E-ISSN: 3068-5052
Journal of Regenerative Medicine & Biology Research

ATHENAEUM SCIENTIFIC PUBLISHERS

*Case Report*

# Case Study: Accelerated Healing and Instantaneous Pain Relief of Severe Pediatric Plantar Burns Using a Novel Biological and Botanical Topical Therapy ("Ace Schnelle")

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Citation: Abdelkarim A, et al. Case Study: Accelerated Healing and Instantaneous Pain Relief of Severe Pediatric Plantar Burns Using a Novel Biological and Botanical Topical Therapy ("Ace Schnelle"). J Reg Med Biol Res. 2026;7(1):1-4.

https://doi.org/10.46889/JRMBR.2026.7106

Received Date: 04-03-2026

Accepted Date: 16-03-2026

Published Date: 24-03-2026



## Abstract

Background: Deep partial-thickness and full-thickness burns in pediatric patients typically require prolonged wound care, often complicated by severe pain and necessitating surgical debridement or skin grafting. We present a case of an 8-year-old female with severe plantar burns treated non-surgically with a novel therapeutic complex.

Intervention: The patient was treated with "Ace Schnelle," a proprietary topical therapy comprising a pico-extract of placenta, Mesenchymal Stem Cells (MSCs), Panax ginseng, Platella (mucilage-rich botanical extract), 1% polyclonal antibodies and adrenal extract. The protocol consisted of applying the formulation as a film to the affected area 4 times daily.

Outcomes: The patient experienced instantaneous pain relief following the first application. Complete epithelialization, auto-debridement of necrotic tissue and restoration of normal skin architecture were achieved within 3 weeks without surgical intervention.

**Keywords:** Burns In Pediatric Patients; Mesenchymal Stem Cells; Panax Ginseng; Platella

## Introduction

Burn injuries in pediatric patients remain a significant clinical concern due to their potential to cause severe pain, prolonged healing and long-term functional impairment. Deep partial-thickness and full-thickness burns often require intensive wound care and are frequently associated with complications such as infection, scarring and contracture formation. In many cases, surgical interventions, including debridement or skin grafting, are required to facilitate wound closure and restore tissue integrity. Burns involving the plantar surface of the feet present a particular challenge because they may interfere with mobility and weight-bearing functions during the healing process.

Recent developments in regenerative and biologically active topical therapies have introduced alternative strategies aimed at enhancing wound healing and reducing the need for surgical management. These therapeutic approaches may promote tissue regeneration, reduce inflammation and accelerate epithelialization. This report describes the management of a pediatric patient with severe plantar burns treated using a novel topical therapeutic complex.

## Case Report

An 8-year-old female patient presented with a severe thermal and chemical burn involving the plantar surfaces of both feet. On initial clinical assessment prior to treatment, visual examination revealed a combination of deep partial-thickness (second-

degree) and localized full-thickness (third-degree) burn injuries. The plantar surfaces demonstrated extensive areas of thick, black necrotic eschar accompanied by significant epidermal sloughing and blister formation. Marked erythema with purpuric involvement was also observed in the surrounding tissues.

Further assessment indicated compromise of the deep dermal layers, suggesting substantial tissue damage. The severity and depth of the burn injury placed the patient at high risk for secondary infection, extensive scar formation, contracture development and significant acute pain (Fig. 1) [1-5].


**Figure 1:** Development of the case in 3 weeks.

**Therapeutic Intervention and Protocol**

To avoid the morbidity associated with skin grafting and to manage the acute pain, the patient was initiated on a non-surgical topical regimen using "Ace Schnelle".

