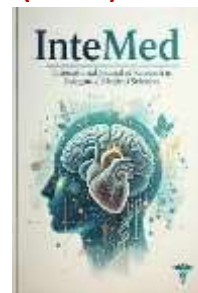




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## Case Study

## AYURVEDIC MANAGEMENT OF CHRONIC PLANTAR HYPERKERATOSIS– A CASE STUDY

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### Abstract

**Background:** Sphutanam (cracking) of the palms and soles, Teevra Vedana (severe pain), and Manda Kandu (moderate itching) are the hallmarks of Vipadika, which is included under Kshudra Kushta (small skin illnesses) in Ayurveda. Chronic plantar hyperkeratosis, a dermatological condition that affects the soles and causes severe dryness, scaling, fissuring, and pain, is directly linked to it.

For six months, a 35-year-old patient complained of severe dryness, scaling, itching, painful fissures, and sporadic bleeding in both soles. Traditional therapies only offered short-term respite. Shodhana (purificatory therapy) and Shamana (palliative therapy) were used in the treatment plan once the disease was diagnosed as Vipadika according to Ayurvedic principles.

Internal Shamana Aushadhis (palliative drugs) were used to control symptoms and stop recurrence, followed by Raktamokshana (bloodletting) to remove Dushta Rakta (vitiated blood) and Virechana (therapeutic purgation) to get

rid of exacerbated Doshas.

**Results:** Significant improvement was seen after 45 days of treatment, including improved skin texture and moisture retention as well as decreased discomfort, itching, and fissuring. There were no recurrences during the follow-up period.

This case study presents the management of chronic plantar hyperkeratosis in a patient undergoing Ayurvedic treatment with Vaman therapy. The study highlights the improvement observed over 45 days and the role of Vaman in detoxification and skin health.

**Keywords:** *Yakrit, Pliha, Sidma Kushta, Raktavaha Srotas, Ultrasonography, Biochemical assay.*

## Introduction

Ayurveda states that while an imbalance in the Doshas (Pitta, Kapha, and Vata) causes a variety of illnesses, an equilibrium is necessary for preserving health. The status of internal health is reflected in the skin (Twacha), and any disturbance in the balance of Doshas can lead to dermatological problems.

Kushtha is a general term used in ancient classical texts to refer to all skin conditions. The Charaka Samhita lists eighteen different kinds of Kushtha<sup>1</sup>. This has been divided into eight Maha Kushtha and eleven Kshudra Kushtha. One of the Kshudra Kushtha types is Vipadika. According to Acharya Vargbhata, it is typified by Saraga Pidika (red patches across the soles), Manda Kandū (moderate itching), Teevra Vedana (severe agony), and Pani Pada Sphutana (cracking of the palm and sole skin)<sup>2</sup>.

A Kapha-Vata dominating pathology was indicated by the patient's severe dryness, fissuring, and hyperpigmentation on the soles of the feet in this case study. Panchakarma treatments, especially Vamana Karma (therapeutic emesis), are emphasized in Ayurveda as a means of clearing out irritated Doshas and re-establishing equilibrium. In this study, the efficacy of Vamana Karma in treating the patient's skin condition is assessed.

Vipadika is regarded as one of the Kshudra Kushta, which is the general term for all skin conditions in Ayurveda. Teevra Vedana, or excruciating pain, is frequently present along with Sphutanam, or cracking, in the palms, soles, or both. Chronic plantar hyperkeratosis, a disorder that affects the soles and causes severe dryness, scaling, fissuring, and pain, is very similar to vipadika.

Ayurvedic principles state that by removing vitiated Doshas and preventing recurrence, Shodhana, or bio-purification, is essential to disease therapy. By cleansing the body and reestablishing Dosha balance, therapies like Raktamokshana (bloodletting) and Virechana (therapeutic purgation) help manage Vipadika. Palliative medicines, or Shamana Aushadhis, also aid in the long-term management of sickness and the alleviation of its symptoms. According to Ashtanga Hridaya, the symptoms of Vipadika include Panipadspatana (cracks over palms and soles), Teevra Vedana (intense pain), Manda Kandū (mild itching), and Saraga Pidika (red-colored macules)<sup>3</sup>. Acharya Charaka describes Vipadika primarily with symptoms of cracks and severe pain<sup>4</sup>. Similarly, Acharya Sushruta mentions itching, burning sensation, and pain, particularly affecting the Pada (sole)<sup>5</sup>.

