



Resolution of a Chronic Non-Healing Ulcer Using Ayurvedic Treatment - A Case Study

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The management of non-healing ulcers (Dushta Vrana) presents a significant clinical challenge. Non-healing ulcers are a common problem in the present era, often resulting from trauma or pathological insults, leading to prolonged suffering for patients. Despite the efficacy of contemporary medicine in treating infected wounds with antibiotics, the issue of non-healing wounds remains unresolved. Ayurveda offers a holistic approach that plays a crucial role in the management of Dushta Vrana. In the first part of his compendium, Sushruta extensively discusses wound healing and its classifications under the Vranitopasaniya Adhyaya. Ayurveda describes various compound formulations and oils for both oral administration and topical application to promote wound healing. In this case, a 56-year-old male patient presented with a non-healing ulcer on the medial aspect of the left foot, posing significant challenges in wound management. The ulcer had been treated with modern medications, but persistent infection complicated the recovery process. Incidentally, routine biochemical testing revealed previously undiagnosed hyperglycemia, which was likely a contributing factor to the impaired wound healing. The integration of Manjishtha (*Rubia cordifolia*), Lodhra (*Symplocos racemosa* Roxb.), and other internal medications, Yashada Bhasma along with the external application of Kampillakadi oil and regular cleansing with Pancavalkala Kvatha, proved to be an effective therapeutic strategy for managing this non-healing wound. The comprehensive approach led to part of wound healing within 35 days, highlighting the potential benefits of combining traditional Ayurvedic treatments with modern wound care practices.

Keywords: Nonhealing ulcer, Hyperglycemia, Ayurveda, Dushtavrana, Vranaropan

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Introduction

Wound healing is a multifaceted physiological process that occurs in four overlapping stages: haemostasis, inflammation, proliferation, and remodelling. Following tissue injury, haemostasis is achieved through clot formation, while inflammatory phase serves to clear cellular debris and prevent infection. The proliferative phase involves re-epithelialization, collagen synthesis, and angiogenesis, followed by remodelling phase, which strengthens newly formed tissue and restores functional integrity. However, in certain cases, physiological impairment due to disruptions in normal wound healing cycle, which may result in chronic wound due to impaired angiogenesis, innervation, or cellular migration.[1] The duration required for complete epithelialization varies based on multiple factors, including comorbidities such as diabetes, autoimmune diseases, peripheral artery disease, body mass index, anatomical location, and use of certain medications. Distinguishing between chronic and acute wounds based solely on healing time is challenging; however, some guidelines suggest that wounds failing to reduce in size by at least 50% within one month may be classified as chronic.[2] Chronic, non-healing wounds are susceptible to infection, pain, and a diminished quality of life.[3]

The management of non-healing ulcers typically involves debridement, the application of antiseptics such as Betadine, silver nitrate, hydrogen peroxide, and Eusol for cleansing, as well as the administration of antibiotics. In severe cases, life-saving procedures like amputation may be necessary, although these interventions have inherent limitations.[4] Despite significant advances in modern medicine, the management of *Vrana* (ulcer) remains a clinical challenge. *Vrana* is traditionally defined as '*Vrana Gatra Avachurnane*,' which refers to the disruption of body tissue continuity.[5] The manifestation of *Vrana* is influenced by both intrinsic (*Nija*) and extrinsic (*Agantuja*) factors. *Nija Vrana* arises from the vitiation of doshas, whereas *Agantuja Vrana* is caused by external trauma, such as injuries from teeth, nails, or sharp instruments.[6] When a *Vrana* becomes infected and fails to heal over an extended period, it is classified as a *Dushta Vrana* (non-healing ulcer). *Dushta Vrana* is characterized by its resistance to healing and its failure to respond promptly to conventional treatment.

