



Case Study

## REVERSING CUTANEOUS MICROANGIOPATHY IN DIABETIC DERMOPATHY AS *PRAMEHA VYADHI UPADRAVA* THROUGH CLASSICAL AYURVEDIC *SHODHANA*

Devika Bhuva<sup>1\*</sup>, Saurabh Pravin Bhagat<sup>2</sup>, Anup Thakar<sup>3</sup>

\*1PhD Scholar, <sup>2</sup>PG Scholar, <sup>3</sup>Head, Department of Panchakarma, Institute of Teaching and Research in Ayurveda (ITRA), Jamnagar, Gujrat, India.

### Article info

#### Article History:

Received: 18-02-2026

Accepted: 22-03-2026

Published: 06-05-2026

#### KEYWORDS:

Diabetic dermopathy, Type 2 Diabetes, *Jalokavacharana*, *Prameha*, *Virechana Karma*.

### ABSTRACT

Diabetic dermopathy is the most common cutaneous manifestation of type 2 diabetes and it is considered a clinical marker of underlying microangiopathy. It presents as asymptomatic, well demarcated, hyperpigmented macules over the pretibial region and it is frequently associated with long standing diabetes and poor glycemic control, in Ayurveda, it may understand as *Prameha* with predominant involvement of *Rakta*, *Meda* and *Kleda*. **Case Report:** A 49-Year-old male patient with history of Type 2 Diabetes since last 5 years presented with multiple reddish brown, round to oval macules over both shin bone for 2 years. The lesions were asymptomatic, without sensory changes. Fasting blood glucose at presentation was 160mg/dl. Based on clinical features and history, a diagnosis of diabetic dermopathy was made. Patient underwent *Virechana Karma* followed by *Shamana* medicine and four sittings of *Jalokavacharana* at weekly intervals. Gradually decreasing pigmentation and reduction in lesion prominence were observed during follow-up. No new lesions developed, and blood glucose levels showed better control. **Conclusion:** The combined systemic and local Ayurvedic intervention were associated with clinical improvement in this case. This approach may be beneficial in managing diabetic dermopathy by addressing both metabolic and microvascular factors.


### INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycemia and progressive microvascular and macrovascular complications.<sup>[1]</sup> Cutaneous manifestations are frequently observed in diabetic patients and may serve as external indicators of underlying systemic involvement.<sup>[2]</sup> Diabetic dermopathy is recognized as the most common cutaneous manifestation of type 2 diabetes mellitus and typically presents as well-demarcated, hyperpigmented, atrophic macules over the pretibial region.<sup>[3]</sup> Although clinically asymptomatic and benign, its presence has been associated with long standing disease and diabetic microangiopathy.<sup>[4]</sup>

Previous studies have suggested a significant correlation between diabetic dermopathy and other microvascular complications, including retinopathy, nephropathy, and neuropathy.<sup>[5]</sup>

Despite its high prevalence, diabetic dermopathy remains largely under-reported in clinical literature, particularly in the context of integrative management approaches. From an Ayurvedic perspective, such manifestations may be understood as a complication of *Prameha*, wherein *Kleda* is considered the principal *Dushya* involved in pathogenesis.<sup>[6]</sup> Vitiation of *Rakta* and *Meda*, along with impaired microcirculation due to *Vata* involvement, may explain the characteristic localization over the lower limbs.<sup>[7]</sup>

Given the limited documentation on Ayurvedic management of diabetic dermopathy, this case report is presented to highlight a rational, *Samprapti* based therapeutic approach and its clinical outcome.

Access this article online	
Quick Response Code	
	<a href="https://doi.org/10.47070/ayushdharma.v13i2.2593">https://doi.org/10.47070/ayushdharma.v13i2.2593</a>
Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)	

**Patient information**

A 49-year-old male patient came to OPD of panchakarma at ITRA Jamnagar, with complaint of reddish, brown round-oval patches at bilateral lower limb below knee joint in the last 2 year. His medical history revealed that he is a known case of type-2 diabetes and for that he is on anti-glycemic agents for 5 years. Patient works in sedentary occupation. There was no family history of similar skin disorders. No major co-morbidity such as hypertension, ischemic heart disease, or renal disease. He had previously used topical depigmenting lotion for 6 months without improvement and discontinued it on his own. No history of tobacco, smoking, alcohol consumption, or substance abuse.

