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# THERAPEUTIC POTENTIAL OF KAPARDIK BHASMA AND ERANDA TAILA IN THE MANAGEMENT OF DURDAGDHA VRANA: A CASE REPORT

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#### ABSTRACT :

Burn injuries are a common occurrence in daily life and require timely and effective treatment to prevent complications such as scarring and impaired healing. Ayurveda offers a vast array of herbal formulations for managing burn wounds, including the use of Kapardik Bhasma and Eranda Taila, both known for their wound-healing and regenerative properties.

A 24-year-old patient presented with a history of burn over the dorsal aspect of the left hand, accompanied by pain, boil formation, and discoloration measuring approximately 4 x 5 x 5 cm. The treatment approach involved the topical application of Kapardik Bhasma and Eranda Taila twice daily for 15 days. By the seventh day, the wound showed significant improvement, with approximately 70% epithelialization. By the end of the treatment period, complete healing was observed, with restored skin integrity. During the one-month follow-up, the skin had fully remodeled, showing the presence of natural skin appendages.

This single case report highlights the potential of Kapardik Bhasma and Eranda Taila as effective Ayurvedic formulations for the treatment of second-degree scald burns, demonstrating promising results in wound healing and skin regeneration.

**KEYWORDS**: Durdagdha Vrana, Burn wound healing, Second-degree scald burns, Kapardik Bhasma, Eranda Taila, Ayurvedic wound management, Topical application

# INTRODUCTION

Acharya Sushruta categorized emergency medical treatments under *Atyayik Chikitsa*, with *Dagdha (burn injuries)* being one of the significant conditions requiring immediate attention. Burns have been recognized as a common medical emergency since ancient times, often leading to serious complications, including morbidity and mortality. Globally, burns rank as the fourth most common trauma, following traffic accidents, falls, and interpersonal violence<sup>1</sup>. According to the *World Health Organization (WHO)*, burns are a critical public health concern, responsible for approximately *180,000 deaths annually*<sup>2</sup>. In India, the estimated yearly incidence of burns ranges between *6 to 7 million cases*, highlighting the urgent need for effective treatment strategies<sup>3</sup>. Burns are classified based on the extent of skin involvement, with *second-degree scald burns* being among the most frequently encountered<sup>4</sup>. These burns affect the *epidermis and part of the dermis*, leading to painful blisters and necessitating specialized wound care, often involving topical antimicrobial agents and appropriate dressings<sup>5</sup>.

In Ayurveda, second-degree burns align with Durdagdha (second-degree burns) as described by Acharya Sushruta<sup>6</sup>. Traditional Ayurvedic formulations offer holistic approaches for burn wound management, with Kapardik Bhasma and Eranda Taila being notable remedies known for their wound-healing and skin-rejuvenating properties.

This report presents the *successful treatment* of a *superficial second-degree scald burn* using *Kapardik Bhasma and Eranda Taila*, demonstrating their effectiveness in promoting rapid healing and minimizing long-term skin damage.

## PATIENT INFORMATION

A 24-year-old female patient presented with a history of a burn injury over the dorsal aspect of her left hand. She reported symptoms of pain and the presence of a boil, along with noticeable discoloration at the affected site. On physical examination, the location of the burn was confirmed to be on the left hand's dorsal surface. The wound measured approximately  $4 \times 5 \times 5$  cm and was circular in shape. There was no discharge noted from the wound;

however, an odor was present. Induration was observed extending about 1 cm around the wound margins. Palpation revealed tenderness in the area. The depth of the burn was found to be superficial, and there was no active bleeding.

## THERAPEUTIC INTERVENTION

During the initial visit, the burn wound was carefully cleansed using normal saline, and any devitalized tissue was mechanically debrided. Following this, *Kapardik Bhasma* and *Eranda Taila* were applied topically to the affected area. The treatment regimen involved *twice-daily wound cleansing* with normal saline, followed by the *application of Kapardik Bhasma and Eranda Taila* for a period of *15 days*.

#### FOLLOW – UP & OUTCOME

Following the application of *Kapardik Bhasma* and *Eranda Taila*, the burning sensation at the wound site began to subside by the *second day* and was completely alleviated by the *third day*. By the *third day*, serous discharge had ceased entirely. The itching associated with the wound progressively diminished and was *completely relieved by the seventh day*.

