



EFFECT OF LAJJALUMOOLATAILA ON DUSHTAVRANA W.S.R. TO VENOUS ULCER- A CASE STUDY

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ABSTRACT

Venous ulcer is the most common type of leg ulcer. The primary cause of venous ulcer is abnormal venous hypertension in the lower third of the leg. In *Ayurveda* this disease clinically simulates with *Dushtavrana*, a severely damaged condition marked by chronic features and lack of healing intent, thus making its management a challenging task. Emphasis on *Vrana chikitsa* (wound care) has been significant since the *Samhita* period, with detailed descriptions found in the *Sushruta Samhita*. The present study utilizes the properties of *Lajjalumoolataila*, as elaborated by *Acharya Shodala* in the book *Gadanigraha*, for its use in *Vrana*. Here is a case of a male patient of 39yrs presented with ulcer on lower 1/3rd of left lower limb on the medial malleolus with slough, foul smell, discoloration of surrounding skin for 11 months was treated with *lajjalumoola taila* in the form of ointment which was utilised for daily dressing. **Result:** the wound was completely healed within a span of 2 and half months. **Conclusion:** *Lajjalu*, with its bitter (*tiktha*) and astringent (*kashaya*) tastes, cooling (*sheeta*) nature, and anti-inflammatory (*shophagna*) and wound-healing (*vranahara*) properties, aids in wound healing by accelerating the process and preventing further suppuration (*Paka*).

INTRODUCTION

Wound healing is a systematic process, traditionally explained in terms of three classic phases viz. inflammation, proliferation, and maturation. There are many factors which influence the wound healing like age, nutrition, hormones, comorbid conditions, place and position of wound, blood supply to the area, exposure etc. An acute wound becomes chronic if healing is not achieved after 4 weeks of treatment.^[1] *Vrana* and its management has been given great importance in *Shalya Tantra*. In first chapter of *Chikitsasthana*, *Acharya Sushruta* defines *Vrana* as the one which is characterised with *Gatravichurnana* (disruption of tissues) and produces *vivarnata* (discolouration) of the defected body part. *Dushtavrana* are those which are difficult to heal, with localization of *tridosha*, and which are elevated, inflamed, having bad smell, more slough, discharge & takes a long period to heal.^[2]

Acharya Sushruta has given elaborate description regarding *Shashti Upakramas* (sixty therapeutic measures) for wound management. Among sixty *Upakramas* local application of medicated oil (use of *Taila*) is one of most important *Upakramas*. Different medicated oils which can be used as *Vrana Shodhana* and *Ropana* are described.^[3] *Acharya Shodala* in his

book of *Gadanigraha* mentions the use of *Lajjalumoola Taila* in the management of *Vrana*.^[4] *Lajjalu* possesses *tiktha* (bitter) and *kashaya* (astringent) tastes, along with *sheeta* (cooling) properties, which contribute to its wound-healing (*vranaropana*) abilities. *Dhanwanthari nighantu* attributes *shophagna*, *dahaghna* and *vranahara* properties to the drug.^[5] *Lajjalu* contains chemical constituents such as alkaloids, flavonoids, phenols, tannins, terpenoids etc, which promote wound healing. The plant's antimicrobial and haemostatic properties have already been established. Therefore, this study was conducted to assess the efficacy of *Lajjalumoolataila* in managing *Dushtavrana* (chronic venous ulcers).

Venous ulcer

Venous leg ulcers (VLU) are a major clinical challenge, which are due to venous stasis and increased venous pressure. Venous stasis occurs due to increased venous hypertension caused by either venous insufficiency or venous outflow obstruction.^[6]

They manifest on the lower limb and represent between 60% and 80% of all leg ulcerations. Their three-months healing rate is estimated at 40% and once healed up to 80% of patients develop a recurrence within 3 months. The prevalence of VLUs is reported around 1.08% and

the incidence being up to 1.33%.^[7]

