

ABSTRACT

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Background: A burn wound is a type of injury to flesh or skin caused by heat, electricity, chemicals, friction, or radiation. Burns can cause swelling, blistering, scarring, infection and, in serious cases, shock and even death. Proper wound dressings are needed to prevent serious infections to the wounded parts. Honey has been proven to aid wound healing and is beneficial for in first and second degree burn. Honey possesses antioxidant and antimicrobial properties, as well as anti-inflammatory activity. In this experiment, the author would like to use honey as an alternative wound dressing.

Methods: This research will be using the design of Post Test Only Controlled Group Design to study the honey as burn healer. All rats are first be shaved and burnt by pulling upward the skin and then placing a hot 100g with 10 mm diameter metal rod (soaked in 100°c boiled water) for about 6 seconds on the marked and shaved part of its body. All the rats are given treatment on honey, silver sulfadiazine and as controlled on each group. All the dressings were taken off only on the day 5 of experiment (final day) without any changings to all treatment nor the dressings.

Results: On day 5 (final day), most wounds in honey treatment group have already dried up, thick and dried crust skin formed and left only small area of raw surface. While the wounds from Silver sulfadiazine group, still have moist area of wounds and presence of slough. Finally, for the controlled group all wounds are still wet, wounded, mild edema, large area of wet surface, reddish and no epithelialization seen. The statistical result shows that p value is $p < 0.0001$ and this means that it has significant difference.

Conclusion: From this research, it can be concluded that the application of honey to second-degree burn injury is beneficial in the wound healing process.

Keywords: burn wound, alternative healing, honey