**Clinical Finding**

On general examination all the vitals were found within normal limits. On skin examination, pink,

reddish, brown coloured round-oval patches are present on bilateral lower limb below knee joint. On sensory examination, all the sensation like pain, temperature, touch, vibration are all intact and normal. Fasting blood glucose level was 160mg/dl (elevated). All other haematological parameter including ESR, CRP, LFT, serum uric acid was within normal limits.

Ayurvedic assessment using *Astavidha Pareeksha* revealed a pulse (*Naadi*) of 70 beats/min with *Pitta-Kapha* predominance; stool (*Mala*) was dry (*Ruksha*), urine (*Mutra*) was normal at four to five times per day, tongue (*Jihva*) was *Sama*, touch (*Sparsha*) and voice (*Shabda*) were normal (*Prakrita*), body build (*Akruti*) was obese (*Sthool*), and eyes (*Drik*) were normal (*Prakrita*). Based on the clinical presentation and laboratory diagnosis, a diagnosis of diabetes dermopathy was established.

**Table 1: Timeline of the events of the studied case**

S.No.	Date	Event / Clinical progression
1	5 years prior	The patient was diagnosed with diabetes mellitus type-2
2	March, 2024	Appearance of reddish, brown round-oval patches on pretibial region
3	30 <sup>th</sup> November, 2025	Patient came to <i>Panchakarma</i> OPD for first time and blood investigation was done
4	1 <sup>st</sup> October, 2025	Patient admitted to the IPD of <i>Panchakarma</i> . Ayurvedic treatment protocol was initiated
5	From 1 <sup>st</sup> October to 16 <sup>th</sup> October, 2025	Inpatient therapies, including internal medications and sequential external procedures administered ( <i>Virechana Karma</i> done)
6	16 <sup>th</sup> October, 2025	The patient reported moderate relief in symptoms and was discharged
7	31 <sup>st</sup> October, 2025	<i>Jalaukavacharan</i> (leech therapy) 1 <sup>st</sup> sitting on bilateral tibial region
8	7 <sup>th</sup> November, 2025	<i>Jalaukavacharan</i> (leech therapy) 2 <sup>nd</sup> sitting on bilateral tibial region
9	14 <sup>th</sup> November, 2025	<i>Jalaukavacharan</i> (leech therapy) 3 <sup>rd</sup> sitting on bilateral tibial region
10	21 <sup>st</sup> November, 2025	<i>Jalaukavacharan</i> (leech therapy) 4 <sup>th</sup> sitting on bilateral tibial region

**Table 2: List of internal medicines along with their duration and dose**

Date	Medicine	Dosage
17 <sup>th</sup> October – 30 <sup>th</sup> November	<i>Kaishor Guggulu</i>	2 tab- TDS - A/F
17 <sup>th</sup> October – 30 <sup>th</sup> November	<i>Manjisthadi Kashaya</i>	20ml – BD - B/F
17 <sup>th</sup> October – 30 <sup>th</sup> November	<i>Khadirastaka Kashaya</i>	20ml – BD - B/F
17 <sup>th</sup> October – 30 <sup>th</sup> November	<i>Amalaka Powder + Gandhak Rasayana</i>	4gm + 250mg – BD - A/F
17 <sup>th</sup> October – 30 <sup>th</sup> November	<i>Jatyadi oil</i>	QS
1 <sup>st</sup> November – 30 <sup>th</sup> November	<i>Lepa</i> application <i>Manjishtha Powder</i> - 2 part <i>Sariva Powder</i> - 1 part <i>Lodhra Powder</i> - 1 part <i>Amalaka Powder</i> - 1 part <i>Haridra Powder</i> - 1 part	QS with milk- OD

