internal purification). Hence, after *Shodhana, Kashaya dhara,* and *Takradhara* over the whole body was done.		
3	*Kashayadhara- Aragwadadhi gana*	7 days	Swelling and pain over bilateral ankle joint reduced slightly.
4	*Takradhara* (whole-body + head) *Pottali- musta, manjishta, aragwadhadi Kashaya churna* *Kashayam- amalaka kashaya*	7 days	Pain slightly reduced. Scaly lesions over the scalp healed slightly.
5	*Utsadana:* *Abhyanga- Shudha durvaadi taila* *Churna- Nimabadi churna + Takra*	7 days	Scaly skin lesions over the body reduced considerably.

At the end of the course of treatment, he got considerable relief in the joint pain and swelling except for the left ankle joint. His skin manifestations got completely cleared off. To get rid of the pain and swelling of the left ankle joint, local *Ksheera dhara* with *Dasmoola Kashaya* was done for 7 days. At last, *Vatatapika rasayana* with *Sasankalekhadi churna*[5] 10gm along with *Guggulutiktaka ghrita* 5ml was given for 3 months. After 1 week of intake of *Rasayana* from the IPD, the patient was discharged and advised to continue the same.

Advice on discharge

- *Sasankalekha Rasayana* (10gm) with *Guggulu Tiktaka*

ghrita (10ml) in an empty stomach early morning for 3 months.

- *Vitpala taila* – external application
- *Pathya*: - Diet prepared from *Sali* (rice), yava (barley), and godhuma (wheat). Peas – *mudga* and *masura* are advised. *Tikta saaka* like *karavella, patola*, and *jangala mamsa* were advised
- *Apathya*: - Avoid *amla- lavana -ushna ahara* (curd, milk, fish, and black gram).

Results and assessment

The assessment was done before and after the treatment by using PASI Score (Psoriasis Area and Severity Index) to measure the severity and extent of Psoriasis. The range of absolute PASI scores is (0-72). A score of (0) indicates no psoriasis, while a score higher than (10) suggests severe psoriasis. Before treatment, the score was 20.4 and after one and half months of treatment, the score was found to be reduced up to 3.7 (Ref. Table 3).

Table 3: assessment of symptoms before and after the treatment by using pasi score based on areas of psoriasis

Head (H)	Score (BT)	Score (AT)
Erythema	1	0
Induration	3	1
Desquamation	4	1
Sum	8	2
× Area	5	1
× 0.1	4	0.2

Trunk (T)	Score (BT)	Score (AT)
Erythema	3	1
Induration	1	0
Desquamation	2	0
Sum	6	1
× Area	2	1
× 0.3	3.6	0.3

Upper limb	Score (BT)	Score (AT)
Erythema	0	0
Induration	0	0
Desquamation	0	0
Sum	0	0
× Area	0	0
× 0.3	0	0

Lower limb (LL)	Score (BT)	Score (AT)
Erythema	3	1
Induration	3	2
Desquamation	2	1
Sum	8	4
× Area	4	2
× 0.4	12.8	3.2

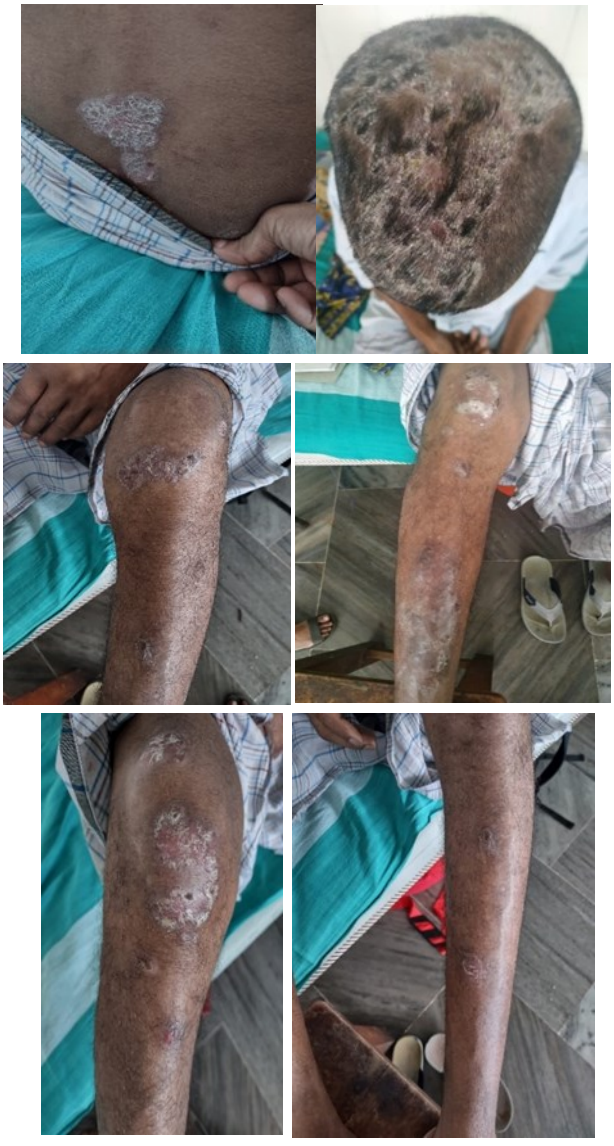
PASI Score (BT) = 4 (H) + 0 (UL) + 3.6 (T) + 12.8 (LL) = 20.4
PASI Score (AT) = 0.2 (H) + 0 (UL) + 0.3 (T) + 3.2 (LL) = 3.7

