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MANAGEMENT OF DUSTHAVRUNA (NONHEALINGWOUND) BY SUPER HEAL ZN- AYURVEDA MEDICINE

ABSTRACT:

Chronic non-healing wounds remain a significant therapeutic concern, particularly in individuals affected by diabetes mellitus and vascular insufficiency. Classical Ayurvedic literature, especially the surgical treatise attributed to Sushruta, provides a detailed framework for wound care under the doctrine of purification and tissue restoration. In Ayurvedic terminology, infected or delayed-healing ulcers are described as Dushta Vrana, a condition marked by persistent discharge, tissue necrosis, foul odour, inflammation, and failure of timely closure.

This report presents three cases of lower-limb ulcers of prolonged duration that had not responded to conventional wound management. The cohort included an elderly female with a large full-thickness diabetic ulcer, a post-amputation chronic wound in a male patient with diabetes, and a six-month-standing diabetic leg ulcer in another male patient. All cases demonstrated clinical features of chronic inflammatory pathology.

The therapeutic strategy consisted of daily cleansing with Triphala decoction, topical application of Super Heal ZN medicated gauze, and systemic administration of Triphala Guggulu, GandhakaRasayana, and Mahamanjishtadi Kashaya for 40 days. Wound progression was quantitatively monitored using the Bates-Jensen Wound Assessment Tool at predefined intervals.

A consistent decline in wound severity was observed across all cases. The average BWAT score decreased from 52.33 ± 4.51 at baseline to 13.33 ± 0.58 by Day 40, corresponding to a 74.39% mean reduction ($p < 0.01$). Progressive granulation, epithelial advancement, and resolution of discharge were noted without any adverse reactions. These findings suggest that an integrative Ayurvedic protocol may offer a safe and potentially effective alternative in the management of chronic non-healing ulcers. Controlled trials are required to validate these observations.

INTRODUCTION:

A wound represents a breach in anatomical continuity that may involve skin, subcutaneous tissue, or deeper structures. Under optimal physiological conditions, tissue repair follows a coordinated sequence comprising inflammation, cellular proliferation, matrix deposition, and remodelling. However, when local or systemic disturbances interfere with these mechanisms, the healing trajectory becomes prolonged, resulting in chronic ulceration. Systemic conditions such as diabetes mellitus, vascular compromise, malnutrition, and long-term steroid use are well-established contributors to delayed wound repair. Persistent microbial colonization, impaired angiogenesis, and dysregulated inflammatory responses further perpetuate chronicity.

दुर्गन्धःपूयमांसश्च शूलवानतविदनः ।

श्यावो रक्तस्तथा पीतो दुष्टो ज्ञेयस्तु स व्रणः ॥

दीर्घकालानुबन्धी च शोफोष्णरुजसंयुतः ।

कण्डूमान्त्रस्तथा स्रावी दुष्टव्रण इतस्मृत ॥ Ref 1

दुष्टं स्राव्यतयित् पूयं दुर्गन्धं चातविदनम् ।

व्रणवैषम्ययुक्तं च तद्व्रणं दुष्टमुच्यते ॥

दीर्घकालस्थितिं यच्च न रोहतचि यत्नतः ।

दोषदुष्टं तु तद्व्रणं दुष्टव्रणमितिस्मृतम् ॥ Ref 2

Traditional Ayurvedic texts categorize wounds into acute (Sadyovrana) and chronic or contaminated types (Dushta Vrana). Chronic wounds are described as exhibiting discoloration, persistent discharge, malodour, induration, and delayed contraction.

Management principles emphasize two sequential strategies: elimination of pathogenic factors (Shodhana) and stimulation of regenerative processes (Ropana).

Given the growing incidence of diabetic foot ulcers and post-amputation wound complications, there is increasing interest in integrative therapeutic approaches. The

present case series was undertaken to evaluate the clinical outcome of chronic lower-limb ulcers treated with a combined regimen involving topical cleansing, medicated dressing, and systemic herbal support, with objective monitoring using a standardized wound assessment tool.

Background: The break/loss/rupture of continuity of body tissue or part of body is called Vrana (Wound). Normally wounds are healed by itself if kept clean. Contamination of Bacteria, insufficient blood supply, tissue tension and radiation are the local factors for delay in wound healing. Whereas general factors include malnutrition, malignant disease, diabetes and long-term consumption of steroids and cytotoxic drugs.

Acharya Shushruta mentioned 60 upakrama for management of Vrana. Acharya Charaka classified vrana into 20 types among them dushtavrana is one of them.

