



ETHANOL EXTRACT OF *Struthanthus vulgaris* ACCELERATES SKIN WOUND HEALING IN RATS

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Struthanthus vulgaris (SV) is a mistletoe species that belongs to the Loranthaceae family and has been used in folk medicine to treat disorders of the respiratory system, management of inflammation and to clean ulcers [1,2]. The aim of this study was to investigate the effect of topical application of *Struthanthus vulgaris* ethanol leaf extract (SV) ointment in the *in vivo* wound healing processes [1,2]. Four full thickness excision wounds were made on the dorsum cervical region of each rat. Immediately after the surgery and daily afterwards on the same hour, the animals were treated only with the ointment (control group) or 5% SV ointment (treated group) [3]. After 2, 7, 14, and 21 days of surgery, five rats of each group were euthanized and the reepithelialization was evaluated by the rate of wound closure. The wounds were harvested and stored for histological studies, total protein content analysis, neutrophil infiltrate and cytokines production determination [3]. Treated group with 5% SV ointment presented faster and higher reepithelialization compared to control group. After 2 and 5 days, the wound closure area of treated group reached 28,9% and 34,5% compared to only 18,2% and 27,7% in the control group, respectively. Interesting, by day 21 the wounds of SV treated rats were completely closed, whereas the wounds of control rats had not yet completely healed. SV group also altered the production and release of pro- and anti-inflammatory cytokines at the wound biopsy. The total protein concentration and the analysis of neutrophil infiltrate (myeloperoxidase levels) also showed a reduction in the treated group comparing with the control group. Histological analysis from the skin revealed significantly decreased cellularity in the wounds of SV treated rats at days 2 and 7 compared to controls. Our data demonstrated that topical application of 5% SV ointment enhances wound closure in the full-thickness excisional model in Wistar rats. This wound healing properties can be partially explained on the cellular level and therefore, may have a potential as a healing promoting agent for cutaneous injuries.

OBS: Rats Wistar were used after the approval of the Ethics Committee on the use of animals from Vila Velha University (CEUA- UVV) (according to number 288/2013).

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