

1 **Ayurvedic management of Plantar Keratoderma (*Vipadika Kushtha*): A case report.**

2 **Abstract:**

3 Skin diseases are among the leading causes of non-fatal disease burden worldwide. In
4 Ayurveda, all skin disorders are classified under *Kushtha* Roga. *VipadikaKushtha*, one of its
5 types, is characterized by fissuring of palms and soles associated with pain, dryness, and
6 thickening of skin. An elderly female presented with gradually progressive thickening of the
7 plantar skin over both soles for 2 years, associated with deep fissures and severe pain. There
8 was no family history of similar illness. The patient had not responded to conventional
9 treatment including methotrexate, retinoids, and topical steroids. Based on clinical features,
10 the condition was diagnosed as *VipadikaKushtha*. The treatment protocol included internal
11 medications along with external therapies such as *Triphala* decoction wash, leech application,
12 and local application of *JatyadiGhrita*. After 12 weeks of Ayurvedic management, marked
13 improvement was observed in hyperkeratosis, fissuring, area of involvement, and pain, with
14 grading reduced from 3, 3, 3, 4 to 1, 0, 0, 0 respectively. This case highlights the potential of
15 Ayurvedic interventions in managing chronic, conventional treatment-resistant plantar
16 keratoderma, offering a safe and effective alternative approach for symptom relief and
17 improved quality of life.

18 Keywords: *JatyadiGhrita*, Leech therapy, Plantar keratoderma, *VipadikaKushtha*

19 **Introduction:**

20 Dermatitis refers to integumentary system disease which includes disease affecting skin, nail
21 and hair. The dermatoses affecting the palm and sole are one of the most difficult to
22 treat.[1] Various dermatoses affect the skin of palms and sole only, Palmoplantar
23 Keratoderma is one such type. Keratoderma is characterized by thickening of skin which may
24 be hereditary or acquired. Plantar keratoderma presents as thickened, hard skin over the soles
25 appearing yellowish, red or flaky, and may manifest in diffuse, punctate and focal pattern. It
26 can lead to pain, difficulty in walking, and sometimes secondary infections. Acquired
27 keratoderma has diverse aetiologies including:[2] Keratoderma climactericum, drug-
28 associated, malnutrition associated, systemic disease associated, malignancy-associated,
29 infectious and idiopathic cause. Conventional management mainly include, Emollients,
30 retinoids and corticosteroids. Ayurveda covers the most skin diseases under *KushthaRoga*
31 which are further classified into *Mahakushtha* and *KshudraKushtha*, depending on the

32 prognosis. Among these, *Vipadika*- a type of *KshudraKushtha*-closely corelates with plantar
33 keratodermawhich is characterized by painful fissures in palm and soles.[3]

34 Case description:

35 A72-year-old female presented with complaints of gradually progressing thickening of
36 plantar aspect of both feet and toes, associated with extreme pain from the past 2 years. She is
37 a house wife by occupation. The patient is non-diabetic and non-hypertensive with no history
38 of any chronic illness. There was no family history of similar illness. Her dietary habits
39 include frequent intake of spicy and unctuous food.She was involved in prolonged standing
40 and habitual squatting during household activities.

41 Clinical findings: On examination, marked hyperkeratosis was observed over bilateral soles
42 with yellowish scaling. Deep fissures with surrounding erythema were present. The patient
43 reported severe pain while walking, leading to significant functional limitation.

44 Ten-fold ayurveda clinical examination:Patient had *Vata-PittaPrakriti* (*Vata-Pitta* body
45 constitution), *Vata-KaphaVikriti* (*Vata-Kapha* dosha imbalance), *MadhyamaSara* (moderate
46 tissue excellence), *MadhyamaSamhanana* (moderate body build/compactness),
47 *MadhyamaSatmya* (moderate adaptability/habituation), *MadhyamaSatva* (moderate
48 psychological strength), *MadhyamaAharaShakti* (moderate digestive capacity),
49 *MadhyamaVyayamaShakti* (moderate physical capacity for exercise), *AvaraBala* (low
50 strength/immunity), and *Vaya: Vriddha* (old age/geriatric stage).

51 Treatment history: Initially the patient received treatment from the nearby primary health care
52 centres, where she was given methotrexate and topical steroids, but she got no relief. She
53 later consulted higher centres where a diagnosis of gradually progressive plantar keratoderma
54 was made. There she was prescribed a systemic retinoid (Acitrecin 25 mg once daily) along
55 with topical urea (20%). However, the response remained unsatisfactory, following which she
56 visited ayurvedic hospital for further treatment.