Dushtavrana (non-healing ulcer) means the ulcers in which *Dosha* has taken the seat are *Dushta* [7] Whether arising from intrinsic or extrinsic causes, an improperly managed *Vrana* can evolve into a *Dushta Vrana*, necessitating thorough *Shodhana* (cleansing) to promote healing. Wound care and management are thoroughly detailed in the *Sushruta Samhita*, specifically in the *Chikitsa Sthana* section. *Sushruta* advises the use of the *Shashti Upakrama*, a comprehensive treatment protocol for wounds.[8] Key actions include *Shodhana* (cleansing), *Kshalana*, *Ropana* (healing), *Sandhana*, and *Raktasthambhana* (hemostasis). In the present case of non-healing ulcer, *Panchvalkala kashaya* has been used for wound cleansing, while internal usage of powders made from herbs such as *Lodhra* (*Symplocos racemosa* Roxb.), *Yashtimadhu* (*Glycyrrhiza glabra*), *Manjishta* (*Rubia cordifolia*), and *Dhataki* (*Woodfordia fruticosa*). These medicinal plants possess properties conducive to wound cleansing (*Vrana Shodhana*) and healing (*Vrana Ropana*). Notably, all three are included in the *Sandhaneeeya Mahakashaya Gana* of *Charaka*, contributing to their efficacy in tissue repair. *Swayambhuva Guggulu* is also used for internal medication owing to its anti-microbial properties. Additionally, *Kampillakadi Tail* was also used for local application recommended for *Vrana Ropana* by the *Acharya Charaka*. This case report discusses the clinical management of a *Dushta Vrana* (non-healing ulcer), including the patient's history, examination findings, treatment approach, observations, and outcomes achieved.

Case Report

A 56-year-old male patient from low socioeconomic background presented to our clinic with a non-healing ulcer on the medial aspect of his right leg. The injury was initially sustained in a road traffic accident and was treated with conventional modern medicine. However, patient subsequently developed a wound infection, which progressed to a chronic, non-healing ulcer. During routine biochemical testing, it was incidentally discovered that the patient had elevated blood glucose levels, indicative of undiagnosed diabetes. Additionally, the patient has a significant history of smoking, which likely contributed to the delayed wound healing and increased risk of infection. On the basis of his history & laboratory investigations it was diagnosed as *Jirna Vrana* (Chronic non healing wound).

The Bates Jensen wound assessment tool was used periodically to assess the result.

General Examination

Patient had pulse rate - 80/min, blood pressure - 130/80 mm Hg. Respiratory rate - 18/min. Temperature - 97.8°F

Systemic Examination

The respiratory and cardiovascular systems were within normal limits. The patient was conscious and oriented, but he was experiencing extreme pain and burning at the site of wound; her pupillary reflexes were normal. Deep tendon and superficial reflexes were both normal.

No tenderness or organomegaly was detected in the gastrointestinal system. *Ashtavidha Parikshan* - *Nadi* (~pulse) was *Vatapittaj*, *Jivha* (~tongue) was *Sama* (~coated), *Aakriti* was *Madhyam* (~medium built), *Mutra*(~Urine) was *Peeta* (~Yellow), *Mala* (~stool) was *Samyak*, *Sparsha* was *Anushna*. Bowel habits were irregular. *Druk* (~vision) was normal with correction of refractive error. *Dashavidha* Examination showed *Pittapradhan* *Vatanubandhi* *Prakruti*, *Madhyam Sarata*, *Madhyam Satva*, *Madhyam Samhanan*, *Madhyam Satmya*, *Madhyam Vyayamshakti*, *Taruna Vaya*, *Vikruti* *Vatapitta Pradhan*, *Abhyavaharan* and *Jaran Shakti* were *Madhyam*.

Family history: Maternal history: No any major illness

Paternal history: hypertension, diabetes mellitus

Patient's daily routine

Ahara (diet): mixed diet (veg and non - veg), 3 times /day, *Sarvarasasatmya*, *Katu Ras Priti*

Vihara: Mild exposure to *Vata* and *Atapa*, driving 8-9 hr/day

Nidra (sleep): *Prakrut* before the incident but disturbed since few days due to discomfort and pain at wound site.

