



Preparation, survey and comparison of the combined herbal cream in healing second-degree burns with silver sulfadiazine 1% in the rat

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Background and objectives: Severe heat damage is one of the most physical and psychological damages that can harm a person. The severe burns are the most dangerous diseases due to the need for multiple surgical procedures and extensive rehabilitation. Second degree burns occur when the layers under the skin are damaged. Required treatment heavily depends on burns degree. There are many local therapies for treating injuries caused by burns. Among these treatments, silver sulfadiazine 1% is widely used in patients. Dressing with this cream, affects the repair of keratinocytes and delays wound healing. The purpose of this work was to provide an appropriate plant cream that in addition to treating burns would not have the side effects of chemical. **Methods:** Prepared extracts of *Quercus infectoria*, *Curcuma longa*, *Camellia sinensis*, *Sesamum indicum*, *Aloe vera* and *Althaea officinalis* were mixed with beeswax, stearyl alcohol and cholesterol with indirect heat to form creams. **Results:** Herbal cream reduced the treatment period by 30% compared to the silver sulfadiazine cream. **Conclusion:** Medicinal plants can be used as suitable sources for obtaining a wide range of medications and active drug combinations. The mixing plant extracts into the cream, caused cooling, decreasing treatment duration, relief of chronic pain during the treatment and prevented burn infections.

Keywords: *Aloe Vera*, herbal cream, *Quercus infectoria*, second-degree burn, silver sulfadiazine