

Original Paper

Effect of combination of topical ointment of aqueous extract of grape seed (*Vitis Vinifera*) and Eucerin on wound healing in diabetic rats

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Abstract

Background and Objective: Diabetic mellitus is one of the main health problems of diabetic subjects skin wound. This study was done to evaluate the effect of topical ointment produced from aqueous extract of grape seed (*Vitis Vinifera*) plus Eucerin on wound healing in diabetic rats.

Methods: In this experimental study, 48 male Wistar rats were randomly allocated into control, first, second and third experimental groups. Animals in control group were received only buffer citrate, interaperitonally. Diabetes was induced by 55 mg/kg/bw of Streptozotocin in three experimental groups. Skin wound (2×3 cm²) was created in left side of the lumbar region in three experimental groups. Animals in experimental group 1 did not received any treatment. The wounds of animals in experimental group 2 were treated with topical ointment of Eucerin twice a day. The wounds of animals in experimental group 3 were treated with topical ointment of aqueous extract of grape seed plus Eucerin with a ratio of 3:1 for 21 days twice a day. Wound healing process was evaluated using macroscopic and histological method.

Results: The mean area and percentage of wound after treatment was significantly reduced in experimental group 2 and 3 in compare to experimental group 1 (P<0.05). The percentage of improvement wound healing was significantly increased in experimental groups 2 and 3 in compare to experimental group 1 (P<0.05). Synthesis of collagen fibers was increased in experimental group 3 in compare to experimental group 2 and 1.

Conclusion: Topical application of aqueous extract of grape seed with ointment of Eucerin accelerates skin wound healing in diabetic rats.

Keywords: Diabetes mellitus, Wound healing, Grape seed, Eucerin, Rat

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