MATERIALS AND METHODS:

Local Treatment:

- Daily wound irrigation with Triphala Kwatha
- Super Heal ZN medicated gauze dressing
- Surgical debridement when required

Internal Medication (40 Days):

- Triphala Guggulu – 500 mg twice daily
- Gandhaka Rasayana – 500 mg twice daily
- Mahamanjishtadi Kashaya – 10 ml thrice daily

OVERALL CASE SERIES OBSERVATION:

In this case series, all three patients were diagnosed with Dushta Vrana (chronic non-healing wounds), occurring in the background of diabetes mellitus and varying degrees of vascular compromise. Chronic wounds in such patients are typically characterized by

persistent infection, delayed granulation, impaired epithelialization, and prolonged inflammation due to poor glycemic control, neuropathy, and reduced peripheral circulation. Despite these known challenges, a uniform pattern of favourable healing response was observed in all cases following the instituted line of management.

1. Significant Reduction in Infection and Slough

At presentation, all wounds showed classical features of Dushta Vrana such as purulent discharge, foul odour, unhealthy slough, inflamed margins, and signs of chronic infection. After initiation of treatment based on Shodhana (cleansing and purification) principles, there was marked reduction in local infection, decrease in microbial load, and progressive removal of necrotic tissue. Slough separation occurred gradually without aggressive surgical debridement, indicating effective wound bed preparation. The foul smell and inflammatory signs subsided within the early phase of treatment, suggesting control of local sepsis.

2. Early and Healthy Granulation Tissue Formation

One of the key indicators of wound healing is the appearance of healthy granulation tissue. In all three cases, red, well-vascularized granulation tissue began to appear in the wound bed within the initial weeks of therapy. This indicated restoration of local microcirculation and improved tissue regeneration. The wounds transitioned from unhealthy, slough-covered beds to clean, viable tissue capable of supporting further healing.

3. Progressive Epithelialization

Following adequate wound cleansing and granulation, progressive epithelialization was observed from the wound margins. The wound edges became healthier, inflammation reduced, and gradual contraction of wound size was documented. The epithelial migration occurred in a steady and organized manner, ultimately leading to closure of the ulcer surface.

4. Reduction in Pain and Discharge

Pain and persistent discharge were common complaints in all three patients at baseline. As infection subsided and healing progressed, there was noticeable reduction in both pain

intensity and wound exudate. This not only indicated resolution of inflammation but also significantly improved patient comfort and quality of life during the treatment period.

5. Absence of Treatment-Related Complications

Importantly, no adverse reactions, allergic manifestations, secondary infections, or systemic complications were observed during the treatment course. Considering that all patients had comorbid conditions such as diabetes and vascular compromise, the absence of complications highlights the safety and tolerability of the adopted therapeutic approach.

6. Consistent Healing Within 40 Days

Despite differences in wound size, duration, and severity, all three cases demonstrated consistent and satisfactory healing within approximately 40 days. Chronic diabetic wounds often require prolonged management extending over several months; therefore, achieving uniform healing within this timeframe indicates a clinically significant outcome.

Therapeutic Interpretation

The observed outcomes can be attributed to the combined application of Shodhana (cleansing and purification) and Ropana (healing and tissue regeneration) principles of Ayurveda.

- Shodhana helped in removing slough, controlling infection, reducing inflammation, and preparing the wound bed for healing.

- Ropana facilitated tissue regeneration, enhanced granulation, supported epithelialization, and promoted wound contraction.

The use of Super Heal ZN dressing provided an optimal local wound environment conducive to healing, while classical Ayurvedic internal medications supported systemic correction, improved metabolic balance, enhanced immunity, and aided glycemic regulation.

Conclusion from Case Series Observation

Collectively, the findings from these three cases suggest that an integrative Ayurvedic

wound management approach based on Shodhana and Ropana principles, combined with Super Heal ZN dressing and appropriate internal medications, is clinically effective, safe, and capable of achieving predictable healing outcomes in chronic diabetic and vascular-compromised wounds within a relatively short duration.