**Table 3: Timeline of therapies**

Procedures		Medicine used	Duration
Virechana Karma (purgation therapy)	<i>Deepana-Pachana</i>	<i>Trikatu Powder</i> - 3gm BD - B/F	01 – 03 October, 2025
	<i>Shodhanartha Snehapana</i> (internal oleation)	<i>Dhanwantara Ghrita</i> (medicated ghee) Day 1- 30ml Day 2- 60ml Day 3- 100ml Day 4- 130ml Day 5- 160ml	04 – 08 October, 2025
	<i>Sarvanga Abhyanga</i> (full body oil massage) And <i>Bashpa Swedana</i> (steam fomentation)	<i>Bala Taila</i> - QS	09 – 12 October, 2025
	<i>Virechana</i> (purgation) – 16 <i>Vega</i> (natural urges)	<i>Trivritta Avaleha</i> – 100 gm <i>Triphala Kwatha</i> – 50 ml	12 <sup>th</sup> October, 2025
	<i>Samsarjana Krama</i> (post therapy dietary regimen for revival)	As per <i>Shuddhi</i> (purification)	12 – 16 October, 2025
<i>Jalaukavacharana</i> (leech therapy)			
1 <sup>st</sup> sitting –			31 <sup>st</sup> October, 2025
2 <sup>nd</sup> sitting –			7 <sup>th</sup> November, 2025
3 <sup>rd</sup> sitting –			14 <sup>th</sup> November, 2025
4 <sup>th</sup> sitting –			21 <sup>th</sup> November, 2025

**Diagnostic assessment**

Diagnosis of diabetes dermopathy was established based on combination of clinical history, laboratory findings and current symptomatology. Patient is known case of Type 2 diabetes for 5 years with uncontrolled serum blood glucose level. The patches mainly on pretibial region with dry skin and no history of itching, pain and there is no any sensory deficit. All these finding suggesting diabetes dermopathy as diagnosis.

**Therapeutic intervention**

Internal medications were administered after *Virechana Karma* till follow-up as mentioned in Table 2. Procedures done for the treatment are mentioned in Table 3.

**Follow-up and outcome**

Following the Ayurvedic treatment protocol, the patient with diabetes dermopathy experienced significant relief in his disease related symptoms. Reddish-brown round oval patches on pretibial region were notably reduced. At 1 month of follow-up, the patient continued to report sustained symptomatic improvement and there is no appearance of new patches and patient blood sugar level are within controlled limit. These findings demonstrate the effectiveness of Ayurvedic interventions in managing the symptoms of diabetes dermopathy.

	
<p>The patient presented with multiple hyperpigmented, oval macular lesions over the bilateral anterior tibial region [Figure 1].</p>	<p>The patient presented with multiple hyperpigmented, oval macular lesions over the bilateral posterior tibial region [Figure 2].</p>
	
<p>At the end of treatment, marked clinical improvement with significant lighting of lesions was noted at anterior tibial region [Figure 3].</p>	<p>At the end of treatment, marked clinical improvement with significant lighting of lesions was noted at posterior tibial region [Figure 4].</p>

**DISCUSSION**

Diabetic dermopathy is considered a cutaneous marker of diabetes related microangiopathy, oxidative stress, and chronic low-grade inflammation.<sup>[8]</sup> Persistent hyperglycemia leads to endothelial dysfunction, increased reactive oxygen species, and inflammatory cytokine release, contributing to impaired dermal perfusion and altered skin repair mechanisms.<sup>[9]</sup> *Virechana* may helpful in this condition by reducing systemic inflammation and improving metabolic regulation, which are main factor of diabetic microvascular complications.<sup>[10]</sup> Studies on *Shodhana* therapies have demonstrated improvement in inflammatory and metabolic markers, suggesting a potential role in restoring endothelial function and

reducing oxidative damage.<sup>[11]</sup> By modulating inflammation and metabolic stress, *Virechana* may indirectly improve dermal microcirculation and tissue repair, thereby contributing to the clinical improvement of diabetic dermopathy. <sup>[12]</sup> In *Prameha*, *Snehapana* aids in correcting *Dhatvagni Mandya* and reducing *Kleda*. From a contemporary viewpoint, medicated ghee (*Dhanvantra Ghrita*) may contribute antioxidant and anti-inflammatory effects, supporting improved metabolic regulation and tissue perfusion.<sup>[13]</sup> *Virechana* is indicated in *Prameha* when *Pitta-Rakta-Meda Dushti* and circulating *Madhura-Kleda* predominate. *Virechana* acts at the level of *Dhatvagni* correction, elimination of excess *Drava-Kleda* and

