



Original Research Article

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## HEALING BURNS NATURALLY: AYURVEDIC MANAGEMENT OF SUPERFICIAL PARTIAL-THICKNESS BURN WITH JATYADI TAILA

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### Abstract

Burn injuries are common traumatic lesions that cause significant tissue damage, infection risk, and long-term functional and aesthetic impairment if not treated effectively. Superficial partial-thickness burns require interventions that promote healing, reduce inflammation, prevent infection, and minimize scarring. In Ayurveda, *Dagdha Vrana* (burn wounds) are managed with various herbal formulations, among which *Jatyadi Taila* is prominently cited for its wound healing (*Vrana Ropana*), cleansing (*Shodhana*), and tissue regenerative (*Ropana*) properties.

This case study explores the clinical application and outcomes of *Jatyadi Taila* in managing a superficial partial-thickness burn on the dorsum of the hand. The intervention resulted in accelerated epithelialization, resolution of inflammation, and scar-free healing within 21 days. This highlights the relevance of Ayurvedic therapeutics in acute wound care and supports their integration into modern medical practice.

**Keywords:** Jatyadi Taila, Ayurveda, Burn wound, Vrana Ropana, Superficial burn, Wound healing

## Introduction

Burn injuries, primarily thermal in origin, represent a major public health concern worldwide. They can range from superficial to full-thickness wounds and often lead to pain, fluid loss, secondary infections, and long-term complications if not managed effectively. Second-degree or superficial partial-thickness burns affect both the epidermis and superficial dermis, presenting with pain, erythema, blistering, and serous exudate.

In Ayurvedic medicine, such burns fall under the category of *Dagdha Vrana*. Management focuses on pacifying *Pitta* and *Rakta* doshas, reducing pain and inflammation, and promoting tissue repair. *Jatyadi Taila*, a classical oil-based polyherbal formulation from *Bhaishajya Ratnavali*, is widely used in clinical practice for treating chronic ulcers, burns, and infected wounds due to its broad-spectrum antimicrobial, anti-inflammatory, antioxidant, and wound-healing properties.

This case study documents a successful therapeutic outcome using *Jatyadi Taila* in a patient with a second-degree thermal burn, reinforcing the clinical utility of Ayurvedic wound care formulations.

## Case Report

### Patient Information

- **Age/Sex:** 35year-old male
- **Occupation:** Businessman
- **Medical History:** Non-diabetic, normotensive, no comorbidities
- **Chief Complaint:** Burn on the left hand BY fire cracker on Deepawali festival
- **Date of Presentation:**

### Clinical Findings

- **Site:** Dorsum of the left hand
- **Extent:** ~3% Total Body Surface Area (TBSA)
- **Burn Depth:** Superficial partial-thickness burn
- **Symptoms:** Pain (VAS 7/10), redness, edema, blisters, serous discharge
- **Vitals:** Stable
- **No systemic signs of infection**

## Management Plan

### Initial 48 Hours:

- Local wound cleaning with sterile distilled water
- Blisters left intact to preserve dermal layer integrity
- No antibiotics or corticosteroids were used

The patient had initially attempted self-management using *Ratanjot* (*Alkanna tinctoria*) based topical application, presumably for its traditional wound healing and anti-inflammatory properties. However, he reported no significant symptomatic relief or visible improvement in the wound condition. Due to continued discomfort and lack of healing response, he presented to our Outpatient Department (OPD) after a period of three days for further evaluation and treatment

### Jatyadi Taila Application Protocol (Day 3–21):

- Blisters de-roofed on Day 3 under sterile conditions
- *Jatyadi Taila* gently warmed and applied directly over the wound
- Covered with sterile gauze and bandaged twice daily
- Dressing changes done under aseptic conditions
- Observed for signs of infection, sloughing, or hypersensitivity

### Formulation Composition (Key Ingredients)

Ingredient	Botanical Name	Action
<i>Jati</i>	<i>Jasminum officinale</i>	Anti-inflammatory, analgesic
<i>Haridra</i>	<i>Curcuma longa</i>	Antimicrobial, antioxidant
<i>Daruharidra</i>	<i>Berberis aristata</i>	Astringent, antiseptic
<i>Manjishtha</i>	<i>Rubia cordifolia</i>	Blood purifier, healing promoter
<i>Nimba</i>	<i>Azadirachta indica</i>	Antibacterial, antifungal
<i>Tila Taila</i> (base)	<i>Sesamum indicum</i>	Emollient, carrier, supports skin barrier

## Clinical Observations

Day	Observation
1-2	Pain, redness, blistering; wound moist with clear fluid
3	Blisters de-roofed, healthy pink dermis exposed; Taila started
5	Pain reduced (VAS 3/10), early granulation visible
7	Redness subsiding, no discharge; granulation progressing well
10	Significant epithelialization, wound area reduced by ~60%
14	>90% epithelialization, scab formation started
21	Complete healing with intact skin, no contracture or scarring

## Photographic Evidence:



**Figure 1: Pre-treatment Wound Image**



**Figure 2: Post-treatment (Day 10)**

## Discussion

Burn wound healing requires a multiphase process of inflammation control, cellular proliferation, and tissue remodeling. Complications like secondary infection, oxidative stress,

and delayed epithelialization commonly occur. In this context, traditional herbal formulations with multi-target actions are highly beneficial.

*Jatyadi Taila*, with its diverse phytochemical constituents (alkaloids, flavonoids, tannins, and essential oils), addresses several critical wound healing parameters:

- **Anti-inflammatory effects:** *Haridra* and *Daruharidra* reduce inflammatory mediators and enhance local circulation.
- **Antimicrobial action:** *Nimba* and *Haridra* prevent microbial colonization, thus reducing infection risk.
- **Promotion of angiogenesis and granulation:** *Manjishta* and *Jati* enhance neovascularization and fibroblast proliferation.
- **Epithelial regeneration:** The lipid-rich base (*Tila Taila*) maintains moisture and allows optimal cell migration and tissue integrity.

This case supports prior research such as that by Thakur et al. (2012) and Singh et al. (2016), which showed faster epithelialization and reduced infection rates in wounds treated with *Jatyadi Taila*. In this patient, healing was achieved within 21 days without the use of modern antibiotics, which reflects the formulation's therapeutic potential in uncomplicated burns.

## Conclusion

This case study clearly illustrates the efficacy of *Jatyadi Taila* as a standalone topical intervention in the management of superficial partial-thickness burns. The formulation demonstrated excellent results in terms of pain relief, infection control, granulation, and complete epithelial healing, without any adverse effects or scarring. Given the rising concern over antibiotic resistance and the need for cost-effective primary care solutions, *Jatyadi Taila* offers a promising, evidence-backed option in wound care especially in rural and resource-limited settings.

Future large-scale clinical studies with biochemical, histological, and microbiological parameters are essential to further validate and standardize Ayurvedic formulations for global clinical use.

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