Patient has long term history of smoking (2-3/day) since last 30 years

Local Examination

On examination: The wound measured 13 cm in length, 7 cm in width, and 1 cm in depth, roughly triangular in shape,

Involving lateral malleolus of the left leg and involving middle to lateral one third part of dorsal aspect of left leg. The wound involved the skin, subcutaneous tissue, veins, and muscle, with inflamed and everted edges. A purulent discharge was present, and the wound floor was covered with slough. The patient also reported tenderness, itching, & burning sensation. The wound margins appeared pale, and a mild foul odour was noted.

On palpation: The area was tender to the touch, No local loss of sensation.

Timeline:

The detailed timeline with therapeutic intervention is given in Table 1.

Investigations

Upon presentation, the patient's non-healing ulcer on the medial aspect of the right leg was evaluated. Considering the chronicity and the risk factors, a basic biochemical profile was initiated. The following investigation was conducted:

Blood Glucose Levels: The patient's random blood glucose level was found to be elevated at 247 mg/dL, suggestive of hyperglycemia. This finding prompted consideration of undiagnosed diabetes mellitus as a contributory factor to the non-healing nature of the wound.

No other laboratory or imaging studies were conducted at this stage, as the primary focus was on the management of hyperglycemia and its potential role in wound healing. Further investigations, such as HbA1c, complete blood count, renal function tests, and wound cultures, were considered for subsequent evaluations depending on the clinical progress (Photographs are given in Fig. 1 to 5).

Diagnostic Assessment

Assessment tool:

In this case study, I utilized the Bates-Jensen Wound Assessment Tool, which evaluates wounds based on 13 specific criteria. The scores for each category were recorded and subsequently analysed.

Wound Assessment criteria: Bates-Jensen wound assessment tool.

1. Size

1 - Length x width < 4 sq. cm

- 2 - Length x width < 16 sq. cm
- 3 - Length x width < 36 sq. cm
- 4 - Length x width < 80 sq. cm
- 5 - Length x width > 80 sq. cm

2. Depth

- 1 - Non-blanchable erythema on intact skin
- 2 - Partial thickness skin loss involving epidermis &/ or dermis
- 3 - Full thickness skin loss involving damage or necrosis of subcutaneous tissue; may extend down to but not through underlying fascia; &/or mixed partial & full thickness &/or tissue layers obscured by granulation tissue
- 4 - Obscured by necrosis
- 5 - Full thickness skin loss with extensive destruction, tissue necrosis or damage to muscle, bone or supporting structures

3. Edges

- 1 - Indistinct, diffuse, none clearly visible
- 2 - Distinct, outline clearly visible, attached, even with wound base
- 3 - Well-defined, not attached to wound base
- 4 - Well-defined, not attached to base, rolled under, thickened
- 5 - Well-defined, fibrotic, scarred or hyperkeratotic

4. Undermining

- 1 - None present
- 2 - Undermining < 2 cm in any area
- 3 - Undermining 2-4 cm involving < 50% wound margins
- 4 - Undermining 2-4 cm involving > 50% wound margins
- 5 - Undermining > 4 cm or Tunnelling in any area

5. Necrotic Tissue type:

- 1 - None visible
- 2 - White/grey non-viable tissue &/or non-adherent yellow slough
- 3 - Loosely adherent yellow slough
- 4 - Adherent, soft, black eschar
- 5 - Firmly adherent, hard, black eschar

6. Necrotic Tissue Amount

- 1 - None visible
- 2 - < 25% of wound bed covered
- 3 - 25% to 50% of wound covered
- 4 - > 50% and < 75% of wound covered
- 5 - 75% to 100% of wound covered

7. Exudate Type

- 1 - None
- 2 - Bloody
- 3 - Serosanguinous: thin, watery, pale red/pink
- 4 - Serous: thin, watery, and clear
- 5 - Purulent: thin or thick, opaque, tan/yellow, with or without odour

8. Exudate Amount

- 1 - None, dry wound
- 2 - Scant, wound moist but no observable exudate
- 3 - Small
- 4 - Moderate
- 5 - Large

