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Effectiveness of Nirgundi taila Vranabasti in the management of Dustavrana with special reference to Varicose Ulcer: A Case Study.

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Abstract: - *Vrana* which means discontinuity of the body tissue,and If the *Vrana* gets infective or not to heal for long time then it is called *Dustavrana*. Ulcer is the disruption in the continuity of covering epithelium i.e., skin or mucus membrane due to molecular death.A Varicose ulcer is a chronic wound caused by venous insufficiency, often occurring in the lower limb. It is classified as *Dustavrana* in *Ayurveda*, characterized by delayed healing, infection, pain, and tissue damage. Conventional treatments focus on compression therapy, antibiotics, and surgical interventions, but these approaches have limitations such as recurrences, drug resistance, and high costs.

This case study evaluates *Nirgundi taila Vranabasti*, an *Ayurvedic* wound healing therapy, in the treatment of a chronic varicose ulcer. A 44-year-old male presented with a non-healing ulcecr over the medial malleolus of the left leg, associated with pain, serous discharge, edema, and blackish skin discoloration for one year. He was treated with *Nirgundi taila Vranabasti*, in which medicated oil was retained on the wound for 30 min daily.

Results showed significant improvement: reduced pain, inflammation, and discharge within 14 days, and 80-100% healing with epithelialization by day 21.

This study heighlights *Nirgundi taila*'s antimicrobial, anti-inflammatory, and wound-healing properties, making it cost-effective alternative to conventional treatments for varicose ulcers.

Key words: Varicose ulcer, *Dustavrana*, *Nirgundi taila Vrnabasti*, Ayurvedic wound healing.

Introduction: - The concept of *Vrana* is as old as human life. *Vrana* can be defined as "*Vrana gatra vichurnane vranayateeti vrana* I"[1]- which means discontinuity of the body tissue. In Ayurvedic literature the *Vrana* is classified as *Sadyovrana* - which cause due to Trauma, and *Dustavrana* - If the *Vrana* gets infective or not to heal for long time then it is called *Dustavrana*[2]. Ulcer is the disruption in the continuity of covering epithelium i.e., skin or mucus membrane due to molecular death[3]. In the same manner *Vrana* is splitting or tearing of the body tissue which causing discoloration of the damaged area and formation of scar after healing, which remains till the body survives. Wound healing has been the major problem in clinical practice. Wound healing is natural process, there are many factors which can cause many complications and as well as hamper the process of healing, thus the wound healing management is one of the crucial problems in surgery till today. As without proper care even a minor and superficial injuries can lead to major complications, which may affect the personal and professional life of the person.

Scientific relevance of Varicose ulcers[4]:

A Varicose ulcer (Statis ulcer) is a chronic, non-healing wound those results from poor venous circulation. Due to valvular incompetence in the veins, blood pools in the lower extremeties, leading to increased venous pressure, fluid leakage, and tissue damage.

In modern medicine, Varicose ulcers are managed using:

- ✓ Compression therapy- to improve venous return.
- ✓ Wound debridement- to remove necrotic tissue.
- ✓ Topical and systemic antibiotics- to prevent infection.
- ✓ Surgical procedures- such as vein stripping or laser therapy.

However, conventional treatments are expencive, have a high recurrence rate, and may lead to complications such as antibiotics resistance.

Ayurvedic perspective- *Dustvrana* and *Vranabasti*

In *Ayurveda* chronic non-healing wounds are classified as *Dustavrana*. *Acharya Sushruta* describes *Shashti Upakramas* (60 treatment modalities) for wound management, including:

- ✓ *Vranabasti*- A technique where medicated oil is retained on the wound, facilitating cleansing, granulation, and epitelialization.
- ✓ Use *Krimighna* (antimicrobial) and *Vranaropana* (Wound-healing) herbs for faster recovery.