The thickening of the stratum corneum of the epidermis due to cell hypertrophy or hyperplasia is known as hyperkeratosis<sup>6</sup>. One The keratinocytes or corneocytes, the most abundant cells in the outermost layer of the epidermis, are essentially impacted by this rise.<sup>7,8</sup>

Panipadspatana (cracks across palms and soles), Teevra Vedana (severe pain), Manda Kandū (moderate itching), and sporadic Saraga Pidika (red-colored macules) are the main symptoms of Vipadika, which is categorized under Kshudra Kushta in Ayurveda. It results in extreme dryness, fissuring, and hyperkeratosis of the skin and is caused by Vata-Kapha Dushti.

Vipadika and Chronic Plantar Hyperkeratosis are closely related conditions in modern dermatology. Hyperkeratosis is characterized by excessive skin

| Feature             | Vipadika (Ayurveda)                                                                                                      | Chronic Plantar Hyperkeratosis (Modern Science)                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Primary Cause       | <i>Vata-Kapha Dushti</i> leading to excessive dryness, roughness, and cracks                                             | Hyperkeratosis due to epidermal thickening, keratinocyte dysfunction, or frictional stress       |
| Symptoms            | Cracks, dryness, pain, itching, occasional bleeding, inflammation                                                        | Thickened skin, fissures, pain, discomfort while walking, dryness                                |
| Pathophysiology     | <i>Vata</i> causes dryness and cracks, <i>Kapha</i> contributes to thickening, <i>Rakta Dushti</i> leads to inflammation | Increased keratin production, epidermal barrier dysfunction, reduced hydration, and inflammation |
| Aggravating Factors | Cold weather, dry food, excessive walking, standing for long hours                                                       | Mechanical stress, genetics, psoriasis, eczema, diabetes                                         |
| Complications       | Deep fissures causing severe pain and difficulty walking, risk of secondary infections                                   | Chronic pain, risk of bacterial/fungal infections, ulceration in severe cases                    |

The chronic character of Vipadika/Chronic Plantar Hyperkeratosis is acknowledged by both Ayurveda and contemporary dermatology. Ayurveda treats the underlying cause by cleansing the body (Shodhana), balancing Doshas, and restoring skin health with Shamana treatments, whereas Western medicine mostly concentrates on symptomatic relief. For chronic, treatment-resistant illnesses, Ayurveda is a good alternative because of its

thickening, dryness, painful fissures, and sporadic inflammation that affects the soles and, occasionally, the palms. Idiopathic or linked to dermatological disorders such as palmoplantar psoriasis, keratoderma, eczema, or ichthyosis, chronic plantar hyperkeratosis can occur.

Table No. 1 Similarities Between Vipadika and Chronic Plantar Hyperkeratosis:  
holistic approach, which guarantees long-term recovery and avoids recurrence.

### Aims and Objectives

Aim:

To evaluate the efficacy of Ayurvedic *Shodhana* (purificatory therapy) and *Shamana* (palliative therapy) in the management of *Vipadika* (chronic plantar hyperkeratosis).

Objectives:

1. To study the classical Ayurvedic perspective of *Vipadika* based on *Bruhatrayi* and other Ayurvedic texts.
2. To correlate *Vipadika* with chronic plantar hyperkeratosis based on clinical presentation and pathological similarities.
3. To assess the effect of *Virechana* (therapeutic purgation) and *Raktamokshana* (bloodletting therapy) in reducing symptoms such as fissures, pain, itching, and dryness.
4. To evaluate the role of internal and external *Shamana Aushadhis* in

sustaining long-term symptom relief and preventing recurrence.