unutilized *Sneha* from circulation.<sup>[14]</sup> *Langhana-Lekhana* and *Virechana* are essential where *Guru-Snigdha Kleda* accumulates, supporting the use of *Virechana* in chronic cutaneous complications of *Prameha*.<sup>[15]</sup> *Raktamokshana* is a prime therapy for *Rakta Pradoshaja Vikara*, particularly when skin manifestations are localized and chronic. Removal of *Dushta Rakta* directly reduces local *Kleda* burden and improves microvascular flow. This aligns with modern understanding, where improving microcirculation reduces progression of diabetic skin lesions.<sup>[16]</sup> *Jalaukavacharana* may exert therapeutic benefits through its well documented effects on microcirculation and local inflammation. Leech saliva contains biologically active substances such as hirudin, which possess anticoagulant and microcirculation enhancing properties.<sup>[17]</sup> Local bloodletting facilitated by leech application improves capillary perfusion and reduces venous congestion, thereby counteracting diabetes-induced microvascular ischemia.<sup>[18]</sup> Additionally, leech-derived bioactive molecules inhibit inflammatory mediators and support dermal healing.<sup>[19]</sup> Improved oxygen delivery and nutrient supply to affected skin regions enhance fibroblast activity and keratinocyte turnover, supporting gradual lesion resolution.<sup>[20]</sup> From a modern clinical standpoint, *Jalaukavacharana* is key pathogenic mechanisms of diabetic dermopathy, including endothelial dysfunction and local inflammation.<sup>[21]</sup> *Shamana* therapy was administered to maintain *Dosha* and prevent recurrence. *Kaishor Guggulu*, *Manjisthadi Kashaya*, and *Khadirastaka Kashaya* are traditionally indicated in *Rakta Dushti* and chronic inflammatory skin conditions.<sup>[22]</sup> These formulations possess documented anti-inflammatory, antioxidant, and microcirculation-enhancing properties, which may be beneficial in diabetic dermopathy. *Amalaka* and *Gandhak Rasayana* contribute *Rasayana* effects by supporting tissue rejuvenation, enhancing antioxidant defense, and improving metabolic homeostasis.<sup>[23]</sup>

Thus, the combined application of *Virechana*, *Raktamokshana* and *Shamana Aushadha* follows the classical principle of treating both systemic *Kleda-Meda-Rakta Dushti* and localized *Twaka* manifestation in chronic *Prameha* complications.

## CONCLUSION

Diabetic dermopathy can be understood as a *Rakta-Meda-Kleda* dominant complication of *Prameha* with significant involvement of *Vyana Vata* and peripheral *Srotas*. *Virechana* corrects systemic *Dhatvagni-Mandya* and eliminates circulating *Kleda*, while *Raktamokshana* directly addresses *Rakta Dushti* at the level of *Twaka*. Together, they offer a *Samprapti*-based, rational Ayurvedic approach for the management of diabetic dermopathy.

**Declaration of patient consent:** Written informed consent was obtained from patient for treatment and publication of clinical details and photographs. Patient identity has been kept confidential.

