

Non-Surgical Management of Second-Degree Burn Wound with Homoeopathic Medicines – A Case Report

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Abstract—Burn injuries are among the most challenging cases encountered in everyday clinical practice. This case report presents a 65-year-old male patient who sustained an accidental second-degree partial-thickness burn injury over the right lower leg. The patient complained of severe burning pain, itching, redness, swelling, serous discharge, and restricted movement of the affected limb. Initial conventional treatment did not provide satisfactory improvement. Homoeopathic management was initiated with Echinacea 30 orally along with Echinacea dressing for the first 3 days, followed by Calendula 30 orally with Calendula dressing for 4 days, and a single dose of Cantharis 200. Marked improvement was observed within 7 days, with healthy granulation tissue formation, reduction in pain and inflammation, and progressive wound healing. The Modified Naranjo Criteria for Homoeopathy (MONARCH) score was 9, indicating a probable causal relationship between the homoeopathic intervention and clinical improvement.

Index Terms—Second-degree burn, Homoeopathy, Wound healing, Cantharis, Echinacea, Calendula

I. INTRODUCTION

A burn is an injury to the skin or other organic tissues caused by heat, chemicals, electricity, radiation, or friction, resulting in coagulative necrosis of tissues. Burns are classified according to the depth of tissue involvement:

First-degree burn: Involves only the epidermis

Second-degree burn: Involves the epidermis and varying thickness of the dermis

Third-degree burn: Involves epidermis, dermis, and subcutaneous tissue

Fourth-degree burn: Extends into fascia, muscle, or bone

Second-degree burns are characterized by pain, blister formation, redness, edema, and serous discharge. Proper management is essential to prevent infection, reduce pain, and promote healing with minimal scarring.²

II. PATHOPHYSIOLOGY

Initial Tissue Damage

Thermal, chemical, or electrical injury causes protein denaturation, leading to destruction of cell membranes and cellular death. Blood vessels are damaged, resulting in reduced blood supply to the affected tissues.²

Jackson's Zones of Burn

Burn wounds are classically divided into three zones:³

Zone of Coagulation

Central area of maximum damage

Irreversible tissue necrosis

Zone of Stasis

Reduced blood flow

Potentially salvageable with proper treatment

Zone of Hyperemia

Increased blood flow

Reversible tissue injury
 Inflammatory Response
 Release of inflammatory mediators such as histamine, prostaglandins, and cytokines causes:
 Vasodilatation
 Increased capillary permeability
 Edema formation
 Fluid Loss and Hypovolemia
 Leakage of plasma from capillaries may result in:
 Fluid loss
 Electrolyte imbalance
 Burn shock in severe cases

III. CLINICAL EVALUATION

The extent of burn injury is assessed by calculating the percentage of Total Body Surface Area (TBSA) involved. The Rule of Nines is commonly used in adults.¹

- Head and neck – 9%
- Each upper limb – 9%
- Each lower limb – 18%
- Anterior trunk – 18%
- Posterior trunk – 18%
- Perineum – 1%

For smaller burns, the patient’s palm approximately represents 1% TBSA. Burns involving:
 Less than 10% TBSA are considered minor
 10–20% TBSA are moderate
 More than 20% TBSA are severe
 Accurate assessment is important for prognosis and treatment planning.

IV. CASE REPORT

A 65-year-old male patient presented with complaints of burn injury over the right lower leg (shin region) following accidental spillage of hot tea. The patient complained of severe burning pain, itching, redness, swelling, and restricted mobility of the affected limb. The patient had previously taken conventional treatment but reported no significant improvement. On examination, the wound was present over the lower third of the right leg extending up to the ankle. The wound measured approximately 15–17 cm in length and 3–4 cm in width. The wound bed appeared red and moist with healthy granulation tissue. Minimal slough was present. The wound edges were irregular but well defined. The surrounding skin showed hyperpigmentation and healing changes. Mild serous discharge was present without active bleeding. The surrounding area was red, congested, swollen, and painful.

V. HOMOEOPATHIC MANAGEMENT





The patient was treated with the following sequential homoeopathic regimen:
 Echinacea 30 orally with Echinacea tincture dressing for the first 3 days
 Followed by Calendula 30 orally with Calendula tincture dressing for 4 days
 Cantharis 200 single dose for promoting healing
 Subsequently, Calendula tincture dressing was continued on alternate days along with placebo for 7 days.