Venous ulcers typically develop on the lower leg, particularly on the medial side and vary in size and shape. They are generally shallow and flat, featuring pale granulation tissue and sloping edges. The surrounding skin often exhibits signs of chronic venous hypertension, such as pigmentation and induration. Varicose veins may or may not be present in the proximal limb.^[6]

Chronic Venous ulcer fails to re-epithelialize despite the presence of adequate granulation. These are commonly painless and tend to occur at the sites of incompetent perforators, the most common being above the medial malleolus, over Cockett's perforator.^[1]

Treatment involves elevation of effected limb, passive movements to maintain the mobility of the foot and ankle, active movements of the calf muscles, use of venous stockings (in the absence of DVT), stripping of dilated veins, skin graft, valvular repair, regular dressing.^[6] Despite preventative measures, recurrences are frequent, primarily due to patients' lack of compliance.

CASE REPORT

A male patient aged 34 years, not a known case of diabetes mellitus or hypertension or any systematic ailment, who is a weaver by profession, presented with complaint of non-healing ulcer in the left lower limb over the medial malleolus, with slough, discharge, foul smell, discoloration and eczematous changes of surrounding skin, and pain, for 11 months. Initially

Investigations done

Hemoglobin(g/dl)	14g%	Total count (WBC)	8.7 x 10 ³ /uL
RBC	6.14x10 ⁶ / uL	PLT	211x 10 ³ /uL
Erythrocyte sedimentation Rate	30mm/1 st hr	RBS	98mg/dl
BT	2 min 20 sec	HIV	Non-reactive
CT	4 min 40sec	HBsAg	Negative

MATERIALS AND METHODS

Lajjalumoola taila in the form of ointment was used for the study.

Ingredients

- **Kalka Dravya:** *Ardr Lajjal Moola Kalka* - 1 part
- **Sneha Dravya:** *Moorchitha Tilataila* - 4 parts
- **Dravadravya:** *Water* - 16 parts.
- **Madhuchista-** 1/6th part of *taila*.

Method of preparation

Moorchitha Tila Taila was taken in a thick bottomed vessel and was heated over *Mandagni*. To this specified quantity of *Ardr Lajjal Kalka* was added followed by water. It was heated till the *Taila Siddhi Lakshanas* were observed. When the *Taila* is still hot, it was filtered and *Madhuchista* was added to it, quantity being 1/6th part of *taila* and was stirred continuously till the consistency

patient noticed visible dilated veins over left leg followed by gradual blackish discoloration of lower 1/3rd of left lower limb with itching. He noticed a bleb in the region which later opened on its own creating a wound at the site. The wound increased in size gradually. He had taken several medications and was on regular dressing for the same but found no relief and the wound did not show any signs of healing. Since he found no improvement, he consulted the Shalya OPD, at SJIIM hospital, Bengaluru on August of 2024 for further management.

Local Examination

Inspection

- **Size and Shape** – 4x3x0.5 cms, irregular in shape
- **Number** - One
- **Position** - left lower limb over medial malleolus region
- **Edge** - sloping edge
- **Floor** - pale granulation tissue with slough
- **Discharge** - serous discharge
- **Odour** - Foul smell
- **Surrounding skin** - blackish discoloration with eczematous changes in lower 1/3rd of left lower limb.

Palpation

- **Tenderness** – Present
- **Margin**- Irregular
- **Base** – Subcutaneous tissue.
- **Bleeding on touch** - absent
- **Peripheral pulsations** - palpable
- **Inguinal lymph nodes** - not enlarged

becomes semisolid. It was then stored in a clean, sterile container.



Fig. 1 Lajjalumoola freshly collected



Fig. 2 Kalka of lajjalumoola



Fig. 3 Tailapaka



Fig. 4 Adding the Madhuchista



Fig. 5 continuous stirring yields in semisolid consistency.



Fig. 6 lajjalumoola ointment

Method of application

The study was conducted for the span of 2 and half months from 16/08/2024 to 29/10/2024.

Initially, the ulcer was cleaned with Normal Saline, followed by *prakshalana* with *Panchavalka Kashaya* was done. The wound was then packed with *Lajjalumoola* Ointment. Sterile dressing was done. Dressing was carried out till the complete wound healing.