57 Timeline of development of symptoms: The patient presented to the outpatient department in
58 October 2025. A detailed history was obtained, and a chronological timeline of symptoms
59 progression was made which is presented in the table No.1.

60 Table No. 1- Timeline of symptom progression

Date	Symptoms
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June 2023 (2.5 years prior)	Mild roughness over plantar surface of bilateral soles
October 2023 (3-4 months later)	Gradual thickening of plantar skin of bilateral soles
March 2024 (5 months later)	Extension of thickening of skin to the toes
July 2024 (4 months later)	Development of yellowish colour over thickened areas
November 2024 (4 months later)	Development of superficial fissures over thickened skin
February 2025 (3 months later)	Deep fissures associated with pain and difficulty in walking
October 2025 (OPD visit)	Deep painful fissures, thickened yellow skin over bilateral plantar and toes with difficulty walking.

61 Diagnostic assessment:

62 The clinical diagnosis was established based on dermatological examination, which revealed
63 marked hyperkeratosis with yellowish scaling over pressure points below the toes and plantar
64 surfaces of both feet, along with deep painful fissures and a gradually progressive course.

65 Investigations: Complete blood count, Erythrocyte sedimentation rate, Liver Function test,
66 Kidney function test, Lipid profile, blood sugar were assessed. All reports were within normal
67 range.

68 Therapeutic intervention: The treatment aimed at softening the hyperkeratotic skin, reducing
69 thickness, promoting fissure healing, relieving pain, and improving functional
70 mobility. During the initial 4 weeks, the patient was administered oral medications along with
71 local washing of the feet using lukewarm *Triphala* decoction. The decoction was applied
72 gently using a syringe (without needle) for approximately 10 minutes daily. In the subsequent
73 4 weeks, oral medications were continued along with two sittings of *Jalaukavacharana*
74 (leech therapy) at an interval of 7 days. Two leeches were applied to each foot and allowed to
75 detach spontaneously after approximately 12–15 minutes. Post-procedure, the wound was
76 cleaned with *Lodhra* powder and bandaged. The same procedure was followed in the second
77 sitting also. In the final 4 weeks, oral medications were continued along with local
78 application of *Jatyadi Ghrita*. The medicated ghee was applied once daily, and the feet were

79 wrapped with a soft cotton cloth for 3–4 hours. The patient was advised to minimize
 80 movement during this period. The detailed therapeutic intervention planned is described in
 81 table no.2.

82 Table No.2: Intervention schedule

Time	Intervention	Dose	Frequency	Anupana (vehicle)
Day 0 (First visit)	<i>PanchatiktaGhrita Guggulu</i>	500 mg.	twice daily after meal	luke warm water
	<i>Khadirarishta</i>	15 ml.	twice a day after meal	luke warmwater
	<i>AvipattikarChurna</i>	10gm.	After meal in night	Hot water
	<i>Triphala</i> decoction	External wash		
Week 4	<i>KaishoreGuggulu</i>	500mg.	twice daily after meal	luke warm water
	<i>ManjishthadiKashaya</i>	15 ml.	twice daily before meal	luke warm water
	<i>ArogyavardhiniVati</i>	500mg.	twice daily after meal	luke warm water
	Leech application (twice with a gap of 7days)			
Week 8	<i>GandhakRasayana</i>	250mg.	twice daily after meal	luke warm water
	<i>ArogyavardhiniVati</i>	500mg	twice daily after meal	luke warm water

	<i>JatyadiGhrita</i>	Local application		
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84 Assessment criteria: An assessment scale was developed to assess changes before and after
85 treatment.

86 A. Hyperkeratosis Thickness

- 87 • 0- None
- 88 • 1- Mild roughness
- 89 • 2- Obvious thickening
- 90 • 3- Thick dense keratoderma
- 91 • 4- Massive plate-like hyperkeratosis

92 B. Fissuring / Skin Integrity

- 93 • 0- None
- 94 • 1- Superficial cracks
- 95 • 2- Painful fissures
- 96 • 3- Deep fissures ± bleeding
- 97 • 4- Hemorrhagic fissures / ulceration / infection

98 C. Area of Involvement

- 99 • 0- None
- 100 • 1- Pressure points only
- 101 • 2- <50% of sole
- 102 • 3- >50% of sole
- 103 • 4- Entire sole ± transgrediens

104 D. Symptoms / Functional Impact

- 105 • 0- None
- 106 • 1- Mild discomfort
- 107 • 2- Pain with prolonged walking
- 108 • 3- Gait/footwear affected
- 109 • 4- Daily activities limited

110 The patient showed significant improvement in hyperkeratosis, scaling, fissures, and pain
111 during walking over a period of 12 weeks of Ayurvedic treatment. Progressive clinical
112 improvement was observed at each follow-up visit. The detailed outcomes are presented in
113 Table 3.