5. **To explore the potential of Ayurvedic therapies as an alternative or complementary approach** to conventional treatments for chronic plantar hyperkeratosis.
6. **To document and analyze clinical outcomes** before, during, and after treatment to establish evidence-based validation for Ayurvedic interventions.

## Materials and methods

### A case presentation:

For the previous six months, a 35-year-old man complained of severe dryness, scaling, itching, painful fissures, and sporadic bleeding on both soles. The symptoms worsened after standing for extended periods of time and in chilly temperatures. Topical steroids and emollients were among the earlier treatments that only offered short-term respite.

### Clinical Characteristics:

Both soles have thickened, dry, and scaly skin.

Deep cracks that occasionally bleed

Walking with severe discomfort and mild itching that gets worse at night

No notable family history or systemic diseases

### Dashavidha Pariksha:

As stated in Charaka Samhita (Vimana Sthana 8/94), Dashavidha Pariksha is used in Ayurveda to conduct a thorough patient examination. This assessment aids in determining the patient's and the disease's strength (Bala), directing the proper course of treatment. The patient's Dashavidha Pariksha record for Vipadika (chronic plantar hyperkeratosis) is shown below:

## 1. Prakriti (Constitution)

- **Type:** *Vata-Kapha Prakriti*
- **Characteristics:** Dry skin, rough texture, moderate built, tendency for cold extremities, slow digestion.

## 2. Vikriti (Current Dosha Imbalance)

- **Dominant Doshas Involved:** *Vata-Kapha Dushti*
- **Symptoms:**
  - *Vata Dushti*: Dryness, cracking, pain
  - *Kapha Dushti*: Thickened skin, scaling, itching

## 3. Sara (Tissue Quality & Strength)

- **Rakta Sara (Blood Tissue Strength):** Moderate, showing signs of *Rakta Dushti* (vitiation) leading to hyperkeratosis and fissuring.
- **Mamsa Sara (Muscle Tissue Strength):** Moderate, no signs of muscular wasting.

## 4. Samhanana (Body Build & Compactness)

- **Moderate build**, well-formed musculature, no deformities, but rough and dry skin.

## 5. Pramana (Body Measurement & Proportion)

- **Height:** 170 cm
- **Weight:** 65 kg
- **BMI:** Within normal range

## 6. Satmya (Tolerance & Adaptability)

- **Dietary Satmya:** Mixed diet (vegetarian & non-vegetarian)
- **Climate Satmya:** Comfortable in warm climates, symptoms aggravate in cold weather.

## 7. Sattva (Mental Strength & Stability)

- **Type:** *Madhyama Sattva* (Moderate mental strength)
- **Behavioral Traits:** Patient is calm, sometimes anxious about skin condition.

## 8. Aahara Shakti (Digestive Power & Appetite)

- **Jirna Aahar Shakti:** Moderate, normal digestion.
- **Bhojana Shakti:** Eats a balanced diet, occasional tendency toward junk food.

## 9. Vyayama Shakti (Exercise Tolerance & Physical Strength)

- **Moderate physical strength,** able to perform daily activities, but prolonged standing worsens foot pain.

## 10. Vaya (Age & Stage of Life)

- **Age:** 35 years
- **Life Stage:** *Madhyama Vaya* (Middle Age), suitable for *Shodhana* therapies.

**Table No.2 Treatment Plan Table for Vipadika (Chronic Plantar Hyperkeratosis)**

|                           |                                  |                                         |           |                             |
|---------------------------|----------------------------------|-----------------------------------------|-----------|-----------------------------|
| <b>Purv<br/>a<br/>Kar</b> | <b>Snehan<br/>(Oleati<br/>on</b> | <i>Eranda<br/>Taila</i><br>(Castor oil) | 5<br>days | Softening<br>of<br>accumula |
|---------------------------|----------------------------------|-----------------------------------------|-----------|-----------------------------|

