

THERAPEUTIC HOTLINE

Topical effectiveness of kiwifruit versus fibrinolysin ointment on removal of necrotic tissue of full-thickness burns in male rats

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ABSTRACT: Formation of necrotic tissues is a major issue affecting treatment of full-thickness burns. This study was designed to compare topical effectiveness of applying kiwifruit versus fibrinolysin on removal of necrotic tissue of burns. Ten adult male Wistar rats were randomly assigned to three groups. For group 1, the right-side wounds were treated with kiwifruit and the other side with fibrinolysin. For group 2, the wounds on the right side were treated with kiwifruit or fibrinolysin, and the left sides were kept as control group 2. All wounds in group 3 were considered as control group 1. The control wounds were left to heal naturally. In each group and for each wound, the time of debridement were noted. The results indicated that for the wounds where kiwifruit was applied, the average time for removal of dead tissue was 5.7 days, which is significantly shorter than the average 18.5 days it took for treatment with fibrinolysin ($p = 0.02$). However, there were no significant differences between control wounds 1 and 2. Findings of the present study can open new horizons and provide a new treatment modality for patients with deep burns.

KEYWORDS: fibrinolysin, full-thickness burn, kiwifruit

Introduction

Debridement is the process of removing dead tissue from wounds, which has a long history in wound

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care and is a vital part of it. This process helps profoundly in the faster recovery of burning wounds (1). Surgical, mechanical, autolytic, biological, and enzymatic are the most direct and rapid method for removal of necrotic tissues (2). Enzymatic debridement is the application of exogenous enzymes to the wound bed in order to degrade necrotic tissue without harming viable, granulation tissue (3).