9. Skin Colour Surrounding Wound

- 1 - Pink or normal for ethnic group
- 2 - Bright red &/or blanches to touch
- 3 - White or grey pallor or hypo pigmented
- 4 - Dark red or purple &/or non-blanchable
- 5 - Black or hyper pigmented

10. Tissue Edema

- 1 - No swelling or edema
- 2 - Non-pitting edema extends 4 cm around wound
- 3 - Non-pitting edema extends >4 cm around wound
- 4 - Pitting edema extends < 4 cm around wound
- 5 - Crepitus and/or pitting edema extends >4 cm around wound

11. Peripheral Tissue Induration

- 1 - None present
- 2 - Induration, < 2 cm around wound
- 3 - Induration 2-4 cm extending < 50% around wound
- 4 - Induration 2-4 cm extending > 50% around wound
- 5 - Induration > 4 cm in any area around wound

12. Granulation Tissue

- 1 - Skin intact or partial thickness wound
- 2 - Bright, beefy red; 75% to 100% of wound filled &/or tissue overgrowth
- 3 - Bright, beefy red; < 75% & > 25% of wound filled
- 4 - Pink, &/or dull, dusky red &/or fills < 25% of wound
- 5 - No granulation tissue present

13. Epithelialization

- 1 - 100% wound covered, surface intact
- 2 - 75% to < 100% wound covered &/ or epithelial tissues extends to >0.5cm into wound bed
- 3 - 50% to < 75% wound covered &/ or epithelial tissues extends to

On examination: the wound measured 13 cm in length, 7 cm in width, and 1 cm in depth, roughly triangular in shape, involving lateral malleolus of the left leg.

The wound involved the skin, subcutaneous tissue, veins, and muscle, with inflamed and everted edges. A purulent discharge was present, and the wound floor was covered with slough.

The patient also reported tenderness, itching, and a burning sensation. The wound margins appeared pale, and a mild foul odour was noted.

Therapeutic intervention

Under sterile conditions, wound was irrigated with *Panchavalkala Kashaya*. A sufficient amount of sterile *Kampillakadi Taila* was then applied to wound site, followed by standard dressing with non-adherent primary dressings. Concomitant systemic treatment included oral administration of *Swayambhuva Guggulu* 500 mg twice daily after meals, & combination of *Lodhra* (*Symplocos racemosa* Roxb.), *Yash-timadhu* (*Glycerrhiza glabra*), *Manjishtha* (*Rubia cordifolia*), & *Dhataki* (*Woodfordia fruticosa*), 500 mg each, twice daily with plain water for 35 days. For acute glycemic control to facilitate wound healing, patient was initiated on monotherapy regimen with metformin 500 mg. This approach was chosen to stabilize blood glucose levels as critical component of wound management strategy. Wound assessments were conduc. at baseline & during follow-up visits on days 7, 14, 21, & 35. *Ayurveda* plan of treat. along with timeline has been shown in table 1

Table 1: Showing Ayurveda plan of treatment along with timeline

SN	Name of the Drug	Dose and duration	Anupana
Day 1 to day 21			
Internal medications			
1.	Swayambhuva Guggulu	500mg twice in a day for 28 days	With luke warm water
2.	Lodhra (<i>Symplocos racemosa</i> Roxb.) + Yastimadhu + Manjishtha (<i>Rubia cordifolia</i>) + Dhataki (<i>Woodfordia fruticosa</i>) powder	each 500 mg twice in a day for 28 days	With luke warm water
3.	Yashada Bhasma	125 mg twice in a day for 21 days	With honey
Local applications			
1.	Kampillakadi Taila	Quantity sufficient	For local application
Local irrigation			
1.	Panchavalkala Kashaya	150-200 ml	-
Day 21 to day 35			
Internal medications			
1.	Swayambhuva Guggulu	500mg twice in a day for 28 days	With luke warm water
2.	Lodhra (<i>Symplocos racemosa</i> Roxb.) + Yastimadhu + Manjishtha (<i>Rubia cordifolia</i>) + Dhataki (<i>Woodfordia fruticosa</i>) powder	each 500 mg twice in a day for 28 days	With luke warm water
Local applications			
1.	Kampillakadi Taila	Quantity sufficient	For local application
Local irrigation			
1.	Panchavalkala Kashaya	150-200 ml	-