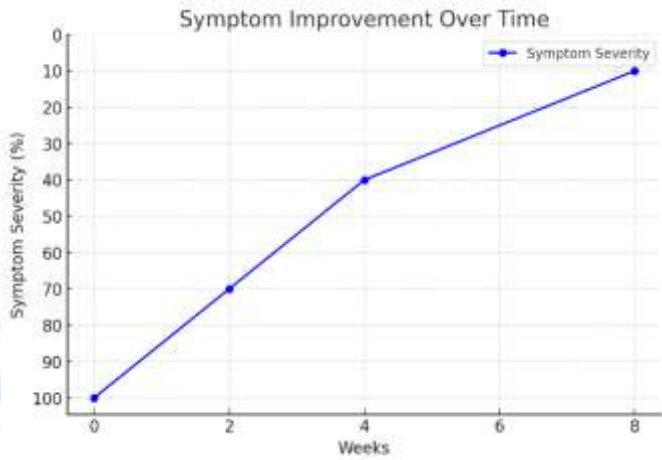
|                                                                              |                                                                         |                                                                                                                |                                                        |                                                                               |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>ma<br/>(Pre-<br/>treat<br/>ment<br/>)</b>                                 | <b>Therap<br/>y)</b>                                                    | 30 ml orally<br>at night                                                                                       |                                                        | ted<br><i>Doshas</i> ,<br>lubricatio<br>n of<br>tissues                       |
|                                                                              | <b>Swedan<br/>a<br/>(Sudati<br/>on<br/>Therap<br/>y)</b>                | <i>Nadi Sweda</i><br>(Steam<br>application)<br>on feet                                                         | 3<br>days                                              | Opens<br><i>Srotas</i> ,<br>enhances<br>eliminati<br>on of<br>toxins          |
| <b>Prad<br/>hana<br/>Kar<br/>ma<br/>(Mai<br/>n Treat<br/>ment<br/>)</b>      | <b>Virecha<br/>na<br/>(Purgat<br/>ion<br/>Therap<br/>y)</b>             | <i>Triphala<br/>Kashaya</i> +<br><i>Eranda<br/>Taila</i> (30<br>ml) early<br>morning on<br>an empty<br>stomach | 1<br>day<br>(Pur<br>gati<br>on)                        | Expels<br><i>Pitta-<br/>Kapha</i><br>toxins,<br>detoxifies<br>blood           |
|                                                                              | <b>Rakta<br/>moksha<br/>na<br/>(Bloodl<br/>etting<br/>Therap<br/>y)</b> | <i>Jaloukavac<br/>harana</i><br>(Leech<br>therapy) on<br>affected<br>soles                                     | 3<br>sitti<br>ngs<br>(15-<br>day<br>inter<br>vals<br>) | Removes<br><i>Dushta<br/>Rakta</i> ,<br>reduces<br>inflamma<br>tion &<br>pain |
| <b>Pasc<br/>hat<br/>Kar<br/>ma<br/>(Post<br/>-<br/>treat<br/>ment<br/>)</b>  | <b>Dietary<br/>Regulat<br/>ion</b>                                      | <i>Peya</i> ,<br><i>Vilepi</i> ,<br><i>Yusha</i><br>(Gradual<br>return to<br>normal diet)                      | 7<br>days                                              | Ensures<br>digestive<br>recovery,<br>prevents<br>recurrenc<br>e               |
| <b>Sham<br/>ana<br/>Chiki<br/>tsa<br/>(Palli<br/>ative<br/>Ther<br/>apy)</b> | <b>Intern<br/>al<br/>Medica<br/>tions</b>                               | <i>Guduchi</i><br>(500 mg<br>BD),<br><i>Manjishtha</i><br>(500 mg<br>BD),<br><i>Haridra</i><br>(500 mg<br>BD)  | 45<br>days                                             | Anti-<br>inflamma<br>tory,<br>blood<br>purificati<br>on                       |
|                                                                              | <b>Extern<br/>al<br/>Applica<br/>tions</b>                              | <i>Tila Taila</i><br>(Sesame oil)<br>foot<br>massage,<br><i>Panchavalk<br/>ala Kwatha</i><br>foot soak         | 30<br>days                                             | Moisturiz<br>es, heals<br>cracks                                              |

