

Abstract

Skin is the largest organ of the integumentary system and has various functions. Burns are one of the most common skin injuries and there is an essential need for a cure with lowest side effects and most efficacy. This study was aimed to show ostrich oil is an effective choice for burn wound healing. Ostrich oil has antioxidant and anti-inflammatory properties and also easily can penetrate skin. Still now many studies are showing emu oil or Australian ostrich oil can accelerate the wound healing process but this oil is rare and expensive so wasn't used as therapeutic way for wound healing. This study was aimed to show wound healing effects of ostrich oil and compared this oil with silver sulfadiazine ointment as a standard therapeutic way for burn wound healing.

In this study we selected 30 rat and then made a scaled wound in their backs. Rats divided in three groups and each group respectively cured with vaseline, silver sulfadiazine and ostrich oil. We took photo from wounds in 0, 3, 7, 14 and 21 day. Then we calculated area of wounds and evaluated wound area changes. Rats euthanized 21 days after inducing burn injury and histopathology samples were collected from burn wounds. Data from macroscopic and microscopic evaluations were analysed respectively with one-way ANOVA followed by the tukey test and kruskal wallis test.

Results of this study shows that wound closure percentage of ostrich oil group is higher than other two groups but statistically significant difference cannot be found between groups. Also histopathological results wasn't statistically significant but in most of parameters ostrich oil group had better score.

It seems that ostrich oil hasn't any effect on burn wound healing but this results may be because of small statistical population so we advise this study repeat with bigger statistical population.

Key words: ostrich oil, burn, wound healing, rat



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Ostrich oil effects on skin burn wound healing in rats

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