



## Case Report

“Ayurveda management of Palmoplantar Psoriasis (*Vipadika*) -a case report”Santosh Kumar Bhatted <sup>a</sup>, Harshali Arun Shende <sup>a,\*</sup>, Hemendra Kumar Singh <sup>a</sup>, Anil Kumar <sup>b</sup><sup>a</sup> Department of Panchakarma, All India Institute of Ayurveda, Sarita Vihar, New Delhi, 110076, India<sup>b</sup> All India Institute of Ayurveda, Sarita Vihar, New Delhi, 110076, India

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## ABSTRACT

**Introduction:** Palmo-plantar Psoriasis is a non-infectious chronic inflammatory disease of the skin bounded to the palm and soles in extent. In Ayurveda, all skin diseases are recounted under a single rubric i.e., *Kushtha* (skin diseases); PPP (Palmo-plantar Psoriasis) may be correspondent with *Vipadika* (one of the *Kshudra Kushtha* described in Ayurveda), based on its clinical sign & symptom.

**Objectives:** The role of Ayurvedic regimen in Palmo plantar psoriasis.

**Methodology:** Here we are presenting a case of 68-year-old man with a long 8-year history of pruritic rashes on his both palms and soles which was diagnosed as Palmo-Plantar Psoriasis (*Vipadika*) and successfully managed with simple Ayurveda medicines, external application of *Jivantyadi Yamaka*, external washing with *Triphala* decoction and 3 sitting of *Jalaukavacharana* (Leech Application).

**Result:** The patient reported a significant improvement in the complaints of itch and rash, on the scale and erythema of the palms and soles in a span of about 3 weeks.

**Conclusion:** We, therefore, recommend the treatment of Palmo –plantar Psoriasis starting with leech application along with oral and external Ayurveda medication, and results can be seen.

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## 1. Introduction

Healthy skin is a mirroring of general healthiness. Skin, the largest organ of the body is also considered elegant in society. Any disease related to the skin not only affects the patient semantically but also muddles the rational and collective health of the forbearing, as the mien of the patient may be mortifying. Palmo-plantar psoriasis (PPP) (L 40.3) is a common chronic immune-mediated, inflammatory, proliferative, non-communicable disease of skin influencing people who are genetically predisposed with habitat having a crucial role in pathogenesis [1]. The prevalence of Psoriasis imprecisely ranges between 2 and 3% worldwide [2]. In India, the prevalence of psoriasis also varies from 0.44 to 2.88% [2]. There are many treatment manners accessible but since its chronic

relapsing nature [3], Palmo-plantar psoriasis is a challenge to treat. Modern medical science treats psoriasis with PUVA (Psoralen plus ultraviolet-A radiation) along with corticosteroids and immunomodulators [4]. The treatment alternatives accessible in modern medicine are associated with side effects with recurring setbacks [5] (see Tables 1–3)

But according to Ayurveda, it's unfurling because of the inapt way of living such as dietary patterns and tensivity. Ayurveda treatments are nature-based and devoid of side effects and the chances of relapse are low. Hence, it is a need of time to search out a safe and effective medicine for the complete cure of psoriasis, and here comes the role of Ayurveda. Acharya Charaka mentioned that all skin diseases (*Kushthas*) are *Tridoshaja* (Bodily Humors) in nature [6]. Palmo-plantar psoriasis is one such disease that can't be correlated exactly with any disease mentioned in Ayurveda but to a certain extent based on its symptoms, it can be correlated with *Vipadika* (AAB-90-Charaka) which is one of the types of *Kshudra Kushtha* (Minor skin diseases) [7]. It involves predominantly *Vata* and *Kapha dosha* [8] (bodily humor), vitiation of *Rakta Dhatu*

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**Table 1**

Treatment protocol.

S.no.	Medicine	Dose	Anupana	Schedule	Duration of Medicine	Leech Application	Time
1	<i>Avipattikar churna</i>	5 g	Lukewarm water	Twice a day before food	02/05/22 to 21/05/22	04/05/22	25min
2	<i>Guduchi churna</i>	3 g	Lukewarm water	Twice a day before food		06/05/22	25min
3	<i>Haridra khand</i>	10 g	Lukewarm milk	Twice a day after food		08/05/22	25min
4	<i>Arogyavardhini vati</i>	2 tablets of 500 mg	Lukewarm water	Thrice a day, after food			
5	<i>Jivantiyadi yamaka</i>	For external application	-	-	02/05/22 to 30/05/22		
6	<i>Decoction of Triphala Kwatha</i>	For external application	-	-	02/05/22 to 30/05/22		

**Table 2**

Assessment criteria for clinical features and observations.