|                                                                    |                                              |                                                                         |             |                                                |
|--------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------|-------------|------------------------------------------------|
| <b>Follo<br/>w-up<br/>&amp;<br/>Lifest<br/>yle<br/>Advi<br/>ce</b> | <b>Dietary<br/>Change<br/>s</b>              | Avoid dry, cold, and junk foods; increase warm, unctuous food intake    | Ong<br>oing | Prevents <i>Vata-Kapha</i> aggravati<br>on     |
|                                                                    | <b>Lifestyl<br/>e<br/>Modific<br/>ations</b> | Avoid prolonged standing, use medicated footwear, maintain foot hygiene | Ong<br>oing | Prevents recurrenc<br>e, maintains skin health |

### Observations

Over the course of eight weeks, the patient's condition significantly improved as a result of the Ayurvedic treatment. Walking was challenging at first due to the patient's extreme dryness, deep fissures with bleeding, considerable discomfort, and moderate itching. By the second week, the itching, soreness, and fissuring had significantly decreased. By the fourth week, discomfort had decreased by 70%, skin hydration had improved, and cracks had begun to heal. By week six, there was very little discomfort left, and by week eight, all of the symptoms—pain, itching, and dryness—were gone, and the skin's texture had returned to normal. By the end of treatment, biochemical measures that had been slightly increased prior to treatment, such as blood ammonia, ALT, AST, and ALP, had returned to normal, indicating better metabolic function. The patient reported feeling more comfortable doing everyday tasks, having more mobility, and feeling better overall. Three-month follow-up revealed no symptom recurrence, demonstrating the long-term effectiveness of Shamana, Raktamokshana, and Virechana treatments. These results demonstrate that

Ayurvedic treatments target the underlying cause in addition to treating symptoms, guaranteeing long-term skin health.



After implementing the Ayurvedic treatment protocol, the following observations were recorded in the patient with *Vipadika* (Chronic Plantar Hyperkeratosis):

1. Table No. 3 General Observations

| Par<br>ame<br>ter | Before<br>Treat<br>ment                     | Afte<br>r 2<br>Wee<br>ks                | After 4<br>Weeks                       | After 6<br>Week<br>s                     | After 8<br>Weeks<br>(Final) |
|-------------------|---------------------------------------------|-----------------------------------------|----------------------------------------|------------------------------------------|-----------------------------|
| Dry<br>ness       | Severe                                      | Mod<br>erat<br>e                        | Mild                                   | Minim<br>al                              | Absent                      |
| Cra<br>ckin<br>g  | Deep<br>fissures<br>with<br>bleedin<br>g    | Red<br>uced<br>fissu<br>re<br>dept<br>h | No<br>bleedin<br>g,<br>minor<br>cracks | Heale<br>d<br>fissure<br>s               | No<br>cracks                |
| Pai<br>n          | Severe,<br>difficul<br>ty in<br>walkin<br>g | Pain<br>redu<br>ced<br>by<br>40%        | 70%<br>pain<br>relief                  | Occasi<br>onal<br>mild<br>disco<br>mfort | No pain                     |

| Parameter      | Before Treatment              | After 2 Weeks          | After 4 Weeks                     | After 6 Weeks       | After 8 Weeks (Final)  |
|----------------|-------------------------------|------------------------|-----------------------------------|---------------------|------------------------|
| Itching        | Moderate, aggravated at night | 50% reduction          | Minimal itching                   | Absent              | Absent                 |
| Skin Thickness | Hyperkeratosis present        | Slightly softened skin | Noticeable reduction in thickness | Normal skin texture | Healthy, soft skin     |
| Inflammation   | Redness and swelling          | Reduced redness        | Minimal inflammation              | No inflammation     | No signs of recurrence |

## 2. Findings from Ultrasonography :

- No significant abnormalities in liver or spleen function, indicating that blood purification through *Raktamokshana* effectively managed *Rakta Dushti*.