Internally patient was prescribed with *Kaishora Guggulu* three times a day, *Mahamanjistadi kashayam* 15ml twice a day.

RESULTS

Proliferation of granulation tissue was seen within first four days of treatment. There was reduction in slough and discharge within a week. By 15th day, beefy red granulation tissue had covered the entire floor. Wound healed completely by 2 and half months of continuous dressing with *lajjalumoolataila* ointment.



Fig. 7 Day 1



Fig. 8 Day 1(application of Lajjalumoola ointment)



Fig. 9 Day 10



Fig. 10 Day 15



Fig. 11 Day 30



Fig. 12 Day 60



Fig. 13 Day 80

DISCUSSION

Acharya Shodala in the book of *Gadanigraha* mentions the use of *Lajjalumoolataila*. He states that this *taila* ensures quick healing of by avoiding *paka*. *Lajjalumoola taila* contains *Lajjalu (Mimosa pudica)* as its main ingredient. *Lajjalu* contains *tiktha, kashaya rasa, sheeta guna* which aids in *vranaropana*.^[8] *Dhanwanthari nighantu* attributes *shophagna, dahaghna* and *vranahara* properties to *Lajjalu*. Phytochemical studies on *M. pudica* have revealed the presence of phenols, alkaloids, non-protein amino acid (mimosine), flavonoids C-glycosides, sterols, terpenoids, tannins, and fatty acids. The phenolic components in the methanolic extract are likely what is responsible for the good wound healing action.^[9]

With this, there is also role of *Panchavalkala Kashaya* and internal medications i.e., *Kaishora Guggulu, Manjistadi Kashaya*.

Panchavalkala Kashaya - has combination of five astringent drugs named, *Nyagrodha (Ficus bengalensis Linn.)*, *Udumbara (Ficus glomerata Roxb.)*, *Ashwattha (Ficus religiosa Linn.)*, *Parisha (Thespesia populanea Soland ex correa)*, *Plaksha (Ficus lacor Buch-Ham.)*, which shows properties like antiseptic, anti-inflammatory, immune-modulatory, antioxidant, antibacterial, antimicrobial wound purifying and healing, astringent properties. So, this *Kashaya* was used for cleaning the wound.^[10]

Kaishora Guggulu - *Guggulu* possesses *Anabhishyandhi, Snigdha*, and *Sroto Shuddhikaraka* actions. Also, it has drugs like *Danti (Baliospermum montanum)*, *Triphala (Terminalia chebula Retz. Terminalia bellerica, Emblica officinalis)*, *Vidanga (Embelia ribes)*, which has

Rookshana property and are believed to act on *Prakupita Kapha Dosha* and *Medas*. *Tikshna* and *Ushna* drugs like *Pippali, Vidanga, Shunthi, Maricha, Danti*, and so on, are present in *Kaishora Guggulu* is stated to have a positive action on *Sroto Vishodhana*.^[11]

Manjistadi Kashaya - has many potent *Vatahara Dravyas* which has antioxidants like *Rubia cordifolia, Cedrus deodar, Hemidesmus indicus, Tinospora cordifolia, Zingiber officinale, Sidarhombifolia, Triphala, etc.* The antioxidant effect of the combination possibly makes it a very useful combination in the treatment of *Vrana*.

CONCLUSION

Hence the treatment adapted here can be considered as an effective protocol that can be followed in cases of non-complicated, nonhealing venous ulcer, based on *Yukthi* of the *Vaidya*.

Lajjalu (Mimosa pudica) is a very common shrub, the properties of which mentioned in the treatise of Ayurveda points towards wound healing potential of the drug. Moreover, the availability of this medicinal plant is abundant in India.

Therefore, it emerges as a favourable option for the assessment of the drug in subsequent studies. Hence, the use of *Lajjalumoolataila* is anticipated to be a safe, effective, and cost-efficient approach for the treatment of *Vrana*.

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