S.No.	Clinical features	Score	BT	AT	FU
<b>A</b>	<b>Sphutan (Scaling of skin)</b>		<b>4</b>	<b>2</b>	<b>0</b>
1	Insignificant dryness at the foot/palms	0			
2	Roughness is present when touching	1			
3	Excessive roughness presents and leads to itching	2			
4	Excessive roughness presents and leads to slight cracks	3			
5	Roughness leads to cracks and fissures	4			
<b>B</b>	<b>Kandu (Itching)</b>		<b>3</b>	<b>2</b>	<b>1</b>
1	No itching	0			
2	1-2 times a day	1			
3	Frequent itching	2			
4	Itching disturbs the sleep	3			
<b>C</b>	<b>Pani-padasphutana (Fissures/cracks)</b>		<b>4</b>	<b>1</b>	<b>0</b>
1	No cracks	0			
2	Cracks on the palm or sole only	1			
3	Cracks on palm and soles	2			
4	Cracks on complete foot and complete hand	3			
<b>D</b>	<b>Vedana (Pain)</b>		<b>3</b>	<b>2</b>	<b>1</b>
1	No pain	0			
2	Mild pain of easily bearable nature; comes occasionally	1			
3	Moderate pain, but no difficulty	2			
4	Appears frequently and requires some measures for relief	3			
5	Pain requires medication and may remain throughout the day	4			

BT-Before treatment.

AT- After treatment (at the time of discharge).

FU-Follow Up (after 1 month of discharge).

**Table 3**

Composition of leech saliva [20,21].

Sr.No	Constituent	Function
1	Bdellins	Anti-inflammatory inhibits plasmin
2	Hyaluronidase	Antibiotic action
3	Hirustastin	Analgesic and Anti-inflammatory
4	Eglins	Anti-inflammatory
5	Acetylcholine	Vasodilator
6	Hinstamine-Like	Vasodilator
7	Ghilantens	Analgesic and Anti-inflammatory
8	Eglin C,	Analgesic and Anti-inflammatory
9	Guamerin And Piguamerin	Analgesic and Anti-inflammatory
10	Tryptase Inhibitor	Analgesic and Anti-inflammatory
11	Kinins	Analgesic, relive itching

(blood) and is characterized by *Pani-Pada Sphutan* (Fissure in palm and soles) and severe pain (*Teevra Vedana*) [7]. Acharya Vagbhat added another sign of red patches over the palm and sole [9]. Palmoplantar Psoriasis (PPP) remains a difficult dermatologic disorder to treat, even in the age of biologics. This condition causes significant morbidity that can interfere with a patient's ability to work and carry out routine activities. We present a case of Palmoplantar

Psoriasis in which a patient has shown an excellent response by combining of Ayurvedic oral medication, external application, and Leech Application proving the novelty of evidence.

## 2. Patient information

A 68-year-old man came to the OPD of All India Institute of Ayurveda, New Delhi on 02/05/2022 with a long 8-year history of pruritic rashes on both his hands and legs and was previously diagnosed as "eczema" by an outside physician. He used triple antibiotic ointment in the past without any significant improvement before he visited Ayurveda hospital. He had no significant family history, past medical and psychological history.

## 3. Clinical findings

On examination, scaly, ill-defined erythematous plaques on the soles and palms were noted. To confirm a case of Palmoplantar Psoriasis differential diagnoses were made-

### 3.1. Differential diagnosis

Differential diagnosis.

Palmoplantar Psoriasis	Dyshidrotic Eczema	Allergic contact Dermatitis
Itching-moderately itchy. Scratching results in <b>bleeding</b>	Itching-mild to moderate. Scratching results in <b>oozing</b>	Very itching, scratching results in <b>oozing</b>
Nail changes-typical	Nail changes-variable	Nail changes-variable
No vesicles	Deep-seated pruritic vesicles.	Pruritic vesicular eruption
Smoking history	Not relatable	Not relatable

### 3.2. Differential diagnosis as per ayurveda

*Vipadika* (Palmo-Plantar Psoriasis) can be differentiate from *Padadari* [10] as per *Doshik* dominance, symptom, cause and affected areas. *Vipadika* caused by *Vata-Kapha* where *Padadari* is due to only *Vata*. *Ruja* (pain), *Srava* (discharge), *Kandu* (itching) are seen in *Vipadika* where only *Ruja* (pain) seen in *Padadari*. Both hands and feet are affected in *Vipadika* where only the foot is affected by *Padadari*.

## 4. Diagnostic assessment

The investigations were done before starting the treatment which included Absolute Eosinophil Counts (AEC)- 913 cells/ $\mu$ L and immunoglobulin E (IgE)- 1000 IU/ml.

