

A CASE STUDY OF JEERAKGHRIT VIKESHIKA FOR LOCAL APPLICATION IN THE MANAGEMENT OF BURNS**Dr. Lakshya Dahiya^{*1}, Dr. Shikha Nayak², Dr. Priyanka Barange³**¹P.G Scholar, P.G. Dept. of Shalya Tantra, VYDS Ayurveda Mahavidhyalaya, Khurja, U.P.²Professor and Guide, P.G. Dept. of Shalya Tantra, VYDS Ayurveda Mahavidhyalaya, Khurja, U.P.³Assistant Professor P.G. Dept. of Shalya Tantra, VYDS Ayurveda Mahavidhyalaya, Khurja, U.P.

Article Received on 16 Dec. 2025,
Article Revised on 06 Jan. 2026,
Article Published on 15 Jan. 2026,

<https://doi.org/10.5281/zenodo.18265243>

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How to cite this Article: Dr. Lakshya Dahiya^{*1}, Dr. Shikha Nayak², Dr. Priyanka Barange³(2026). A CASE STUDY OF JEERAKGHRIT VIKESHIKA FOR LOCAL APPLICATION IN THE MANAGEMENT OF BURNS". World Journal of Pharmaceutical Research, 15(2), 704–711.
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ABSTRACT

Management of burn injuries remains a challenging task, as they often result in significant pain, disability, and cosmetic deformity. In India, the estimated annual incidence of burn injuries is approximately 6–7 million. With the rising burden of such injuries, Ayurvedic medicine has gained renewed importance in addressing current and emerging healthcare challenges. It is essential that Ayurvedic interventions demonstrate their effectiveness in promoting health as well as in preventing and treating diseases. Acharya Sushruta, the pioneer of Indian surgery, has described Dagdha Vrana (burn wounds) and their management in the 12th chapter of Sutrasthana. In modern society, the incidence of Dagdha (burn) is increasing due to stressful and fast-paced lifestyles. The present study, entitled “*A Case Study of jeerakghrit Vikeshika for Local Application in the Management of Burn,*” was

undertaken to evaluate the effectiveness of Vikeshika in burn care. Conventional treatments in modern medicine, such as silversulfadiazine, chlorhexidine acetate (bactigauze), have proven efficacy in burn management; however, they have certain limitations. These treatments may not adequately prevent complications such as eschar formation, hypertrophic scarring, post-burn contractures, and cosmetic disfigurement. To overcome these limitations,

Vikeshika was applied locally in cases of first- and second-degree burns. Clinical assessment was carried out using specific grading criteria based on the symptomatology of Dagdha Vrana, including Vedana (pain), Srava (discharge), Vrana Varna (wound color), Gandha (odor), eschar formation, discoloration, hypertrophic scarring, and contracture. Based on the observations and results obtained, a conclusion was drawn regarding the therapeutic efficacy of Vikeshika in burn management.

KEYWORDS: Burn, Dagdavrana, jeerakghrit Vikeshika Bandhana.

INTRODUCTION

India, as a developing country with limited organized burn care facilities and inadequate public safety awareness, has an estimated annual burn incidence of 6–7 million cases, making burn injuries one of the leading causes of trauma after road traffic accidents.^[1] An estimated 300,000 deaths occur worldwide each year due to burn injuries, and burns are among the leading causes of disability-adjusted life years (DALYs) lost in both developed and underdeveloped countries, accounting for approximately 10 million DALYs lost globally every year.^[2] A Burn is a wound in which there is a coagulative necrosis of the tissue. It is caused due to excessive exposure to thermal, chemical, electrical or radioactive agents. It is classified into three stages depending on percentage of burn like mild, moderate and major or severe.^[3] Burn wound healing is a complex process including inflammation, granulation, and remodeling of the tissue and depending on the degree of burn or the thickness of skin involved, the healing period may vary from 1 to 3 weeks^[4] Acharya Sushruta has classified Dagdha Vrana depending on the depth and severity of the burn, among which Durdagdha^[5] has similar presentations to that of second-degree burns wherein, the treatment is more emphasized over Sheetala Chikitsa (~cooling therapies)^[6] Acharya Sushruta also mentions Bandha for healing purpose^[7] in different forms like Vikeshika, Kavalika, Plota, Pichu.^[8] Among these Vikeshika is the cloth which contains Tila, Kalka, Madhu and Ghrita.^[9] The properties of Vikeshika Aushadha should not be too wet too dry or should not be placed unevenly and if done so their consequences would be excessive moistness in the wound bed, making the wound edges apart, disrupting the wound margins respectively^[10] Jeerakgrith Phala Shruti says it is an excellent vrana ropana, shoola shamak.

Case Details

The following is a case report of a patient aged 27 years, who was presented with the following details.

