

Anti-inflammatory potential of seven plant extracts in the ultraviolet erythema test. A randomized, placebo-controlled study.

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BACKGROUND: Phytotherapeutics are widely used in medicine. The aim of this study was the evaluation of the anti-inflammatory potential of seven medical plant extracts using the ultraviolet (UV) erythema test.

PATIENTS AND METHODS: Randomized, placebo-controlled study on 40 healthy subjects. Test areas on the upper back were irradiated with the 1.5 fold UV-B minimal erythema dose (MED). Formulations of *Aloe vera*, *Chamomilla recutita*, *Hamamelis virginiana*, *Melissa officinalis*, *Mentha arvensis*, *Melaleuca alternifolia*, *Coriandrum sativum* as well as 1% hydrocortisone acetate and 0.1% betamethasone valerate as positive controls and unguentum leniens as vehicle control were applied under occlusion on the irradiated areas and on non-irradiated area on the contralateral side. Photometric assessment of the erythema was performed before the application of the substances (t0), at 24 hr (t1) and at 48 hr (t2).

RESULTS: *Aloe vera*, *Chamomilla recutita*, *Melissa officinalis*, *Melaleuca alternifolia* and *Coriandrum sativum* showed an anti-inflammatory effect compared to UV-control and unguentum leniens. However, the results were only statistically significant for *Aloe vera*. All tested plant extracts were well tolerated.

CONCLUSION: *Aloe vera* possesses an anti-inflammatory effect on UV-induced erythemas.

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