Wound healing initiated as early as the second day, with significant epithelialization observed. By the seventh day, approximately 70% of the wound was covered with newly regenerated tissue, exhibiting a healthy pink epithelial layer. By the end of the 15th day, the wound had completely healed without any signs of contracture.

During the *one-month follow-up*, the affected area showed *excellent skin recovery*, with restored pigmentation and the presence of *skin appendages*, indicating optimal wound healing.

#### DISCUSSION

The treatment approach for burn injuries depends on their severity. *First and second-degree burns*, classified as minor when affecting *less than 10% of the body surface area*, are typically managed with *topical antimicrobial ointments* such as *silver sulfadiazine* or *neomycin*. These burns are then covered with *light gauze or paraffin gauze*, though each dressing method has its own limitations in wound care<sup>7</sup>.

Acharya Sushruta describes Durdagdha Vrana Chikitsa as employing either Ushna (hot) or Sheeta (cold) therapies depending on the condition. In cases where Durdagdha Vrana presents with plushta-like symptoms, Ushna Chikitsa is recommended for effective management.

Eranda Taila possesses Madhura, Katu, and Kashaya rasa, with Madhura vipaka and Ushna veerya, making it Vatakaphashamak and Pittavardhak. It also functions as a Vedanashamak (pain reliever) and Vata Anulomak, promoting balance in the body. The Madhura rasa further contributes to tissue healing and regeneration.

Similarly, Kapardik Bhasma exhibits Katu rasa, Katu vipaka, and Ushna veerya, which aligns well with Bhrajak Pitta involvement in Twak (skin physiology) and the role of Pitta and Rakta in Agnidagdha Vrana (burn injuries). Kapardik Bhasma undergoes Bhavna (processing) with Kumari rasa and Nimbu rasa, where Kumari rasa has Tikta (bitter), Snigdha (unctuous), Pichhila (mucilaginous), and Sheeta (cooling) properties, and Nimbu rasa exhibits Tikta (bitter), Laghu (light), Krimighna (antimicrobial), and Sheeta (cooling) properties. These properties enable Kapardik Bhasma to act as Dahashamak (soothing burns) and Raktapitta Shamak (balancing Pitta disorders).

The local application of Kapardik Bhasma and Eranda Taila helps in reducing symptoms of Durdagdha Vrana and promotes healthy tissue and skin formation, making them effective Ayurvedic formulations for burn wound management.

From a *pharmacological and chemical perspective*, the therapeutic effects of these formulations can be attributed to their *bioactive compounds*. *Ricin* exhibits *antimicrobial properties*, while *Ricinoleic acid* aids in *preventing or reducing water loss from the outer skin layer*, ensuring hydration and barrier protection. *Palmitin* contributes *antibacterial and anti-inflammatory effects*, whereas *Sterine* further enhances *anti-inflammatory action*, reducing swelling and discomfort. Additionally, *Calcium carbonate* plays a crucial role in *stimulating angiogenesis*, *collagen synthesis*, *and extracellular matrix protein production*, facilitating *overall tissue granulation and wound healing*.

### CONCLUSION

This case highlights the successful healing of a superficial partial-thickness scald burn following the topical application of Kapardik Bhasma and Eranda Taila, with no adverse effects observed throughout the treatment period. The intervention demonstrated significant progress in wound healing, including early epithelialization, reduced inflammation, and complete skin regeneration within the prescribed timeline.

The therapeutic properties of Kapardik Bhasma, processed with Kumari and Nimbu rasa, contributed to soothing the burn, reducing Pitta and Rakta imbalances, and accelerating tissue regeneration. Similarly, Eranda Taila, known for its Ushna veerya and Vatakaphashamak properties, played a crucial role in pain relief, moisturization, and enhanced healing. Together, these formulations helped restore skin integrity, minimized the likelihood of scarring, and ensured optimal skin remodeling, as observed during the one-month follow-up period.

However, since this is a single case report, further clinical studies involving a larger population are required to validate and establish the efficacy of Kapardik Bhasma and Eranda Taila as a reliable treatment for second-degree scald burns. A well-structured clinical trial or observational study would provide more comprehensive insights into their therapeutic potential, ensuring scientific validation alongside traditional Ayurvedic wisdom.

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