

# Comparative study of healing in burns treatment based on ulmo honey (Eucryphia cordifolia) and oral vitamin C in guinea pig (Cavia porcellus) versus hydrogel [Estudio comparativo de la cicatrización en quemaduras con tratamiento en base a miel de Ulmo (Eucryphia cordifolia) y vitamina C oral versus hidrogel en cobayos (Cavia porcellus).]

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A burn is a traumatic injury resulting in local and systemic injury with oxidative changes. Honey has antioxidant, anti-inflammatory and antibacterial properties. At the same time, among other benefits vitamin C improves the epidermal barrier and reduces wound contraction. The aim of this study was to evaluate morphologically the effect of regimen with Ulmo honey + vitamin C in guinea pigs and compare its healing and debriding potential with Hydrogel + tull in injuries caused by type B burns at day 10 post-injury. We used 15 guinea pigs (Cavia porcellus) distributed in groups A (Ulmo honey and vitamin C topical, oral), B (hydrogel-tull), and control (0.9% saline). Wound debridement was observed daily and wound treatment was performed daily until biopsies were obtained at day 10 post-injury. Four 4 um sections were stained with HE, Masson's trichrome and PAS. In group A there was rapid debridement when compared with groups B and Control. Treatment study presented advanced proliferative phase at day 10 post-injury with vascularized tissue, and presence of collagen fibers and fibroblasts. The epidermis was completely regenerated, presenting a visible basal lamina by PAS staining. Group B presented an initial proliferative fibroblastic phase, showing acute dermal elements. Epithelialization phase was completed in only 50% of the samples. Ulmo honey + vitamin C substances have been shown to be effective as treatment material in healing of type B burns in guinea pig skin.

Burns

Healing

Honey

Vitamin C