Chief Complaints

Firecracker burn over medial aspect of right leg below knees 5 days back , mild pain and burning sensation.

History of present illness

The patient was apparently normal before 5 days then he developed a burn wound over medial aspect of right leg below knees, water is used to control the burns immediately. Immediately taken to local govt. hospital took first aid (details of treatment not found) from there patient is referred to higher center for further management their Patient is treated for 5 days in burn ward (details of treatment not found) than visited Shalya tantra OPD of PLRD Hospital associated to VYDS Ayurveda Mahavidhyalaya, Khurja and admitted for further management with above mentioned complaints.

History of past illness

No H/O DM, HTN or any other medical / surgical illness in the past.

Personal History

- Diet : veg
- Appetite : low
- Bowel : Once a day, normal
- Micturition : 1-2 times, dark yellow
- Sleep : Disturbed.

Examination of the patient**General examination**

- GC : Fair
- Pallor : Absent
- Icterus : Absent
- Lymphadenopathy : Absent
- Cyanosis : Absent
- Clubbing : Absent
- Edema : Absent.

Vitals

- Pulse : 84 bpm, Regular

- BP : 130/90 mm of Hg
- Temperature : Afebrile, 97.4°F
- Respiratory rate : 18/min.

Systemic examination

- CVS : S1S2 heard.
- CNS : Intact, Conscious, oriented to time, place and person.
- P/A : Soft, non-tender, No Organomegaly
- RS : Bilateral equal air entry, Normal vesicular breath sounds, no added sounds present.

Wound Examination

- Location of burn – medial aspect of right leg below knees
- Degree of burn – second degree
- Percentage of burns – 5% of total body surface area according to rule of 9.

Investigations

- Hb : 12.1 gm/dl
- TC : 10,300 cells/cmm
- ESR : 46 mm/hr
- RBS : 74 mg/dl
- Sr. Creatinine : 0.7 mg/dl
- Blood urea : 3.0 mg/dl
- Sodium : 138 mmol/l
- Potassium : 4.9 mmol/l
- Chloride : 104 mmol/l
- Final Diagnosis: Dagdhavrana -second degree burns 5 %.

Procedure

Local approach

Pancha Valkala Kwatha Prakshalana followed by wound cleaning with normal saline and Jeerakghrit Vikeshika Bandhana.

METHODOLOGY

Preparation of Vikeshika




- Under aseptic measures

- Jeerakgrith is evenly impregnated over lenowave fabric.

Patient approach

- Written consent was taken.
- The patient was made to lie down in a supine position.
- Pancha Valkala Kwatha Prakshalana
- Wound cleaned with normal saline.
- Sterile Jeerakgrith Vikeshika is applied over the wound and removed after 24 hours.
- The same procedure is repeated every 24 hours and continued for 15 days.

DAYS	IMAGES OF DAGDHAVRANA
DAY 1	
DAY 10	

DAY 15	
DAY 30	
DAY 45	

RESULT

- Slough is reduced completely in 10 days.
- Re-epithelialization of the wound was seen.
- 100 % reduction in Burning sensation and pain.
- No discomfort during dressing change
- Normal pigmentation of the healed skin seen in 20 % of burn area.

DISCUSSION

- Ayurvedic literature emphasizes that Vikeshika should not be *Ati Snigdha* (excessively unctuous), *Ati Rooksha* (excessively dry), or *Vishama* (irregular in consistency). These quality standards described by Acharya Sushruta closely resemble the characteristics of an ideal contact layer dressing used in modern wound management.
- As per the analysis, Jeerakghrit Vikeshika is pathogen-free. It has been proven Ghrit plays an important role in wound healing as it helps to control infection and increase anti-microbial activity, oxygen release, angiogenesis, protease activity, and bacterial toxicity.^[11]
- Vikeshika has helped in maintaining uniformity in drug application and its sterility has lowered the risk of contamination.
- The dressings were changed once in 24 h, keeping in mind about the sensitive nature of burn wounds and to provide wound healing.
- According to the literature, second-degree burns typically require 2–3 weeks to heal and are also susceptible to secondary infections. However, in the present study, the wounds healed within 15 days, suggesting that in addition to possessing the qualities of an ideal contact layer dressing, the formulation played a significant role in reducing local *Shotha* by eliminating local *Dhatu Dushti*, thereby initiating the *Ropana* process, characterized by wound contraction and epithelialization.

CONCLUSION

The use of *Jeerakghrit Vikeshika* has demonstrated encouraging results, including early epithelialization, faster wound healing, prevention of contracture, and reduction in scar formation. It was also found to be more effective in alleviating itching, reducing swelling of the surrounding area, and minimizing foul odor and discharge. Further studies evaluating this formulation and other similar preparations in different types of wounds and ulcers are needed to establish their broader therapeutic potential.

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