Nirgundi taila in wound-healing:

- ✓ Anti-inflammatory- Reduces swelling and pain.
- ✓ Antimicrobial- Prevents secondary infection.
- ✓ Analgesic- Relieves discomfort.
- ✓ Circulatory stimulants- Promotes angiogenesis and tissue regeneration.

Case report: -

Patient History

A 44-year-old male, diagnosed with hypertension (1 year ago), presented with:

- ✓ A non-healing ulcer over the left medial malleolus (1-year duration).
- ✓ Pain, foul-smelling serous discharge, and blackish skin discoloration.
- ✓ History of vericose veins for 11 years.

Local Examination: -

Inspection

- Position- left lower limb medial malleolus region.
- Size and shape- 5 X 3 cm, irregular in shape.
- Number- One ulcer.
- Edge- sloping edges.
- Discharge- serous discharge.
- Floor- unhealthy granulation tissue present.
- Odour- foul smell.
- Surrounding skin- blackish discoloration seen.

Palpation

- Tenderness- present.
- Bleed on touch- slightly present.
- Peripheral pulsations- palpable.

Lab Investigations: -

- CBC- within normal limits.
- RBS- 98mg/Dl.
- HIV, HBsAg,HCV - Non reactive.

Materials and Methods: -

Treatment Approach: *Nirgundi taila Vranabasti.*

The study was conducted on an OPD basis for 14 days.

Materials used:

- *Nirgundi taila* (Medicated oil)
- Normal saline (wound cleansing)
- Sterile gauze, Masha Pishti (dough wall for Vranabasti)
- Roller bandage, gauze pieces, pads.

Procedure-

1. Wound cleansing: Daily normal saline irrigation to remove debris.
2. *Vranabasti* therapy:

A *Masha Pishti* dough wall placed around the ulcer.
Lukewarm *Nirgundi taila* was poured into the enclosed area.
Oil was retained for 30 minutes, maintaining continuous warmth.
Dressing with *Nirgundi taila* was applied post-procedure.

3. Internal Medications:

Triphala Guggulu- 2 tablets BD (after food).
Gandhaka Rasayana- 2 tablets BD (after food.
Chandraprabha vati- 1 tablet BD (after food).

Result: -

Before treatment: Day-0



During treatment:



Vranabasti with *Nirgundi taila* Day-7 Day-14

After procedure:



Day- 21

- ✓ Day-7: Reduced pain, inflammation, and foul-smelling discharge.
- ✓ Day-14: Significant wound contraction, improved granulation tissue.
- ✓ Day-21: Complete healing, epithelialization, and pain relief.

Discussion: -

- Role of *Nirgundi taila* in wound healing: *Nirgundi taila* is rich in anti-inflammatory, antimicrobial, and analgesic properties, which address the key challenges in venous ulcer, including infection, pain, and delayed healing. Its ability to enhance local circulation aids in tissue regeneration and granulation.
- Scientific Mechanism of *Vranabasti:*
  - ✓ Retained medicated oil enhances deep absorption and localized action.
  - ✓ Continuous warmth improves microcirculation and angiogenesis.
  - ✓ Vata-Kapha pacification accelerates wound healing.
- Comparison to Conventional treatments: Unlike convetional dressings and systemic medications, *Nirgundi taila Vranabasti* offers a holistic approach, targeting both local symptoms and systemic imbalances. It avoids complications like antibiotic resistance and promotes natural healing without adverse effects.
- Clinical relevance: The therapy addresses critical aspects of venous ulcer management- reducing infection,enhancing granulation, and promoting rapid epithelialization. It is especially beneficial in chronic and non-healing ulcers.

Conclusion:

- ✓ *Nirgundi taila Vranabasti* effectively treats Varicose ulcers.
- ✓ Reduces pain, inflammation, and discharge.
- ✓ Promotes rapid granulation and epithelialization.
- ✓ Safe, cost-effective, and prevents recurrence.

Future scope:

Further clincal trails with a larger size and histopathological analysis can strengthen scientific validation.

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