EFFECTS OF TLC-AG DRESSINGS ON SKIN INFLAMMATION IN MICE

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Aim: The TLC-Ag dressings, a combination of TLC (Technology LipidoColloid) and silver salts, are used to promote wound healing in wounds with risks or signs of local infection, thanks to the antimicrobial properties of silver salts. Nanocrystalline silver dressings, also used to improve wound healing, present both antimicrobial and anti-inflammatory effects. Therefore, the goal of this study was to investigate the anti-inflammatory effects of TLC-Ag dressings in a model of skin inflammation (SI) induced by repeated skin application of TPA in mice, in comparison with Silcryst Nanocrystalline dressing (SN), the topical corticosteroid cream 0.05% (DC)* and Gauze.

Methods: Daily treatments of mice began 7 days after the start of induction of SI and lasted for 7 days. A macroscopic score of SI was performed daily during the treatment period until sacrifice on Day 15. Skin samples were taken for histopathological analysis to determine the microscopic score of SI.

Results: TLC-Ag reduced significantly the macroscopic score of SI from Day 10 in comparison with Gauze and TLC, similarly to SN containing Nanocrystalline silver and the topical corticosteroid cream*, a corticoid cream (positive control), which presents the best anti-inflammatory effects. No significant differences were observed between TLC and Gauze. TLC-Ag reduced significantly the microscopic score of SI in comparison with TLC and Gauze, similarly to SN but significantly less than DC.

Conclusions: These results demonstrate that TLC-Ag dressings present significant anti-inflammatory effects on skin inflammation. These dressings can clearly improve wound healing, thanks to both antimicrobial and anti-inflammatory properties.

*Desonide cream (DC)