THE EVALUATION OF HEALING POTENTIAL IN PLANT EXTRACTS IN INDUCED WOUNDS IN MICE.

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Introduction: There are few Brazilian plant species which are employed for therapeutic purposes. Despite the prevalence of allopathic substances and synthetic drugs in the treatment of various diseases, it is a growing interest in phytotherapy as an alternative for wound healing. Objective: To evaluate the activity of fractionated extracts of Achyrocline alata in excisional skin wound in mice skin. Material and Methods: The crude extract of A. alata was partitioned with organic solvents to obtain fractions of hexane, chloroform, ethanol-water and ethyl acetate. It were identified the main substances through of thin layer chromatography. The HaCat (human keratinocytes) and L929 (mouse fibroblasts) cell line were used for cytotoxic screening of the plant extracts, characterized by 50% inhibition (IC50) using 3-(4,5–Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay. Wound healing was studied in animals housed individually in cages with food and water ad libitum. Five groups, each containing 13 animals were recorded as follows: control (Natrasol gel), ethanol extract, hexane extract, chloroform extract and ethyl acetate extract. The extracts were dissolved in Natrasol® gel (0,01 m/m). Treatment was applied daily and areas of injury Were measured with manual caliper for 13 days. Results: The phytochemical study showed higher amounts of flavonoids and phenolic derivatives in the ethyl acetate fraction when compared to other. It was also observed that none of the partitions is cytotoxic to cell lines tested. In the in vivo test, on the thirteenth day, all wounds were closed; there wasn’t statistical difference between treatments. Complete epithelization of lesions was observed histologically. Conclusion: The extracts of A. alata can positively affect the healing process, since there are cell proliferation and reepithelialization.

Key words: wound healing, plant extracts, mice

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