- *Dosing Protocol:* The formulation was applied topically as a continuous film over the affected burn areas 4 times daily
- *Immediate Clinical Observation:* Upon application of the very first dose, the patient reported an instantaneous and complete cessation of pain

**Pharmacological Profiling and Mechanisms of Healing**

The remarkable dual outcome-instant pain relief and rapid 3-week regeneration-can be attributed to the specific molecular pathways targeted by the formulation's components:

*A. Platella (Botanical Extract) and Instant Pain Relief*

- *Chemical Structure:* Composed primarily of high-molecular-weight mucilaginous polysaccharides (D-mannose and D-glucose residues)
- *Role in Healing:* This is the primary driver of the instantaneous pain relief. The polysaccharides immediately form a breathable, protective hydrocolloid film over the burn. By instantly sealing the exposed and damaged cutaneous nerve endings from air currents and mechanical friction, it physically blocks nociceptive (pain) signaling. Furthermore, it maintains an optimal moist wound environment crucial for cell migration.

*B. Pico-Extract of Placenta and Mesenchymal Stem Cells (MSCs)*

- *Chemical Structure:* A highly heterogeneous matrix of cytokines, growth factors (e.g., VEGF, EGF, TGF-$\beta$), structural glycosaminoglycans like Hyaluronic Acid and lipid-bilayer-encapsulated exosomes from the MSCs
- *Role in Healing:* MSCs act as regenerative signaling centers. They secrete paracrine factors that stimulate massive angiogenesis to restore perfusion to the necrotic plantar tissue. The placental extract provides the structural scaffolding and growth factors necessary to accelerate rapid fibroblast proliferation, driving the 3-week re-epithelialization

*C. Panax Ginseng*

- *Chemical Structure:* The primary active compounds are Ginsenosides, which are triterpene saponins featuring a dammarane steroid backbone (e.g., Ginsenoside Rg1, $C_{42}H_{72}O_{14}$)
- *Role in Healing:* Ginsenosides act as potent localized antioxidants. They enhance the migration of keratinocytes to the wound bed and stimulate Type I collagen synthesis, which is critical for restoring the mechanical strength of the foot's weight-bearing surface without hypertrophic scarring

*D. Polyclonal Antibodies (1%)*

- *Chemical Structure:* Immunoglobulins (primarily IgG), which are large glycoproteins consisting of four polypeptide chains linked by disulfide bonds
- *Role in Healing:* The topical 1% polyclonal antibodies provide immediate, passive local immunity. By neutralizing local pathogens and their toxins at the burn site, they prevent the necrotic tissue from converting into a deeper, life- threatening infection, entirely bypassing the need for systemic antibiotics

*E. Extract of Adrenals*

- *Chemical Structure:* Contains glucocorticoids such as Cortisol ($C_{21}H_{30}O_5$) and catecholamines
- *Role in Healing:* Burns trigger a destructive local inflammatory cascade leading to extreme edema and tissue ischemia. The topical adrenal glucocorticoids provide potent, localized anti-inflammatory action. They inhibit phospholipase A2, reducing the synthesis of inflammatory prostaglandins, thereby halting progressive tissue damage and rapidly reducing foot swelling

**Clinical Course and Outcome**

Photographic evidence and clinical logs demonstrate an extraordinary resolution:

- *Day 1:* Immediate, complete cessation of pain upon the first film application
- *Week 3 (Follow-up):* The thick necrotic eschar fully auto-debrided. There is complete epithelialization of the plantar surface with the restoration of normal dermal color and texture. No hyper-granulation or hypertrophic scarring is present.

## Conclusion

The 4-times-daily topical application of the "Ace Schnelle" biological and botanical complex resulted in instantaneous pain relief and the rapid, scarless healing of a severe pediatric plantar burn within 21 days. The formulation's ability to immediately seal nerve endings while providing targeted immunosuppression, passive immunity and stem-cell- driven regeneration presents a highly promising, painless, non-surgical paradigm for severe burn management.

## Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

## Funding Statement

This research did not receive any specific grant from funding agencies in the public, commercial or non-profit sectors.

## Acknowledgement

None.

## Data Availability Statement

Not applicable.

## Ethical Statement

The project did not meet the definition of human subject research under the purview of the IRB according to federal regulations and therefore, was exempt.

## Informed Consent Statement

Informed consent was taken for this study.

## Authors' Contributions

All authors contributed equally to this paper.

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