



ROLE OF JALAUKAVACHARANA IN THE MANAGEMENT OF CHRONIC WOUNDS (DUSHTA VRANA): AN INTEGRATIVE APPROACH

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ABSTRACT

Dushta Vrana is a chronic non-healing wound described in Ayurvedic surgical literature and can be correlated with chronic ulcers in modern surgery. These wounds are characterized by delayed healing, infection, foul smell, discharge, discoloration, and unhealthy granulation tissue. Management of chronic wounds remains a challenge in contemporary medicine due to poor vascularity, infection, and metabolic disorders such as diabetes mellitus. Ayurveda describes a comprehensive approach for wound care including Shodhana (cleansing), Ropana (healing), and parasurgical procedures. Jalaukavacharana (leech therapy) is a form of Raktamokshana that is especially indicated in conditions associated with vitiated Rakta and Pitta Dosh. Medicinal leech saliva contains several biologically active substances such as hirudin, calin, bdellins, and hyaluronidase which possess anticoagulant, anti-inflammatory, analgesic, and antimicrobial properties. These substances improve microcirculation and promote wound healing. The present review discusses the Ayurvedic concept of Dushta Vrana and highlights the therapeutic role of Jalaukavacharana in chronic wound management.

Keywords: Dushta Vrana, Chronic Ulcer, Jalaukavacharana, Wound Healing, Ayurveda

INTRODUCTION

Wound management is an important part of surgery and has been elaborately described in Ayurvedic classics. Acharya Sushruta explained the classification, pathology, and management of wounds in detail in the Sushruta Samhita¹. According to Ayurveda, improper management of an acute wound or presence of Dosha vitiation leads to the development of Dushta Vrana which shows features such as foul smell, excessive discharge, pain, discoloration, and delayed healing². Chronic wounds such as diabetic ulcers, venous ulcers, arterial ulcers, and pressure sores are considered comparable conditions in modern medicine³. Jalaukavacharana is a parasurgical procedure mentioned under Raktamokshana therapy and is particularly useful in inflammatory and congestive conditions⁴.

Debridement is an essential component of wound therapy because non-viable tissue in the wound interrupts oxygen and nutrients delivery to healthy tissue which prevents healing. The primary goal of debridement is to remove all the devitalized tissue from the wound bed to promote wound healing and for removal of biofilm and bioburden⁵. For which use of biological agents like leeches and maggots can be taken as adjunct therapy. Acharya Sushruta has explained Shashti Upakramas⁶ in Dwivraniya Adhyaya of Chikitsasthana for comprehensive management of Vrana. Acharya Sushruta also advised Jalaukavacharana in Dushta vrana⁷. As Ayurveda got a remedy in the form of leech therapy as a para-surgical tool which acts like boon in various inflammatory conditions of skin and soft tissues. This procedure serves debridement of the wounds by the blood sucking and oozing phenomenon. Jalaukavacharana possesses high efficacy in both Vrana Shodhana and Ropana, hence can be used for management of Dushta Vrana. Wound bed preparation is the management of a wound in order to accelerate endogenous healing or to facilitate the effectiveness of other therapeutic measures⁸.

AYURVEDIC CONCEPT OF DUSHTA VRANA

A wound which becomes contaminated due to vitiation of Doshas and Dhatus and fails to heal properly is termed Dushta Vrana. According to Ayurvedic texts, Dushta Vrana presents with features such as severe pain, foul smell, discoloration, swelling, pus discharge, and unhealthy granulation tissue⁹. The pathogenesis involves vitiation of Vata, Pitta and Kapha along with Rakta Dhatu leading to impaired tissue healing.

AIM

To evaluate the role of Jalaukavacharana in the management of chronic wounds (Dushta Vrana).

OBJECTIVES

1. To study the Ayurvedic concept and pathogenesis of Dushta Vrana.
2. To assess the therapeutic effectiveness of Jalaukavacharana therapy.
3. To evaluate improvement in wound healing parameters after treatment.

MATERIALS AND METHODS

Study Design: Clinical observational study.

Sample Size: 20 patients suffering from chronic non-healing ulcers.

INCLUSION CRITERIA

- Patients aged between 20–60 years.
- Presence of chronic non-healing ulcer.
- Clinical features of Dushta Vrana.

EXCLUSION CRITERIA

- Severe anemia.
- Bleeding disorders.
- Malignant ulcers.

PROCEDURE OF JALAUKAVACHARANA

1. The wound area was cleaned with sterile saline solution.
2. A medicinal leech was applied directly over the affected area.
3. The leech was allowed to suck blood until it detached naturally.
4. After detachment, turmeric powder or sterile dressing was applied.
5. The therapy was repeated weekly depending upon severity.

ASSESSMENT CRITERIA

The therapeutic response was evaluated based on reduction in pain, swelling, discharge, size of ulcer, and development of healthy granulation tissue.

In present study, 16 out of 20 patients were from age group of 40-60 years. In analysis 14 (70%) patients were male and rest 6 (30%) patients are Females. Majority of the patients belonged to middle class i.e. 18(90%) whereas 2 (10%) patients were from poor class of society. 15(75%) patients had wound at lower extremity and 5 (25%) patients had wound at sacral region. 10 (50%) patients had controlled diabetes, 5 (25%) patient had Varicose vein and 6 (30%) patients had HTN while 2 (10%) patients doesn't have any history of other illness.

RESULTS

Significant improvement was observed in patients treated with Jalaukavacharana therapy. There was reduction in pain, swelling and discharge. Healthy granulation tissue formation was observed along with gradual reduction in wound size indicating enhanced healing.

DISCUSSION

Jalaukavacharana acts through multiple mechanisms. According to Ayurvedic principles, it removes vitiated blood and restores Dosha balance¹⁰. Modern research indicates that leech saliva contains hirudin which acts as a powerful anticoagulant improving blood circulation¹¹. Other enzymes such as hyaluronidase increase tissue permeability and reduce edema¹². Anti-inflammatory peptides present in leech saliva also contribute to pain relief and faster wound healing¹³.

CONCLUSION

Jalaukavacharana is an effective parasurgical procedure in the management of chronic wounds (Dushta Vrana). The therapy helps remove vitiated blood, improves microcirculation, reduces inflammation and promotes faster wound healing. Therefore, Jalaukavacharana can be considered a safe and effective integrative approach in chronic wound management.

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