TOPICAL ANTI-INFLAMMATORY ACTIVITY OF ETANHOLIC EXTRACT AND ETHYL ACETATE FRACTION OF *Tabernaemontana catharinensis*

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Introduction and objectives - Inflammatory skin disease including contact dermatitis may have a high impact on the quality of life of patients. However, the treatments, such as corticosteroids, to treat chronic inflammatory diseases of the skin, produces adverse effects, which limits its long-term use, being necessary new therapeutic alternatives. Thus, this study aims to investigate the topical anti-inflammatory activity of the ethanolic extract and the fraction of *Tabernaemontana catharinensis* in models of croton-oil induced inflammation in the mice skin.

Materials and methods - Male Swiss albino mice (25-30g) were used. The ear edema was induced by topical application of croton oil (1 mg in 20 uL acetone) following treatments. The edema was measured in an acute and chronic model of skin inflammation and was expressed as the increase of ear tickness (µm). The myeloperoxidase enzyme activity was evaluated to estimate the infiltration of inflammatory cells.

Results and conclusions - In an acute contact dermatitis model croton oil-induced, ethanolic extract (0.0001 – 1 µg/orelha) and ethyl acetate fraction (0.0001 – 10 µg/orelha) of *Tabernaemontana catharinensis* reduced ear edema, with an ID\text{50} value of 0.007 (0.003 – 0.014) µg/ear and a maximum inhibition of 95\%\(\pm\)1% (1 µg/ear) and an ID\text{50} value of 0.001 (0.0004 – 0.004) µg/ear and a maximum inhibition of 86\%\(\pm\)6% (10 µg/ear), respectively. Dexamethasone 1mg/ear, used as a positive control, inhibited the edema at 100%. MPO activity was inhibited, with a maximum inhibition of 94\%\(\pm\)5% (1 µg/ear) and 93\%\(\pm\)4% (10 µg/ear)., respectively, while dexamethasone reduced in 98\%\(\pm\)2%. In a chronic contact dermatitis model, the ethanolic extract reduced ear edema with a maximum inhibition of 41\%\(\pm\)8%. MPO activity was inhibited, with a maximum inhibition of 58\%\(\pm\)14%, while dexamethasone reduced in 96\%\(\pm\)3%.
According to studies using animal models of skin inflammation, *Tabernaemontana catharinensis* can be effective to treat skin inflammatory diseases when applied topically.

**Key words** *Tabernaemontana catharinensis*, inflammation, edema.

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