Follow-up and Outcome

The wound on the lateral malleolus of the left foot initially measured over 80 cm² and demonstrated progressive improvement over the course of follow-up visits. On day 1, the total Bates-Jensen Wound Assessment Tool (BWAT) score was 41, indicating significant tissue involvement, necrosis (necrotic tissue score: 3), and heavy exudate (exudate amount score: 3). By day 7, the total score decreased to 32,

With notable reductions in necrosis (score: 2) and exudate (score: 1), reflecting early signs of wound healing.

Further improvements were observed by day 14, where total score was 25, with necrosis reduced to minimal (score: 1), and wound remained dry with minimal exudate (score: 1). By day 21, total score had decreased to 21, showing continued epithelialization & granulation tissue formation. The necrotic tissue and exudate scores remained stable at 1.

At the final follow-up on day 35, the wound had significantly healed, with a total BWAT score of 19. The necrotic tissue and exudate scores remained minimal at 1 each, indicating stable wound bed health and readiness for further tissue remodelling. The progressive decrease in total BWAT scores across the follow-ups highlights the wound's steady healing trajectory, with a marked reduction in wound size and improvement in tissue quality. (Photographs are given in Fig. 1 to 5). Result measured by Bates Jensen wound assessment tool (Table no. 2)

Table 2: Result measured by Bates Jensen wound assessment tool.

SN	Wound character	Base line	Score At base line	Score at 7 days	Score at 14 days	Score at 21 days	Score at 35 days
1.	Size	4	4	3	3	2	
2.	Depth	4	4	3	2	2	
3.	Edge	4	4	3	2	2	
4.	Undermining	2	2	2	2	2	
5.	Necrotic tissue type	3	2	1	1	1	
6.	Necrotic tissue amount	4	3	2	1	1	
7.	Exudate type	3	1	1	1	1	
8.	Exudate amount	3	1	1	1	1	
9.	Skin Colour surrounding wound	2	1	1	1	1	
10.	Peripheral tissue oedema	2	1	1	1	1	
11.	Peripheral Tissue Induration	1	1	1	1	1	
12.	Granulation Tissue	4	3	2	2	2	
13.	Epithelization	5	5	4	3	2	
	Total score	41	32	25	21	19	

Images showing stage wise improvement in wound healing



Figure 1: Day 1



Figure 2: Day 7



Figure 3: Day 14



Figure 4: Day 21



Figure 5: Day 35

Discussion

Despite significant advancements in surgical techniques, wound management continues to be a challenging area, with early signs of poor healing often leading to serious complications, extended recovery times, and, in some cases, fatal outcomes in surgical practice. It has long been recognized that non-healing and chronic wounds are frequently associated with diabetic conditions.[9] The diagnostic process for the non-healing wound in this road traffic accident case was complicated by several factors. The presence of undiagnosed hyperglycemia, discovered incidentally during routine biochemical testing, suggested underlying diabetes, which may have contributed to impaired wound healing. The patient's history of smoking further exacerbated the situation, as it likely compromised vascular supply and tissue oxygenation. Additionally, the initial treatment with modern medicines, although standard, was insufficient to prevent the subsequent infection. This infection became a significant barrier to healing, necessitating a more comprehensive approach to diagnosis and management. These complexities highlighted the need for a thorough evaluation of potential systemic and local factors hindering wound resolution. Sixty therapeutic approaches for wound management, covering both local and systemic measures, have been detailed for comprehensive care.[10] *Swayambhuva Guggulu*, a classical Ayurvedic formulation, is traditionally documented for its efficacy in managing *Prameha* (disorders akin to diabetes) and *Kushtha* (chronic skin diseases). Given the patient's underlying hyperglycemia and the chronic, non-healing nature of the ulcer, *Swayambhuva Guggulu* was employed in this case, leveraging its dual therapeutic action in addressing both metabolic dysfunction and persistent wound pathology. The formulation's primary component, *Guggulu* (*Commiphora mukul*), is known for its anti-inflammatory and antimicrobial properties, which can help reduce local inflammation and prevent infections, crucial for wound healing. *Haridra* (*Curcuma longa*), rich in curcumin, contributes with its antioxidant and anti-inflammatory effects, promoting collagen synthesis and granulation tissue formation. The *Triphala* component, a blend of *Amalaki*, *Bibhitaki*, and *Haritaki*, enhances tissue regeneration and detoxification, further supporting wound repair.