VI. REPERTORIAL RESULT

Remedy Name	Canth	Caust	Carbn-s	Bry	Phos	Sep	Sulph	Calc	Lach	Rhus-t	Nat-c
Totally	9	6	5	5	5	5	5	5	5	5	4
Symptoms Covered	4	3	4	3	3	3	3	2	2	2	3
Kingdom	🐾	🐾	🐾	🌿	🐾	🐾	🐾	🐾	🐾	🌿	🐾
[Murphy] [Skin] Burning, pain: (195)	1	2	1	3	3	2	3	2	3	3	1
[Murphy] [Skin] Vesicles, skin:itching: (45)	2	1	1	1	1	2	1	3	2	2	2
[Murphy] [Skin] Red, spots, skin:Inflammation, after: (1)				1							
[Murphy] [Skin] ITCHING, skin: Burning: Painful parts: (1)											
[Murphy] [Skin] Blisters, skin: Scalding, of skin, from: (2)			1								
[Murphy] [Clinical] BURNS, general, fire, chemicals, ailments, from: Scald..	3	3	2								
[Murphy] [Skin] Blisters, skin: Burn, as from a: (11)	3				1	1	1				1
[Murphy] [Clinical] Sloughing, tissue, from trauma: Wounds, in: (1)											

Cantharis for fast healing.

VII. FOLLOWUP

Date	Prescription	Follow up
23/06/2023	Echinacea 30 (4-0-4) × 2 days with Echinacea tincture dressing	
26/06/23	Slough formation, inflammation, bleeding, serous discharge Calendula 30 (4-0-4) × 3 days with Calendula tincture dressing	
30/06/23	Granulation tissue formation, no active bleeding, pain reduced, mobility improved Cantharis 200 single dose with Calendula dressing	
02/07/23	Healing initiated, inflammation absent Calendula tincture dressing with placebo × 7 days	

<p>09/07/23–15/07/23</p>	<p>Progressive healing with reduction in wound size Continued follow-up</p>	
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VIII. CLINICAL OUTCOME

Significant reduction in pain and burning sensation
 Reduction in inflammation and serous discharge
 Formation of healthy granulation tissue
 Improved mobility of the affected leg
 Progressive epithelialization and wound contraction
 Near complete healing with minimal scarring by the fourth week
 The MONARCH score was calculated as 9, suggesting a probable relationship between the homoeopathic intervention and the observed clinical improvement.

IX. DISCUSSION

Burn wound healing involves inflammation, granulation tissue formation, collagen deposition, and epithelialization. Homoeopathic medicines such as *Calendula officinalis*, *Cantharis vesicatoria*, and *Echinacea angustifolia* are traditionally used in wound management for their possible antiseptic, anti-inflammatory, and healing-promoting properties.^{4,6}

Calendula is known for promoting healthy granulation tissue and reducing suppuration.⁵ *Cantharis* is commonly indicated in burns associated with intense burning pain and vesication.⁴ *Echinacea* is considered useful in septic conditions and infected wounds due to its supportive action in tissue healing.⁶ This case demonstrated satisfactory healing without complications, suggesting that individualized homoeopathic treatment may serve as a useful adjunctive therapeutic approach in selected burn cases.

X. CONCLUSION

This case demonstrates rapid clinical improvement in a 65-year-old patient with a second-degree partial-thickness burn managed with a sequential homoeopathic regimen consisting of *Echinacea* 30, *Calendula* 30, and a single dose of *Cantharis* 200. Significant reduction in pain, burning sensation, inflammation, and restricted movement was observed within 7 days. The MONARCH score of 9 supports a probable causal relationship between the

homoeopathic intervention and the positive clinical outcome. Further systematic clinical studies are recommended to evaluate the role of homoeopathy in burn wound management.

XI. DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patient consent forms. In the consent form, the patient's guardian has given permission for clinical information and images to be reported in the journal. The guardian understands that names and initials will not be published and efforts will be made to maintain anonymity; however, complete anonymity cannot be guaranteed.

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Nil.

Conflicts of Interest

There are no conflicts of interest.

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