

**SUCCESSFUL AYURVEDIC MANAGEMENT OF A DIABETIC FOOT ULCER
(WAGNER GRADE II): A CASE REPORT****Dr. Ancitta Jose*¹, Dr. Maheshkumar E.S.²**¹Final Year PG Scholar, Department of Shalya Tantra, SDM College of Ayurveda and Hospital, Hassan, Karnataka-573201, India.²Professor and Head, Department of Shalya Tantra, SDM College of Ayurveda and Hospital, Hassan, Karnataka-573201, India.***Corresponding Author: Dr. Ancitta Jose**

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ABSTRACT

Diabetic foot ulcers (DFUs) are a major complication of diabetes mellitus, often leading to infection and amputation. Conventional treatments have limitations, prompting exploration of Ayurvedic approaches. A 59-year-old Indian male with a 30-year history of type 2 diabetes mellitus and hypertension presented with a painful, non-healing Wagner Grade II ulcer on the right plantar forefoot. Local wound care involved daily cleansing with Panchavalka Kwatha and dressing with Ropana Ghrita. Systemic treatment included Aragwadadi Kashaya, Mehabhaya Kashaya, Nimbadi Guggulu, and a rejuvenative powder for 4 weeks, alongside diabetes management. The ulcer healed completely in 30 days, with resolution of pain, swelling, and discharge. The patient resumed normal ambulation without complications. This case highlights the efficacy of Sushruta's Shashti Upakrama principles (Shodhana and Ropana) in DFU management, offering a holistic alternative to antibiotics.

KEYWORDS: Diabetic foot ulcer, Ayurveda, Dushta Vrana, Shodhana, Ropana, Wagner classification.**INTRODUCTION**

Diabetic foot ulcers (DFUs) affect 15% of diabetic patients lifetime, with 6% developing infections, making diabetes the leading cause of non-traumatic lower extremity amputations worldwide. Risk factors include longstanding diabetes, insulin dependence, obesity, alcoholism, and smoking.^[1] Chronic hyperglycemia impairs cellular nutrition, oxygenation, immunity, and promotes neuropathy, delaying healing.^[2]

Peripheral neuropathy causes sensory loss, allowing unnoticed trauma to progress to ulcers. Of DFUs, 60–80% heal, 10–15% persist, and 5–24% lead to amputation; neuropathic ulcers heal slowest. Classified by pathophysiology: neuropathic (35%; warm, callused, weight-bearing), ischemic (15%; painful, necrotic, toe tips), and neuro-ischemic (50%; cool, high-infection risk).^[3]

Modern management uses antibiotics, anti-inflammatories, and dressings but risks adverse effects

and antibiotic resistance. Ayurveda, per Sushruta Samhita, classifies wounds as Dushta Vrana (infected), managed via Saptopakramas (e.g., Shodhana for cleansing, Ropana for healing). For Madhumeha (diabetes)-related wounds, this holistic approach enhances innate healing without indiscriminate antibiotics.^[4]

Patient Information

A 59-year-old Indian male from Piriapatna, Mysore, Karnataka, presented to the Shalya Tantra OPD at SDM College of Ayurveda and Hospital on April 8, 2025. He reported a non-healing wound on the right plantar forefoot for 20 days, with burning pain and swelling to the mid-foot and lower leg.

Medical History: Type 2 diabetes mellitus (30 years, insulin-dependent), hypertension (30 years). No surgical history (vascular/orthopedic). Social history: Non-smoker, occasional alcohol, farmer by occupation. Family history: Diabetes in first-degree relatives.

Written informed consent was obtained. The study adhered to Helsinki Declaration principles; institutional ethics approval was granted (Ref: SDM/AYU/2025/001).

Clinical Findings

Local Examination: Wagner Grade II ulcer (2 × 3 cm) on lateral plantar forefoot with slough, serosanguinous discharge (5–6 mL/12 hours), surrounding induration, and Grade II edema (dorsal foot/lower leg).

Vascular/Neurological: Palpable dorsalis pedis/posterior tibial pulses; stocking-distribution sensory loss (monofilament test).

Systemic: BMI 28 kg/m² (obese); random blood sugar 280 mg/dL.

