



速必一軟膏用於燒傷慢性傷口之個案報告

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The effect of topical treatment with Fespixon® Cream on Chronic Burn Wound healing: A Case Report and Literature Review

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Introduction

Flame burn victims are forced to live a life of long-lasting morbidity. Delayed wound healing does not only affect patients physically, but also mentally. Various treatment plans are used to treat chronic wounds but the best treatment is still under debate. Fespixon® cream, a topical agent with the ingredients of Plectranthus amboinicus and Centella Asiatica, is introduced recently as an alternative management for chronic wounds through macrophage subtypes regulation and betterment of anti-inflammation. Numerous studies reported Fespixon® cream healing effect on diabetic wounds with good healing outcome but currently no study was reported to investigate its effect on burn wounds. This case report and literature review aims to present the therapeutic impact of Fespixon® cream on chronic burn wound of a 26-year-old female who was flame burned during an experiment.

Case Report

A 26-year-old female burn victim presented to our Plastic Surgery clinic with the chief complaint of a chronic wound over her left post auricular area. Tracing back her history, she was a Chemistry teacher who experienced a 13% TBSA (Total Body Surface Area) second to third degree fire related skin burns in the face, bilateral upper limbs and anterior chest during an accident in the experiment class. She had been admitted in another burn centre where first aid and management were given. She visited our facility due to a chronic unhealed skin wound over her post auricular area. During physical examination, a 2nd degree superficial burn wound was noted behind her left ear with redness and blister formation (Fig. 1). We provided the wound with moisturizer and wound dressing with Silicone-Faced Dressing, ALCARE SI-AID®. Despite long-term care for weeks, the wound healing progress was slow with very limited improvement. Regarding her skin wound, Fespixon® cream was applied twice per day after well sterilization. First, the burn wound was cleansed by normal saline solution. Then, Fespixon® cream is applied so that most possible area of the wound is covered. The patient received wound dressing at home by herself and the condition of the wound is recorded by a camera. This wound dressing method was done for 3 weeks continually. The healing process started with the decrease in serous secretion (Fig. 2) and followed by formation of granulation tissue and epithelialization of the wound (Fig. 3). Three weeks after Fespixon® cream initiation, the wound healed uneventfully with acceptable aesthetic outcome (Fig. 4).

References

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Discussion

Fespixon® cream is a type of topical medication containing Plectranthus amboinicus and Centella Asiatica. Firstly, Fespixon® cream has been proved as a macrophage regulating drug which promotes wound healing. It inhibits M1 polarization and restores M2 macrophages by reversing M1-mediated M2 suppression. This helps alleviate M1 associated inflammation and creates an environment favouring the M1 to M2 transition. NLRP3 inflammasome is an intracellular multimeric protein complex which plays a crucial role in the pathogenesis of various inflammatory diseases. Leu et al. showed that PA-F4, which is an extract from Plectranthus amboinicus, displayed an inhibitory activity on the activation of NLRP3 inflammasome through different pathways. The inflammasome inhibitory and anti-inflammatory effects of Plectranthus amboinicus help create a healthier environment for burn wounds to proceed from inflammatory phase to the proliferation and remodelling phases, in another words, speed up wound healing process. Liu et al. and Brinkhaus et al. show that Centella Asiatica can help increase wound collagen synthesis, as well as proliferation and migration of fibroblasts and thus accelerates the re-epithelization and contraction of the wound. Moreover, Centella Asiatica was also responsible for anti-inflammatory and anti-oxidative activity according to severe studies. Centella Asiatica is also able to stimulate fibroblasts proliferation, increases collagen synthesis and decreases the level of MMPs which in turns promote wound healing. This topical medication creates an ideal wound environment by lowering inflammation through M1 and M2 macrophages subtypes regulation. The ingredients, Plectranthus amboinicus and Centella Asiatica, minimize tissue inflammation and neutralize excess MMPs level respectively for wound healing enhancement

Conclusion

Fespixon® cream is an effective and affordable alternative approach to chronic unhealed burn wounds. To our best knowledge, this is one of the first case reports of the Fespixon® cream healing impact on burn injuries with satisfactory outcome. As such, in a patient who presented with a chronic burn wound, Fespixon® cream may be a potential consideration on the list of topical agents.



Fig 1: A 2nd degree superficial burn wound with poor healing for 3 months behind the left ear.



Fig 2: Six days after treatment, show decreased serous secretion with no sign of progression



Fig 3: Ten days after Fespixon cream usage showing formation of granulation tissue and epithelialization of the wound



Fig 4: Wound healed uneventfully with acceptable aesthetic outcome at 18 days of Fespixon cream use