Original Paper

Local effect of *Aloe barbadensis Miller* gel on skin incisional wound healing in Rat

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Abstract

Background and Objective: *Aloe barbadensis Miller* plant was used for treatment of wound healing in traditional medicine. However it has different and sometimes contradictory effects. In this study the effect of *Aloe barbadensis Miller* gel on skin incisional wound healing in Rat was investigated.

Materials and Methods: In this experimental study, forty male wistar Rats were randomly divided into 4 experimental groups including: sham operated, control and two treatment groups. Under deep anesthesia, an incision (3cm, full thickness) was made over skin of the back in Rats. The animals of sham group received no treatment. Control group received topical cold cream twice per day (from beginning to end of experiment) and treatment groups' similarliy received topical *Aloe barbadensis Miller* gel mixed with cold cream (25% and 75%). For computing the percent of wound healing, the area of wound measured at the days 2, 4, 6, 8, 10, 12, 14 and 16 after beginning of experiments.

Results: *Aloe barbadensis Miller* gel at concentration 25% and 75% significantly improved wound healing at 12th day and 8, 10 and 12th days, respectively in comparison with control group.

Conclusion: This study indicated that local administration of *Aloe barbadensis Miller* gel, accelerate the skin incisional wound healing in Rat. This healing is related to the gel concentration.

Keywords: Incisional wound healing; Skin; *Aloe barbadensis Miller* gel, Rat