## REFERENCES

1. Bologna JL, Schaffer JV, Cerroni L. *Dermatology*. 4<sup>th</sup> ed. Philadelphia: Elsevier; 2018. p. 1121-3.
2. Lima AL, Illing T, Schliemann S, Elsner P. Cutaneous manifestations of diabetes mellitus: a review. *Am J Clin Dermatol*. 2017; 18(4): 541-53.
3. Romano G, Moretti G, Di Benedetto A, Giofrè C, Di Cesare E, Russo G, et al. Skin lesions in diabetes mellitus: prevalence and clinical correlations. *Diabetes Res Clin Pract*. 1998; 39(2): 101-6.
4. Shemer A, Bergman R, Linn S, Kantor Y, Friedman-Birnbaum R. Diabetic dermopathy and internal complications in diabetes mellitus. *Int J Dermatol*. 1998; 37(2): 113-5.
5. Morgan AJ, Schwartz RA. Diabetic dermopathy: a subtle sign with grave implications. *J Am Acad Dermatol*. 2008; 58(3): 447-51.
6. Agnivesha. *Charaka Samhita (Chikitsasthana 6-Prameha Chikitsa)*. Acharya YT, editor. Reprint ed. Varanasi: Chaukhambha Orientalia; 2011. p. 447.
7. Sushruta. *Sushruta Samhita (Sutrasthana & Nidanasthana)*. Acharya YT, editor. Reprint ed. Varanasi: Chaukhambha Orientalia; 2014. p. 268.
8. Murphy-Chutorian B, Han G, Cohen SR. Diabetic dermopathy: a subtle sign with grave implications. *J Am Acad Dermatol*. 2013; 68(2): 341-6.
9. Brownlee M. The pathobiology of diabetic complications: a unifying mechanism. *Diabetes*. 2005; 54(6): 1615-25.
10. Tripathi JS, Pandey PK, Dwivedi R. Clinical evaluation of *Virechana karma* in metabolic disorders with special reference to diabetes mellitus. *Ayu*. 2013; 34(2): 181-6.
11. Bhatt SK, Shukla VD, Thakar AB. Effect of Shodhana therapy on inflammatory and metabolic markers in chronic disorders. *Ayu*. 2011; 32(4): 467-72.
12. Forbes JM, Cooper ME. Mechanisms of diabetic complications. *Physiol Rev*. 2013; 93(1): 137-88.
13. Sharma H, Chandola HM. Ayurvedic concept of oleation therapy and its probable biochemical basis. *J Ayurveda Integr Med*. 2011; 2(2): 65-70
14. Vagbhata. *Ashtanga Hridaya (Nidana Sthana & Chikitsa Sthana - Prameha Adhyaya)*. Reprint ed. Varanasi: Chaukhambha Surbharati Prakashan; 2019. p. 502-510.
15. Vagbhata. *Ashtanga Hridaya (Nidana Sthana & Chikitsa Sthana - Prameha Adhyaya)*. Reprint ed.

- Varanasi: Chaukhambha Surbharati Prakashan; 2019. p. 654–662.
16. Boulton AJM, Armstrong DG, Kirsner RS, et al. Diagnosis and management of diabetic foot complications. *Diabetes Care*. 2008; 31(8): 1679–1685.
  17. Baskova IP, Zavalova LL. Proteinase inhibitors from the medicinal leech *Hirudo medicinalis*. *Biochemistry (Mosc)*. 2001; 66(7): 703–14.
  18. Michalsen A, Roth M, Dobos G. Medicinal leech therapy. *Am J Med*. 2007;120(10):878–85.
  19. Abdullah S, Dar LM, Rashid A, Tewari A. Hirudotherapy in wound healing. *Int Wound J*. 2012; 9(4): 432–7.
  20. Singh AP. Medicinal leech therapy (hirudotherapy): a brief overview. *Complement Ther Clin Pract*. 2010; 16(4): 213–5.
  21. Hotamisligil GS. Inflammation and metabolic disorders. *Nature*. 2006; 444(7121): 860–7.
  22. Sharma PV. *Dravyaguna Vijnana*. Vol. 2. 4<sup>th</sup> ed. Varanasi: Chaukhambha Bharati Academy; 2005. p. 450–455.
  23. Acharya YT, editor. *Charaka Samhita of Agnivesha, Rasayana Adhyaya*. Reprint ed. Varanasi: Chaukhambha Orientalia; 2011. p. 377–383

**Cite this article as:**

Devika Bhuvra, Saurabh Pravin Bhagat, Anup Thakar. Reversing Cutaneous Microangiopathy in Diabetic Dermopathy as Prameha Vyadhi Upadrava Through Classical Ayurvedic Shodhana. *AYUSHDHARA*, 2026;13(2):403-408. <https://doi.org/10.47070/ayushdhara.v13i2.2593>

**Source of support: Nil, Conflict of interest: None Declared**

**\*Address for correspondence**

**Dr. Devika Bhuvra**

PhD Scholar,  
Panchakarma Department,  
Institute of Teaching and Research in  
Ayurveda (ITRA) Jamnagar, Gujrat.  
Email: [devikabhuvra@gmail.com](mailto:devikabhuvra@gmail.com)

Disclaimer: AYUSHDHARA is solely owned by Mahadev Publications - A non-profit publications, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. AYUSHDHARA cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of AYUSHDHARA editor or editorial board members.

