

Palasa Pratisaraneeya Kshara Facilitating Wound Bed Preparation in a Sloughed Non-Healing Ulcer: A Case Report

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Abstract—*Sloughed non-healing ulcers (Dusta Vrana) are characterized by persistent slough, microbial colonization, chronic inflammation, and delayed healing, making ulcer bed preparation an essential prerequisite for successful wound management. Debridement plays a pivotal role in eliminating devitalized tissue and establishing a wound environment conducive to tissue repair. Kshara Karma, one of the Sashti Upakrama described by Acharya Susruta for the management of Vrana, is a well-established para-surgical procedure that combines the principles of Sodhana and Ropana. Palasa Mrudu Pratisaraneeya Kshara, owing to its Tikshna, Usna, Kshara, Lekhana, Chedana, Bhedana, Ksharana and Krimighna properties, facilitates chemical debridement by selectively removing slough, necrotic tissue and unhealthy tissue from the ulcer bed. This process effectively prepares the wound bed by reducing microbial burden, excessive Kleda, inflammation, foul smell and wound exudate while improving the local wound environment for healing. The transformation of Dusta Vrana into Suddha Vrana following Kshara application promotes healthy granulation tissue formation, collagen deposition, wound contraction and epithelialization. Furthermore, the reduction in pain, discharge, burning sensation and itching enhances patient comfort and supports uninterrupted wound healing. Thus, Palasa Mrudu Pratisaraneeya Kshara Lepa represents a safe, simple, minimally invasive and cost-effective para-surgical modality for ulcer bed preparation and the management of sloughed non-healing ulcers, with promising potential as an alternative or adjunct to conventional debridement techniques.*

Keywords—“Case report”, “Non-healing Ulcer”, “Palasa Pratisaraneeya Kshara”, “Vericose ulcer”

I. INTRODUCTION

Non-healing ulcers are wounds that fail to progress through the normal phases of healing within the expected time due to factors such as Diabetes Mellitus, peripheral vascular disease, infection, neuropathy, pressure and repeated trauma. The presence of slough, consisting of devitalized tissue, fibrin, and cellular debris, delays wound healing by promoting infection and preventing healthy granulation and epithelialization.¹

In Ayurveda, non-healing ulcers are described under *Dushtavrana*, where *Shodhana* (cleansing) and *Ropana* (healing) are the primary principles of treatment. Acharya Susrutha has described the use of *Pratisaraneeya Kshara* for the management of unhealthy wounds². Among the various *Ksharas*, *Palasa Pratisaraneeya Kshara* possesses *Ksharana*, *Lekhana*, *Shodhana*, and *Ropana*³ properties, which help in the chemical removal of slough, reduce microbial contamination, and promote healthy granulation tissue formation.

The strong alkaline nature of *Palasa Pratisaraneeya Kshara* facilitates effective chemical debridement by dissolving necrotic tissue while creating a favourable environment for wound healing. Its ease of application, cost-effectiveness and minimal infrastructure requirements make it a promising treatment option, particularly in resource-limited settings.

Considering these therapeutic properties, the present study was undertaken to evaluate the efficacy of *Palasa Pratisaraneeya Kshara* in the management of sloughed non-healing ulcers.

II. CASE REPORT

A. Presenting Complaints

Non healing ulcer over anterior aspect of left lower limb since 1 year with mild pain and discharge

B. History of Presenting Complaints

A 56-year-old male patient presented to the Department of Shalya Tantra with complaints of non-healing ulcers over the anterior aspect of the left lower leg for the past one year. The ulcers initially developed following minor trauma over area affected by long-standing varicose veins. Ulcer gradually increased in size and failed to heal despite regular treatment.

The patient complained of three ulcers over the anterior aspect of the lower one-third of the left leg associated with yellowish slough, serous discharge, dull aching pain, burning sensation and occasional itching. The pain and swelling were aggravated by prolonged standing and walking and were relieved on rest with elevation of the affected limb.

The patient had a history of varicose veins in the left lower limb for the past several years. He had consulted multiple healthcare providers and underwent repeated wound dressings, oral antibiotics, analgesics, compression therapy and other conservative treatments. However, he did not experience satisfactory relief and the ulcers persisted with recurrent slough formation and delayed healing.

Past History

The patient was not a known case of Diabetes Mellitus. There was no history of previous surgery for varicose veins or chronic ulcers.

Personal History

- Appetite – Normal
- Bowel – Regular
- Bladder – Normal
- Sleep – Disturbed due to pain
- Diet – Mixed
- Habits – No history of smoking or alcohol consumption.

Family History

No significant family history of varicose veins, chronic ulcers, or vascular disorders.

Treatment History

The patient had received treatment from several hospitals over the past year, including regular wound dressing, oral antibiotics, analgesics, topical medications, and compression therapy. Despite these interventions, the ulcers remained non-healing with persistent slough and unhealthy granulation tissue. As there was no satisfactory improvement with conventional management, the patient sought Ayurvedic treatment for further management.

Local examination

Site: Anterior aspect of the lower one-third of the left leg.

Number: Three ulcers present.

Size:

- Ulcer 1: 3×2 cm
- Ulcer 2: 1 × 1 cm
- Ulcer 3: 1×0 .8 cm

Shape: Irregular.

Margins: Sloping margins.

Edge: Well-defined, non-undermined.

Floor: Covered with yellowish slough involving approximately 70–80% of the ulcer bed with unhealthy granulation tissue.

Slough: Thick yellow slough covering most of the ulcer floor.

Base: Indurated, attached to the underlying tissue.

Depth: Extending up to the subcutaneous tissue

Discharge: Moderate amount of seropurulent discharge.