Nimba (*Azadirachta indica*), included for its potent antimicrobial properties, aids in controlling bacterial and fungal infections common in chronic ulcers. Additionally, *Vacha* (*Acorus calamus*) improves blood circulation and reduces swelling, which are critical in managing non-healing wounds. Collectively, these ingredients create a multifaceted approach that not only addresses local wound pathology but also systemic factors that may impede healing. The synergistic effects of *Swayambhuva Guggulu* components suggest a potential role as an adjunct therapy in the management of non-healing ulcers, particularly where conventional treatments alone may be insufficient. Among the 60 remedies, *Sarpi*, which involves the topical application of medicated ghee, serves both as a *Shodhana* (major purification therapy) and a *Ropana* (healing) treatment. *Virechana* (therapeutic purgation) is also effective in pacifying the aggravated *Doshas*. In wound management, *Shodhana* is considered just as crucial as *Ropana*, as it plays a vital role in halting the underlying pathological process. For centuries, plant-based extracts have been regarded as a promising alternative for wound healing due to their rich variety of secondary metabolites, easy availability, and minimal side effects.[11] *Acharya Charaka* has referenced *Kampillakadi Taila* as a remedy for promoting wound healing.[12] Ramesh and Shivram's research indicates that *Kampillakadi Taila*, formulated based on the *Sharangdhara Samhita*, achieved a 93.33% wound healing rate within 21 days, with no reported adverse effects. [13] In a study conducted by Nayak and colleagues, the wound healing effects of *Patoladi Kwath* and *Kampillakadi Taila* were evaluated on traumatic wounds up to 8 cm in size, excluding stabbed, punctured, surgical, and infected wounds. The study found that the combination of *Kampillakadi Taila* and *Patoladi Kwath* led to a significant wound reduction within 7 days (69.33%) compared to the use of sterile dressings (5.38%) or *Patoladi Kwath* alone (14.89%).[14] *Kampillakadi Taila* contains ingredients such as *Kampillaka* and *Vidanga*, known for their *Krimighna* and proven antimicrobial properties.[15] Additionally, components like *Lodhra* (*Symplocos racemosa* Roxb.) [16] *Khadira*, & *Dhat-aki* (*Woodfordia fruticosa*) [17] possess *Kashaya* (astringent) & *Ruksha* (drying) qualities, which help reduce excessive moisture (*Kleda*) in wounds, ultimately promoting wound healing (*Ropana*). It has been established that *Khadira* (*Acacia catechu*) exhibits both wound-healing & antidiabetic properties.