## 5. Therapeutic intervention and timeline

### 5.1. Application of Leech therapy

Primarily a Leech was placed on the affected site of the palm and sole and observed for two minutes (to allow the leech to suck the blood from the site), a wet cotton Gauze was placed over the body of the leech to provide moisture to the leech. After 15 minutes, the leech detached from the site after sucking the blood. A piece of cotton gauze was placed over the site of the bite to avoid further bleeding of the affected part. This procedure was performed for three sittings without any complications.

### 5.2. Ayurvedic medication

The patient was first put on Leech therapy with Ayurvedic oral medication (Table no.1) and cleaning with the decoction of *Triphala* along with the daily external application of *Jivantyadi Yamaka* (Herbal Medicated Ghee) to the palms and soles.

## 6. Outcome & follow up

The patient was under close observation in the In-Patient Department of All India Institute of Ayurveda, for eight days and no side effect was reported.

The patient noted a good improvement since there was a reduction in the scaling of the skin, itching, and erythema on his palm and sole and a significant reduction in Absolute Eosinophil Counts (AEC) from 913 cells/ $\mu$ L (5/5/2022) to 534 cells/ $\mu$ L (9/5/2022) and further to 108 cells/ $\mu$ L (31/5/2022) indicating significant decline (88.2%) in AEC. Similarly, the immunoglobulin E (IgE) levels declined from 1000 IU/ml to 992 IU/ml further to 820 IU/ml over the same duration.

At the time of discharge, the patient reported a significant improvement in the complaints of itch and rash of his palms and soles, and a substantial improvement in the scale and erythema of

the palms and soles was observed on examination, and complete relief after 1 months follow up (Table no.2) Even after one-month visit and telephonic communication during 2 months' follow-up no side effect was reported by the patient.

## 7. Discussion and conclusion

Palmoplantar psoriasis remains a debilitating skin disorder. The present case report of a patient who was misdiagnosed in allopathy as a case of eczema and remained on treatment for long eight years without any noticeable benefits, was diagnosed as a case of Palmoplantar psoriasis (PPP) which can be correlated with *Vipadika* described in Ayurveda as one of the *Kushtha* (Skin Disease). Looking into the age, *Bala* (Strength) of the patient and severity of the sign and symptoms, *Nitya Mridu Virechana* was planned by giving *Avipattikar Churna* as it is mentioned in the classics that *Alpaalpa Punah: Punah: Shodhana* [11](repeated little by little cleansing) in the context of *Kushtha*, and *Shodhana* should be done with due care of *Prana* (vitality) as it is mentioned for *Shodhana* (purification) application in *Kushtha* – “*Bahusho Anurakshata Pranam*” [12] (with due care of vitality). Considering the *Rakta* (vitiation of Rakta) and *Pitta Dushti* (vitiation of Pitta) and to provide immediate relief from suffering, *Raktamokshana* with *Jaloukavacharana* was done.

The patient was first exposed to three sittings of Leech Application to suck out the vitiated blood and additionally oral Ayurveda medicines, external application of *Jivantyadi Yamaka* and external washing with *Triphala* decoction (Table no 1). Leech saliva is rich in both analgesics and anti-inflammatory actions (Table no.3). *Jivantyadi Yamaka* [13] (medicated ghee) is a special Ayurvedic medicine where two fats are used in the preparation. Here sesame oil and cow ghee are used as a base. Thus, this herbal preparation contains oil soluble and water soluble phytoactive principles of medicinal herbs and some standard oral Ayurveda medicines like *Avipattikar Churna* [14], *Guduchi churna* [15] & *Arogyavardhani Vati*. [16] All are *Raktashodhak* (blood purifier) and *Pittarechak* (eliminating the excess of pitta) and *Mala Shodhaka* (eliminating metabolic wastes). All of these are assumed to be causative factors for palmoplantar psoriasis. In Ayurveda *Haridra Khanda* [17] is one of the well-known formulations to treat allergic manifestation, as the clinical presentation of the patient was with rashes and raised AEC, hence it was also used. One can see Fig. 1 and observe clear improvements in clinical conditions between 4/5/22 to 30/05/22 - in about 3 weeks. Based on the findings of this study, our recommendation for treating Palmoplantar Psoriasis is to initiate the use of leech application in conjunction with oral and external Ayurveda medication. Positive results have been observed with this approach. Although, the benefit of leech applications has been reported in situations of nevus of Ota [18] and *Vicharchika* [19] but no reference could be located in the literature where in leech application is done in *Vipadika*. Therefore, the present case report may be the first time on the subject.



Fig. 1. Application of leech.

