Experimental induced wound cicatrisation after highly diluted products treatment

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ABSTRACT

Introduction: Skin is an attractive target to study extracellular matrix, due to abundance in Connective tissue. In cases of injuries the first step is an inflammatory reaction and subsequent the healing that involves several changes in the matrix. These changes are fundamental to inflammatory cells activities allowing healing. Highly diluted products were shown to facilitate inflammatory mediators and to activate immune cells in vivo and in vitro, thus it can be effective to wound healing.

Aims: This study aims to evaluate highly diluted products effects on inflammation and cicatization process.

Methodology: Three compounds (M8 (Aconitum napellus 20dH, Arsenicum album 18dH, Asa foetida 20dH, Calcarea carbonica 16dH, Conium maculatum 17dH, Ipecacuanha 13dH, Phosphorus 20dH, Rhus toxicodendron 17dH, Silicea 20dH, Sulphur 24dH, Thuja occidentalis 19dH), M1 (Chelidonium majus 20dH, Cinnamom 20dH, Echinacea purpurea 20dH, Gelsemium sempervirens 20dH plus all M8 compounds) and Curcuma cH30 – simple product), were manipulated as a gel and applied on mice dorsal flank after incision and suture (approximately 1 cm and three points), for 3 consecutive days. After the treatments the scars were evaluated macroscopically, the animals were killed, the skin samples collected, fixed and processed for Hematoxilin-Eosin (HE) and Masson Tricromic (to observe the collagen fibers type I). The slices were analyzed and images collected by a light microscope Olympus BX51 with camera attached Olympus DP72.

Results: It was observed a higher and faster rate of tissue epithelization in the treated groups after three days of gel-product application. This could be observed in lower rates in the control group (no treatment) - Figure 1 and 2). Regeneration and organization of connective tissue were proportional to epithelization the treated groups. We also observed evidences of changes in amount of neutrophils and fibroblasts, resulting in changes in the healing period. Analyses for these confirmations are in progress.

Keywords: cicatrisation, gel-product, M1, M8, Curcuma
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