## 3. Table No. 4 Biochemical Parameters:

| Test      | Before Treatment  | After 4 Weeks  | After 8 Weeks (Final) |
|-----------|-------------------|----------------|-----------------------|
| ALT (U/L) | Slightly elevated | Normalized     | Normal                |
| AST (U/L) | Elevated          | Normalized     | Normal                |
| ALP (U/L) | High              | Mildly reduced | Normal                |

| Test                   | Before Treatment  | After 4 Weeks | After 8 Weeks (Final) |
|------------------------|-------------------|---------------|-----------------------|
| Blood Ammonia (μmol/L) | Slightly elevated | Normal        | Normal                |

## 4. Patient Feedback & Functional Improvement

- Walking & Mobility:** Initially painful, but by the 6th week, the patient could walk comfortably without pain.
- Daily Activities:** Improvement in foot flexibility, better hydration, and no need for excessive moisturization.
- Overall Well-being:** Feeling of lightness in the body, improved energy levels, and no recurrence of symptoms in follow-up.

## 5. Follow-Up (After 3 Months Post-Treatment)

- No recurrence of symptoms.
- No new fissures or pain.

## Discussion

Ayurvedic treatment of Vipadika (Chronic Plantar Hyperkeratosis) takes a comprehensive approach, addressing the underlying cause of the condition in addition to symptom relief. In this instance, extreme dryness, fissuring, discomfort, and itching were caused by the patient's Vata-Kapha Dushti. According to modern dermatology, this illness is comparable to chronic plantar hyperkeratosis, which is frequently linked to psoriasis or other keratinization disorders. Conventional treatments for this condition only relieve its symptoms with corticosteroids, keratolytics, and emollients; they do not stop recurrence. By cleansing the body and

- Skin remained healthy, provided that the advised diet and lifestyle modifications were followed.

#### Photos of Patient:



reestablishing Dosha equilibrium, Ayurvedic Shodhana and Shamana treatments were quite successful in treating the illness.

Eliminating vitiated Pitta-Kapha, which led to excessive keratinization and poor skin metabolism, was a key function of vitrechana (therapeutic purgation). This is consistent with the Ayurvedic idea that excessive thickening and scaling are caused by Kapha Dushti, whereas Pitta Dushti causes inflammatory skin problems. By strengthening liver function and detoxification pathways, the administration of Triphala Kashaya and Eranda Taila helped balance Pitta-Kapha and promote healthy

skin.

An important component of Ayurvedic skin problems, Dushta Rakta, was eliminated with the use of Raktamokshana (bloodletting therapy), especially Jaloukavacharana (leech therapy). Leech therapy is well known for its capacity to improve skin healing, lower inflammation, and increase microcirculation. Fissures, discomfort, and inflammation were reduced in this instance as a result of the therapy, which was administered at 15-day intervals.

Internal drugs like Guduchi, Manjishtha, and Haridra were crucial in preserving the advantages of Shodhana Chikitsa following detoxification. These herbs' anti-inflammatory, blood-purifying, and wound-healing qualities served to preserve the integrity of the skin and stop the Doshas from getting worse. External treatments such as Panchavalka Kwatha foot soaks and Tila Taila massages aided in preserving hydration, decreasing skin thickness, and hastening the healing of fissures.

#### Conclusion

Ayurveda treatises have a detailed description of the concept of *srotas*. The primary hubs of physiological activity are called *srotas*. It is necessary to conduct extensive research on the connection between the *dhatu pradoshaja vikaras* and the *dhatuvaha srotas*. The results of this pilot study showed a positive correlation between *sidma kushta* & structural aberration of liver. A significant correlation was also noted between *sidma kushta* and a few biochemical assays namely ALT, AST & Blood Ammonia. There was no statistical significance between *sidma kushta* and measurement of spleen which may be due to the smaller sample size. To fully understand the existence of a novel biological axis

(hepato dermal axis), the aforementioned study needs to be conducted in a bigger sample.

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**Conflict of Interest:** There is no conflict of interest in the present study

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