### 7.1. Strength of the study

Given the challenging nature of treating skin diseases, this study could serve as a treatment protocol for patients with palmoplantar psoriasis, as it has demonstrated positive outcomes in alleviating symptoms such as cracks, pain, itching, and disfigurement, with no reported side effects. Further research can be carried out with a series of cases with the same treatment plan for confirmation, and this can also be adopted in other skin diseases having the same features. The treatment is affordable and accessible in terms of cost.

### 8. Patient perspective

The patient expressed great contentment with a treatment that was cost-effective and required less time. Features like scaling,

itching, cracks, and pain, have shown marked relief making the patient socially and semantically confident.

### Author contribution

Concepts, literature search-SK, HS, HK Design- SK, HS, HK, Application of Leech- HS, HK, Manuscript preparation- HS, HK Manuscript editing- SK, AK, Other.

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None.

### Conflict of interest

None.



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## Appendix

### Mode of Action of internal medicines.

Internal medicines, their contents and mode of action.

S.No.	Medicine	Contents	Mode of Action
1	<u>Arogyavardhini vati</u>	Loha (Calcined iron) Abhrak (Biotite mica), Tamra (Incinerated copper), <i>Shilajit</i> (Asphaltum), <i>Guggul</i> (Commiphora wightii), Indian bdellium-tree, <i>Chitrak</i> (Plumbago zeylanica), and <i>Kutki</i> (Picrorhiza kurroa), <i>Triphala</i> , <i>Kajjali</i> , <i>Nimba Patra Swaras</i> . (Neem leaves's juice)	These drugs have <i>Pachak</i> (Digestive), <i>Dipak</i> (appetizer), <i>Vishaghna</i> (Antitoxic), and <i>Jantughna</i> (Antimicrobial) effects. It is mentioned as the best medicine for skin diseases.
2	<u>Guduchi Churna</u>	<i>Guduchi</i> ( <i>Tinisporea cordifolia</i> )	It is anti-inflammatory, antioxidant, hepatoprotective, antiallergic, and immunomodulatory activities. <i>Guduchi</i> is known for its detoxifying, rejuvenating, immune-supporting properties.
3	<u>Haridra khanda</u>	<i>Haridra</i> ( <i>Curcuma longa</i> ) <i>Shunthi</i> ( <i>Zingiber officinale</i> ) <i>Maricha</i> ( <i>Piper nigrum</i> ) <i>Pippali</i> ( <i>Piper longum</i> ) <i>Twak</i> ( <i>Cinnamomum zeylanica</i> ) <i>Ela</i> ( <i>Elettaria cardamomum</i> ) <i>Tamala patra</i> ( <i>Cinnamomum tamala</i> ) <i>Vidanga</i> ( <i>Embelia ribes</i> ) <i>Trivrita</i> ( <i>Operculina turpethum</i> ) <i>Haritaki</i> ( <i>Terminalia chebula</i> ) <i>Bibhitaki</i> ( <i>Terminalia bellirica</i> ) <i>Amalaki</i> ( <i>Emblia officinalis</i> ) <i>Nagkesara</i> ( <i>Mesua ferrea</i> ) <i>Musta</i> ( <i>Cyperus rotundus</i> ), Sugar	All the drugs have properties to control the allergic condition and improve <i>Vyadhikshamatva</i> (immunomodulatory).
4	<u>Avipattikar churna</u>	<i>Shunthi</i> ( <i>Zingiber officinale</i> ), <i>Maricha</i> ( <i>Piper nigrum</i> ), <i>Pippali</i> ( <i>Piper longum</i> ), <i>Haritaki</i> ( <i>Terminalia chebula</i> ), <i>Vibhitaka</i> ( <i>Terminalia bellerica</i> ), <i>Aamalaki</i> ( <i>Emblia officinalis</i> ), <i>Musta</i> ( <i>Cyperus rotundus</i> ), <i>Vidanga</i> ( <i>Embelia ribes</i> ), <i>Ela</i> ( <i>Amomum subulatum</i> ), <i>Patra</i> ( <i>Cinnamomum tamala</i> ), <i>Lavanga</i> ( <i>Syzygium aromaticum</i> ), <i>Trivrit</i> ( <i>Operculina turpethum</i> ) and <i>Sharkara</i> (Sugar candy), salt ( <i>Vida Lavana</i> ),	Antacid, Appetizer, Carminative, Digestive, Stimulant Antioxidant, Anti-inflammatory.
5	<u>Jivantyadi yamaka</u>	<i>Jivanti</i> , <i>Neem</i> , <i>Karela</i> , <i>Triphala</i> , <i>Giloy</i>	It has antipruritic and soothing action which helps to promote healing of lesions. It is also an antioxidant, which is used in many skin infections and helps the body to get rid of harmful blood toxins responsible for various diseases.

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