114 Table No.3: Follow-up and outcome assessment

Time	Hyperkeratosis	Fissuring/ skin integrity	Area of involvement	Pain
Day 0 (First visit)	3	3	3	4
Week 4 (first follow up)	2	1	1	2
Week 8 (second follow up)	1	0	0	0

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116 Figure No.1: Before treatment images of both feet



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118 Figure No. 2: After treatment images of both feet



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121 **Discussion:**

122 The clinical presentation in this case suggests a probable diagnosis of keratoderma
123 climactericum (Haxthausen disease), which typically occurs after menopause and is
124 associated with hormonal changes, although its exact pathogenesis remains unclear. The
125 lesions characteristically begin over pressure-bearing areas of the soles and progress to
126 erythema, hyperkeratosis, and fissuring—features that were consistent with this case.[4]In
127 Ayurveda, the condition can be correlated with *Vipadika*, a type of *Kshudra Kushtha*,
128 characterized by painful fissures over the palms and soles, primarily due to vitiation of *Vata*
129 and *Kapha Dosha*. Although, all the three *Doshas* are involved in *Kushtha* treatment in
130 ayurveda is guided by predominant *Dosha* involvement.[5]In this case, a multimodal
131 Ayurvedic approach was adopted to correct *Dosha imbalance*, enhance wound healing, and
132 address chronic skin pathology.

133 *PanchatiktaGhritaGuggulu* is classically indicated in *Kushtha* and chronic skin disorders.[6]
134 Its *TiktaRasa*(bitter taste) and *Ghrita* base helps in pacification of vitiated *Pitta* and *Kapha*,
135 while *Guggulu* contributes due to its anti-inflammatory and wound-healing
136 properties.*Khadirarishta* is a fermented ayurvedic formulation that is indicated in skin
137 disorders[7] and is utilised in the treatment of various skin diseases. *AvipattikarChurna* was
138 given here to control the *PittaDosha* as well as to produce mild laxation and improve
139 digestion as impaired digestion may aggravate skin pathology. For local wound care, *Triphala*
140 decoction was used for washing the feet because of its well-known wound-healing, anti-
141 inflammatory, and astringent properties.[8] The cleansing action of *Triphala* supported
142 improved granulation, and helped maintain hygiene of the wound surface.The
143 *Kaishoreguggulu* is a polyherbal formulation containing purified resin *Guggulu* indicated in
144 all skin diseases and wounds.[9] Its anti-inflammatory and *Pitta-Rakta* alleviating properties
145 helps to control erythema here. *MahamanjishthadiKashaya* helps to control *Pitta* and
146 *RaktaDosha*, healing of wounds. *Manjishtha* is classically known for its blood purifying and
147 skin complexion enhancing effects, which are beneficial in chronic skin conditions with
148 associated ulceration.*ArogyavardhiniVati* is a herbo-mineral preparation that is indicated in
149 skin diseases and is used to eliminate excessive deranged *Pitta* and *Rakta*. Leech therapy is
150 well known for its wound healing properties. [10] The local removal of vitiated blood and
151 bioactive substances released by leech saliva may have contributed to reduction in
152 congestion, pain, and inflammation at the wound site.*GandhakRasayana* is a rejuvenation
153 agent which is indicated for all types of skin diseases.[11]*JatyadiGhrita* for local application

154 is indicated in painful ulcers.[12] Its antibacterial and anti-inflammatory properties support
155 wound cleansing and epithelialization. The wound-healing potential of *JatyadiGhrita* has
156 been found comparable to mupirocin hydrochloride in experimental studies, supporting its
157 role as an effective topical agent in chronic wounds.[13]Overall, the combined internal and
158 external therapies addressed both systemic imbalance and local wound pathology. The
159 observed clinical improvement suggests that an integrative Ayurvedic approach may be
160 beneficial in chronic skin diseases with ulcerative lesions. However, further controlled
161 clinical studies are required to validate these findings and establish standardized treatment
162 protocols

163 **Conclusion:**

164 This case demonstrates that plantar keratoderma can be effectively managed using an
165 Ayurvedic approach based on *Dosha* involvement. The patient, who was unresponsive to
166 conventional therapies including retinoids, methotrexate, and topical corticosteroids, showed
167 significant clinical improvement within three months of treatment. These findings suggest the
168 potential role of Ayurvedic management in chronic and treatment-resistant cases; however,
169 further controlled studies are required to substantiate these results.

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