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## Wound Healing Effect of Hydroalcoholic Extract of *Salvadora Persica* (Miswak) on Physically Induced Second-Degree Burn Wound in BALB/c Mice

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### Abstract

**Introduction:** Different Scholars have mentioned a lot of benefits for *Salvadora Persica*(SP) compounds. The Present study was conducted aiming at evaluating the effect of hydroalcoholic extract of SP on second-degree burn healing in Mice.**Materials and Methods:** The present study population was 60 mature mice (BALB/c). The mice were divided into 5 equal groups. Groups 1 and 2 were treated by means of the application of 5% hydroalcoholic extract of SP and 10% extract of it, respectively; regarding group 3 received silver sulfadiazine ointment. Group 4 was treated using Vaseline. Group 5 received no treatment. Then, samples from the injured sites was gathered, and wound healing was evaluated histopathologically.**Results:** Inflammation and infiltration of neutrophils and lymphocytes in the treatment groups, i.e. the groups to which 5% and 10% SP extract was applied, demonstrated a significant decrease, compared to the vaseline and sham groups ( $P<0.01$ ). Moreover, the number of fibroblasts increased followed by collagen production, epithelialization and new hair follicles formation at the wound margins on the 10<sup>th</sup> and 14<sup>th</sup> day in the 5% and 10% SP extract groups significantly increased compared to vaseline and sham groups ( $P<0.05$ ). The number of fibroblasts and the density of collagen tissues in the group treated with 10% SP extract even showed a significant increase compared to the groups treated with 5% SP extract and silver sulfadiazine on the 14<sup>th</sup> day.**Conclusion:** It was found that hydroalcoholic *salvadora Persica* extract accelerated the healing of second-degree burn injuries in BALB/c mice.

**Key Words:** *Salvadora Persica*, Wound, Burn, Skin, Mice