ASSESSMENT TOOL:

COMPARATIVE BWAT ANALYSIS (CASE SERIES)

Assessment Tool Used: Bates-Jensen Wound Assessment Tool (BWAT)

Score Range: 13 (Best) – 65 (Worst)

Table 1. Total BWAT Score Comparison (Day 0-40)

Number of Days

Case I

Case II

Case III

Day 0

57

52

48

Day 10

44

40

38

Day 20

33

29

27

Day 30

20

18

16

Day 40

13

14

13

Table 2.Total BWAT Score Comparison

Case

Initial Score

Final Score

Total Reduction

% Improvement

Case I

57

13

44

77.19%

Case II

52

14

38

73.07%

Case III

48

13

35

72.91%

Table 3.TotalBWAT Score Comparison

Parameter

Case I

Case II

Case III

Size Reduction

Marked

Moderate to Marked

Marked

Depth Reduction

Significant

Significant

Moderate

Necrotic Tissue

Complete removal byDay 30

Minimal by Day 30

Absent by Day 30

Exudate

Controlled by Day 20

Controlled by Day 20

Minimal by Day 20

Granulation Tissue

Healthy by Day 20

Healthy by Day 20

Healthy by Day 20

Epithelialization

Near complete Day 40

Near complete Day 40

Near complete Day 40

STATISTICAL OBSERVATION (CASE SERIES LEVEL)

- Mean Baseline BWAT Score: 52.33
- Mean Final BWAT Score (Day 40): 13.33
- Mean Percentage Reduction: 74.39%
- Standard deviation shows minimal inter-case variability, indicating consistent treatment response.

CLINICAL INTERPRETATION:

The comparative BWAT data across three independent cases of Dushta Vrana (chronic non-healing wounds) demonstrates:

- Consistent wound improvement pattern
- Effective infection control
- Accelerated granulation and epithelialization
- Comparable healing response despite variation in wound size and comorbidities

The steady downward trend across all cases supports the therapeutic efficacy of:

- TriphalaKwathaPrakshalana
- Super Heal ZN medicated dressing
- TriphalaGuggulu
- GandhakaRasayana
- Mahamanjishtadi Kashaya

THE COMPARATIVE HEALING CURVE GRAPH DEMONSTRATES:

All three cases demonstrated:

- A steady and progressive decline in BWAT scores across all three cases from Day 0 to Day 40.
- The steepest decline occurring between Day 10 and Day 30, indicating active wound healing phase.
- A plateau effect approaching Day 40, corresponding to near-complete healing.
- Parallel downward trends, suggesting consistent therapeutic response across cases.

Statistical Analysis

Wound healing progression was evaluated using the Bates-Jensen Wound Assessment Tool (BWAT). BWAT scores range from 13 (best wound status) to 65 (most severe wound condition). Statistical analysis was performed using descriptive statistics and paired comparisons between baseline and Day 40 scores.

Table 4. Comparative Statistical Summary of BWAT Scores (Day 0–Day 40)

Variable

Case I

Case II

Case III

Mean \pm SD

Baseline BWAT (Day 0)

57

52

48

52.33 \pm 4.51

Day 10

44

40

38

40.67 ± 3.06

Day 20

33

29

27

29.67 ± 3.06

Day 30

20

18

16

18.00 ± 2.00

Day 40

13

14

13

13.33 ± 0.58

Absolute Reduction

44

38

35

39.00 ± 4.58

Percentage Reduction (%)

77.19%

73.07%

72.91%

74.39 ± 2.39

INFERENCEAL STATISTICAL ANALYSIS

A paired comparison between baseline and Day 40 BWAT scores demonstrated:

- Mean difference: 39.00 ± 4.58
- Percentage reduction: 74.39%
- Effect size (Cohen's d): 8.51 (very large effect)
- 95% Confidence Interval (mean difference): 27.6 – 50.4
- Paired t-test (two-tailed): $p < 0.01$

The statistically significant reduction in BWAT scores indicates substantial improvement in wound severity over the 40-day treatment period.

Results Statement:

The mean BWAT score significantly decreased from 52.33 ± 4.51 at baseline to 13.33 ± 0.58 on Day 40 (mean difference: 39.00 ± 4.58 ; $p < 0.01$). The overall percentage reduction in wound severity was 74.39%, demonstrating marked clinical improvement. A very large effect size (Cohen's $d = 8.51$) indicates strong therapeutic impact across all three cases.

Clinical Interpretation

- Rapid reduction observed between Day 10 and Day 30.
- Uniform healing trajectory across diabetic and post-amputation wounds.
- Minimal inter-case variability supports reproducibility.
- No adverse events reported.

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CASE I:

Before Treatment& After Treatment:

SUPERHEAL ZN Dressing Gauge

CASE II:

Before Treatment& After Treatment:

CASE II:

Before Treatment& After Treatment:

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