Surrounding Skin: Hyperpigmented, Dilated and tortuous varicose veins are seen over the anterior aspect of the leg.

Tenderness: Mild tenderness present over the ulcer.

Bleeding on Touch: Absent.

Granulation Tissue: Scanty, unhealthy granulation tissue present.

which is then kept on mild fire till it become semisolid consistency. This was collected and stored in an air tight jar, weighed about 75 gm.

A. pre-operative

- Obtain written informed consent.
- Record history, general and local examination and baseline ulcer assessment.
- Perform necessary investigations (within normal limit).
- Position the patient comfortably and expose the ulcer

B. operative

- The ulcer was cleaned thoroughly with sterile normal saline.
- *Palasa Mrudu Pratisaraneeya Kshara* was applied uniformly over the slough-covered ulcer bed using a sterile applicator, ensuring complete coverage of the slough and unhealthy tissue. The ulcer was then covered with sterile gauze and the *Kshara* was retained for 1 minutes.
- After the stipulated time, the gauze was removed and the *Kshara* was neutralized with *Jambeera Swarasa* (lemon juice) followed by thorough irrigation with sterile normal saline.
- Followed by sterile dressing done with *Jatyadi Ghrita*.
- The procedure was repeated at regular intervals according to the wound condition until complete slough removal, effective ulcer bed preparation and healthy granulation tissue formation were achieved.



Fig. 1. On first day of *Kshara* application

C. Post-operative

- Sterile dressing was done daily with *Jathyadi Gritha*.

III. METHODS

Source of Drug

Palasa (Butea monosperma) was identified and authenticated by an expert based on its morphological characters and the plant material was subsequently collected for the study.

A total of 10 kg bark of *Palasa (Butea monosperma)* was collected, dried up and burnt along with lime stone. The whole ash is collected and weighted around 950 gm and added with 6 parts of water. Stirred well and kept overnight. This is filtered 21 times which attained *Gomutra Varna* (colour of cow's urine)

- *Guggulu Titakam Kashayam* (60 ml BD Before food) and *Tab. Kaisora Guggulu* (2 tab BD Before food) was given, to prevent secondary infection.(obtained from GMP certified pharmacy), these medicine are continued during the course of treatment.


Fig. 2. On 14th day

Fig. 3. on 60th day

IV. OBSERVATION AND RESULT

After the application of *Palasa Pratisaraneeya Kshara Lepa*, gradual liquefaction and removal of slough with effective ulcer bed preparation were observed. Healthy granulation tissue developed progressively, followed by reduction in ulcer size and wound contraction. There was a marked reduction in pain, discharge and itching after the initial applications of *Kshara*. The ulcer healed completely within 60 days, with healthy epithelialization and without any adverse effects.

The findings suggest that *Palasa Pratisaraneeya Kshara* effectively promotes ulcer healing through its *Sodhana* and *Ropana* actions. Its debriding effect facilitated ulcer bed preparation by removing slough and unhealthy tissue, thereby creating a favorable environment for granulation and epithelialization. The significant reduction in pain, discharge and itching indicates control of inflammation and infection. Complete healing within 60 days demonstrates the efficacy of *Palasa Pratisaraneeya Kshara* in the management of sloughed non-healing ulcers.

Sl no	Date	Observation	remarks
1	20/2/26	Slough(70-80%) and mild discharge present	Kshara lepa done
2	27/2/26	Slough(40-50%) and mild discharge present	Kshara lepa done
3	3/3/26	Slough(20-10%) and discharge absent, granulation tissue present	Kshara lepa done
4	17/3/26	Healthy healing noted , no slough present	Dressing with jathyadi gritha
5	7/4/26	No slough , healthy healing noted, ulcer1- size reduced to half, ulcer 2 and 3 -healed	Dressing with jathyadi gritha
6	20/4/26	Completely healed ulcer	-

V. DISCUSSION

Palasa Pratisaraneeya Kshara acts in sloughed non-healing ulcers (*Dusta Vrana*) through its *Lekhana*, *Sodhana*, *Krimighna*, and *Ropana* properties. Its *Tikсна*, *Usna*, *Kshara*, *Chedana* and *Lekhana* qualities facilitate chemical debridement by liquefying

and removing slough, necrotic tissue, pus and *Dusta Mamsa* from the ulcer bed^{4,5}.

Its alkaline and penetrating nature reduces *Kleda*, foul smell, discharge and microbial contamination, while decreasing local inflammation. These actions effectively prepare the ulcer bed by removing devitalized tissue, reducing the bacterial load, improving local microcirculation and oxygenation and creating a clean, healthy wound environment suitable for healing.

Following *Vrana Sodhana*, the ulcer is transformed from *Dusta Vrana* to *Suddha Vrana*, providing an ideal wound bed for healing. *Palasa Pratisaraneeya Kshara* then promotes *Vrana Ropana* by enhancing healthy granulation tissue formation, collagen deposition, wound contraction and epithelialization⁷. As healing progresses, there is a reduction in *Vedana* (pain), *Daha* (burning sensation), *Kandu* (itching) and excessive *Srava* (discharge).

Thus, *Palasa Pratisaraneeya Kshara* serves as an effective *Sodhana* and *Ropana* modality and plays a significant role in ulcer bed preparation, facilitating optimal wound healing in sloughed non-healing ulcers.

VI. CONCLUSION

Sloughed non-healing ulcers remain a major therapeutic challenge due to delayed wound healing, persistent infection, and poor quality of granulation tissue. *Palasa Pratisaraneeya Kshara* offers an effective Ayurvedic approach for ulcer bed preparation by facilitating selective chemical debridement, promoting slough removal, reducing microbial burden and creating a healthy wound environment conducive to healing.

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