EULAR Criteria were also used for RA diagnosis (Ref. Table 4).

Table 4: 2010 acr/eular criteria for ra diagnosis

Sl.NO	Criteria	Score (BT)	Score (AT)
1	Joint involvement	3	1
2	Serology	0	0
3	Acute-phase reactants	1	0
4	Duration of Symptoms	1	0

Subjective changes were observed before and after the treatment (Ref. Fig. 1-3).



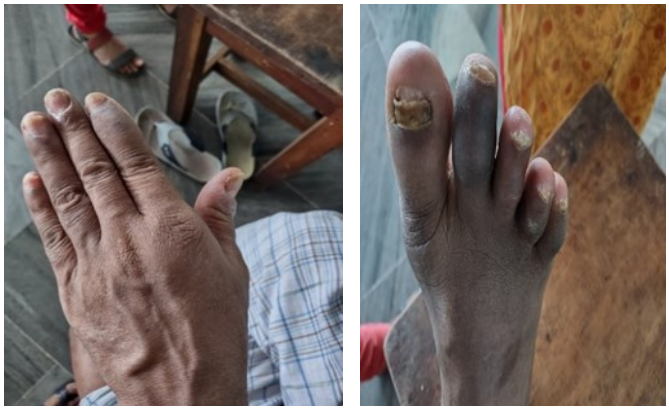


Fig. 1. Before Treatment

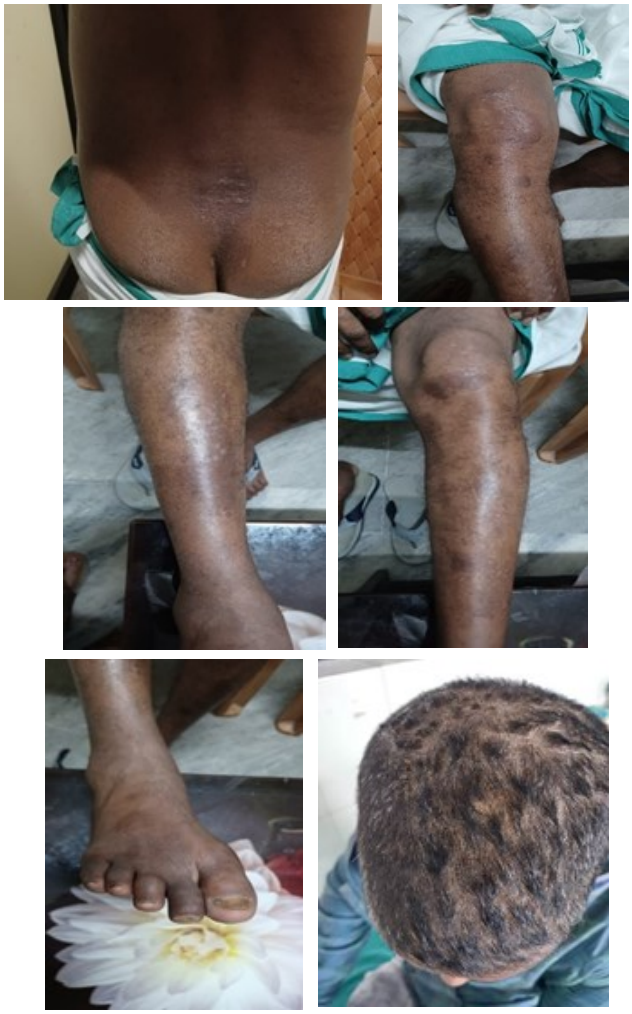


Fig. 2. After Treatment

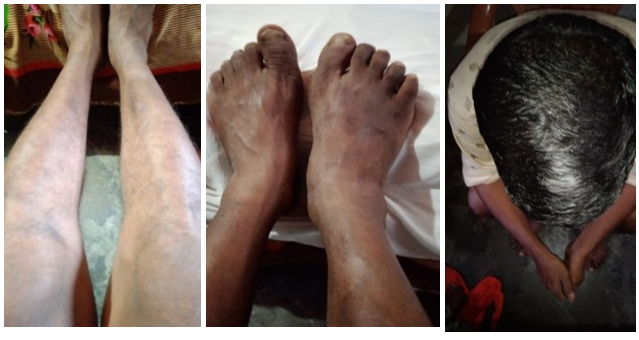


Figure 3 Follow up (after 6 months)

Discussion

Psoriatic arthropathy can be quietly co-related to *Gambhira Vatarakta*. As per Sushruta, *Uttana* and *Gambhira* are two different stages in the pathology of *vatarakta*[6]. The stages of psoriasis can be considered as the *Vyakta kriyakala* and if this *kriya avasara* is not properly utilized the disease can progress and invade the deeper *dhatu* such as *asthi – majja*. Along with the clinical features of *Gambhira Vatarakta* like *Gambhira swayathu*, *Gambhira ruk*, and *Anguli vakrata*, the person also gets crippled (*Khanja* -lame by one leg or *Pangu* -lame by both the legs[7]. In this case, the patient had extreme difficulty in standing on his left leg and he could not do the stance because of pain and was walking like a *khanja*. Psoriatic arthropathy can be considered the *Bhedavastha* of psoriasis.

Due to indulgence in incompatible food items and mental stress, the patient had excess *mala sanchaya* and impaired *dhatu parinama*. *Punaranavaadi Kashaya* and *Shaddharana churna* were administered for *deepana* and *pacana*, and the expulsion of *sanchita mala, Patolaadi Kashaya,* and *Manibhadra gula* were given. In this case, *doshas* are lodged in *sakha marga* and *marmasthi sandhi marga*. The psoriatic arthropathy can be considered as a *Tiryak gata vyadhi*. As the patient had *pravara bala* and *pravara satwa*, *Shodhanaga