In a preclinical study, *Acacia catechu* bark extract was found to significantly promote wound healing in diabetic mice, likely due to the active compound epicatechin and other associated phytochemicals. The study highlighted that the combination of both topical and oral application yielded the most effective results. This evidence supported our approach in the current case, where *Khadira* (*Acacia catechu*) was used both internally and topically to enhance wound healing outcomes.[18] Preclinical studies have demonstrated its efficacy in managing elevated blood glucose levels, which is relevant in cases where hyperglycemia is present.[19] Therefore, in the current case where the patient presented with increased blood glucose levels, *Khadira* offers a dual therapeutic benefit, addressing both the wound healing and hyperglycemia. This dual action makes it a valuable option for managing such complex cases in clinical practice. *Manjishta* is *Kaphaghna*, *Ushna Virya* and helps in wound healing. The extract demonstrated significant wound healing activity in an animal model. Histological assessments revealed substantial infiltration of inflammatory cells, increased angiogenesis, and enhanced cellular proliferation following treatment with *Rubia cordifolia* gel and extract. These findings indicate that the ethanolic extract from the roots of *Rubia cordifolia* is effective in promoting wound healing and ameliorating histopathological changes associated with wound repair. Given that infections are a leading cause of morbidity and mortality in patients with wounds, these herbal extracts may play a crucial role in preventing infections that can lead to a heightened risk of sepsis, thus mitigating the duration of the inflammatory phase.[20] *Pancavalkala Kashaya* is a traditional decoction formulated from the bark of five specific trees: *Vaṭa* (*Ficus benghalensis* Linn), *Udumbara* (*Ficus glomerata* Roxb.), *Aśvattha* (*Ficus religiosa* Linn), *Parīṣa/Parīśa* (*Thespesia populneoides* L.), and *Plakṣa* (*Ficus lacor* Buch-Ham.). This decoction is recognized for its potent properties as it is *Kashaya* (astringent) helps to absorb excessive moisture content and also possess properties including *Shodhana* (cleansing) and *Ropaṇa* (healing) of wounds, making it a valuable component in the management of wound care.[21] The wound was regularly cleansed each day using freshly prepared *Pancavalkala Kvatha*, known for its soothing and antimicrobial properties. Prior research on wound healing using *Pancavalkala* cream has also demonstrated promising outcomes.[22]

Among the various *Pittashamak* drugs, *Yashad Bhasma* was chosen for its *Kashaya* (astringent) taste, wound-healing (*Vrana Ropak*) properties, and its specific efficacy in treating *Dushta Vrana* (chronic ulcers). This selection was based on its ability to address clinical symptoms such as excessive oozing and warmth by effectively dehydrating the wound area. *Yashad Bhasma* is herbo-metallic preparation derived from zinc, a mineral crucial for the body's immune function. Biochemically, zinc is vital for the development and activation of T-lymphocytes, a key component of the immune system. It plays an essential role throughout phases of wound healing, from cellular proliferation to maturation. Additionally, zinc enhances process of re-epithelialization, thereby contributing to strengthening and closure of wound.[23] Zinc is widely recognized for its significant role in the wound healing process; however, the current evidence supporting the routine use of zinc supplementation remains insufficient.[24] The integration of *Manjishta* (*Rubia cordifolia*), *Lodhra* (*Symplocos racemosa* Roxb.), and other internal medications, along with the external application of *Kampillakadi* oil and regular cleansing with *Pancavalkala Kvatha*, proved to be an effective therapeutic strategy for managing this non-healing wound. The comprehensive approach led to part of wound healing within 35 days, highlighting the potential benefits of combining traditional *Ayurvedic* treatments with modern wound care practices. These findings underscore the need for further clinical studies to validate the efficacy of these therapies in broader patient populations and varied clinical scenarios.

Conclusion

The present case of the 56-year-old male patient with a non-healing ulcer highlights the potential of ayurveda treatment approaches in managing chronic wounds, even in individuals with underlying conditions such as hyperglycemia and a history of smoking. The treatment regimen incorporating internal use of *Swayambhuva Guggulu*, powdered herbal medicines, and *Yashada Bhasma*, alongside local application of *Kampillakadi Taila* and wound irrigation with *Panchvalkala Kashaya*, resulted in significant clinical improvement. Throughout the treatment process, the wound exhibited progressive healing, demonstrating not only a reduction in size and depth but also improvements in tissue quality and granulation.

This comprehensive approach emphasizes the synergistic effects of *Ayurvedic* formulations in enhancing wound healing and addresses the underlying factors contributing to non-healing ulcers. Further studies are warranted to explore the mechanisms behind the efficacy of these herbal interventions and to establish standardized protocols for their use in similar clinical scenarios. Ultimately, this case underscores the importance of holistic treatment strategies, particularly for patients with complex medical histories, fostering a renewed interest in traditional remedies as viable options in modern wound management.

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