WOUND HEALING

FIRST EXPERIENCE OF AUTOLOGOUS FIBROBLASTS FOR THE TREATMENT OF CUTANEOUS LOXOSCELISM

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Background: Evidence in Cutaneous Loxoscelism (CL) is scarce and of low methodological quality being insufficient to elaborate a therapeutic consensus.
The ulcer CL is difficult to treat; it usually takes more than 40 days to heal, but may be extended up to 360 days, with discrete aesthetic results. Autologous Fibroblasts (AF) is a novel therapy that has been used successfully in bioengineering as skin substitutes for surgical wounds, burns, diabetic ulcers, pressure ulcers and other aesthetic purposes. Interestingly, there are no reports of their use in CL.

Observation: A case of CL with an ulcer in the thigh of 13 cm x 7 cm that did not heal after 50 days of treatment with Dapsone. Three weekly applications of AF 100,000/cm2 were performed on a biocompatible porous polymer matrix, which were obtained from the patient's retroauricular area and cultured for 3 weeks. It was decided to test this therapeutic alternative for the potential of AF to actively construct the architecture of the skin and its proven efficacy in wounds and burns as previously mentioned. The results were encouraging, since the healing process was constant and complete, and the quality of newly formed tissue was satisfactory, with good aesthetic results. This is explained by the transcendental role of these cells in the healing process, having the ability to produce extracellular matrix proteins, differentiate into myofibroblasts to generate wound contracture and finally synthesize type I collagen.

Key message: This case represents the first report of Autologous Fibroblasts in Cutaneous Loxoscelism with optimal response, representing a biocompatible, safe and simple option for tissue regeneration. Many of the possible indications of AF are currently under investigation and we believe that this experience sets the stage for future studies in CL.