snehapana* was chosen with *Guggulutiktaka ghrita* followed by *virecana*. At the end of *shodhana*, the patient got 50 % relief in the symptoms. As the skin lesions were persisting in certain areas like the scalp and low back, *Kashaya dhara* and *Utasadana* were advised and the above-mentioned lesions were subsided. *Utsadana* also helped to improve the texture and overall health of the skin. As there is the involvement of psychological factors, time-tested therapy of *Takra dhara* was administered. Recently, research work has been done to validate the efficacy of *Takradhara* in Psoriasis. From the neurophysiological mechanism, it can be hypothetically stated that it promotes the production of natural steroids which boosts innate immunity.

The *Rasayana* advised in the present case was *Sasankalekhadi churna* which is a *samana oushadha* explained in *kushta prakarana*. The ingredients are *Bakuchi, Vidanga, Pippali, Chitraka, Ayomala,* and *Amalaka*. According to the reference, this *rasayana* is to be administered along with *taila*. Still, in this case, it is given along with *Guggulu Tiktaka ghrita* because this ghrita is found to be beneficial in the management of musculoskeletal disorders.

Conclusion

This single case is documented evidence for the successful management of Psoriatic arthritis through *Samana, So-*

dhana chikitsa, and *Rasayana. Sodhana* plays a major role in the elimination of *Doshas*. Lastly, Rasayana was intended to act upon both the integumentary system and musculoskeletal disorders. Further studies are needed to validate its efficacy.

Patient consent

Authors certify that consent has been obtained from the patient to publish the case along with clinical information and images.

Source(s) of funding

None

Compliance with ethical standards

Conflict of interest: None

Ethical issues: None.

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