Baseline Investigations

Table 01: Findings of Baseline Investigations.

| Parameter | Value (Admission: 8/4/2025) |
|-------------------|-----------------------------|
| HbA1c | 9.2% |
| CRP | 45 mg/L |
| ESR | 60 mm/hr |
| Blood Sugar (RBS) | 280 mg/dL |
| WBC Count | 12,500/ μ L |

Timeline

Table 02: Timeline of the Treatment

| Date | Key Events/Interventions | Wound Status/Outcomes |
|------------------|---|--|
| March 19, 2025 | Ulcer onset (unnoticed trauma) | 2 × 3 cm, painful, discharge begins |
| April 8, 2025 | Admission; baseline investigations | Wagner Grade II, edema, slough |
| April 8–21, 2025 | IPD: Local care + systemic meds + diabetes Rx | Pain ↓, discharge ↓ |
| Week 2 (Apr 22) | Marked improvement; discharged on meds + pathya | Edema resolved; size 1.5 × 2 cm |
| Week 3 (Apr 29) | OPD follow-up | Granulation; size 1 × 1.5 cm |
| Week 4 (May 6) | Complete closure; normal ambulation | Healed; no pain/swelling |
| June 6, 2025 | 1-month follow-up | Scar intact; RBS 140 mg/dL, HbA1c 7.8% |

Diagnostic Assessment

Correlated to Madhumehajanya Dushta Vrana (Sushruta): Kashta Sadhya (difficult-to-heal) due to Vata-Medodhatu vitiation, lower extremity location, and doshic imbalance. Wagner Grade II confirmed clinically (deep ulcer to tendon, no abscess/osteomyelitis per X-ray).^[5]

antibiotics used. Patient advised pathya (light diet, warm water, avoid curd/sweets) and apathya (heavy/oily foods, day sleep).

Local (Daily IPD/OPD)

Prakshalana: Panchavalkala Kwatha wash.
Dressing: Ropana Ghrita application.

Therapeutic Intervention

Dual approach: Sthanika Chikitsa (local) and Abhyantara Chikitsa (systemic), per Shashti Upakramas. No

Table 03: Management Protocol.

| Formulation | Dosage | Rationale |
|--|-----------------------------|----------------------------------|
| Aragwadadi Kashaya | 15 mL BD | Raktaprasadana, Kusthaghna |
| Mehabhaya Kashaya | 15 mL TID | Mehaghna, Kledahara |
| Nimbadi Guggulu | 2 tabs BD | Anti-inflammatory, antimicrobial |
| Rasayana Prayoga (Ashwagandha + Shatavari + Amla + Kapikacchu, 50g each) | 5 g (1 tsp) BD (warm water) | Balya, Rasayana |

Concurrent Diabetes Management: Inj. Huminsulin MixTard 12-0-12 IU S/C; Tab. Metformin 500 mg 1-0-1.

Follow-up and Outcomes

Complete healing by Day 30 (May 6, 2025). Pain/swelling resolved; healthy scar formed. 1-month follow-up (June 6): No recurrence, comfortable ambulation, improved glycemic control (HbA1c 7.8%) (Table 04 and Figure 01).

Table 04: Investigations at the Discharge (May 6, 2025):

| Parameter | Value |
|-----------|----------------|
| CRP | 5 mg/L |
| ESR | 15 mm/hr |
| RBS | 140 mg/dL |
| WBC | 7,200/ μ L |

Patient Perspective: "The burning pain vanished in 2 weeks; I walked freely after a month without surgery or

heavy drugs."



Figure 01: Timeline of the Prognosis.

DISCUSSION

This DFU exemplifies Sushruta's Madhumehajanya Dushta Vrana: Vata-Pitta-Medodhatu vitiation forms Pidaka, progressing to non-healing ulcers in lower extremities due to gravity, poor circulation, and doshic imbalance—mirroring modern neuropathic DFU pathology.^[6,7]

The protocol's success stems from synergistic drug actions across Shodhana (cleansing) and Ropana (regeneration), improving the wound "soil" for innate healing, unlike modern focus on bacterial load alone.

Local Mechanisms

Panchavalkala Kwatha (Cleansing): Its Kashaya Rasa provides Stambhana (discharge control) and Vranashodhana (slough removal, pH neutralization), reducing infection and Kleda without cytotoxicity.^[8] Ropana Ghrita (Regeneration): Lipophilic ghee base enables deep penetration of Yashtimadhu (anti-inflammatory, demulcent) and Manjistha (antimicrobial, blood-purifying), fostering granulation and epithelialization.^[9]

Systemic Mechanisms

Mehabhaya Kashaya: Targets Madhumeha root by regulating glucose, Kapha-Pitta shamana, and Kledahara (moisture reduction), addressing hyperglycemia's healing barrier. Aragwadadi Kashaya/Nimbadi Guggulu: Raktaprasadana and Lekhana reduce inflammation/infection. Rejuvenative Powder: Balya-Rasayana herbs (e.g., Ashwagandha for strength, Amla

for antioxidants) support tissue repair.^[10] Pathya-Apathya adherence optimized doshic balance, enhancing outcomes. Healing in 30 days outperforms typical DFU timelines (12–20 weeks). Avoiding antibiotics minimized resistance risks.

Limitations: Single case; lacks controls/imaging (e.g., MRI for osteomyelitis). No long-term (6-month) data. Strengths: Cost-effective (~INR 2,000), holistic, patient-centered.

CONCLUSION

Ayurveda's Shodhana-Ropana framework effectively healed this Wagner Grade II DFU, underscoring its role in antibiotic-sparing DFU care.

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