

XI International Congress on Aesthetic and Anti-Aging Medicine

30 September - 2 October 2011



Facial skin ageing : a new treatment option through mechano-stimulation

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Introduction: Skin mechanical characteristics are closely related to those of the dermis. Indeed, by its compressibility and extensibility, this layer absorbs shocks and gives to the skin its essential properties of elasticity, spontaneous tension and firmness. Cutaneous tissue is subjected to both internal and external forces. Mechanical forces have an impact on fibroblasts through the mechanotransduction which is the conversion of mechanical signals into biochemical response. This response is characterized by the modulation of genes expression coding for extracellular matrix components (Type I, III, V,.. collagens, elastin...) but also for degradation enzymes (MMP) and their inhibitors (TIMP). The stimulations produced by the treatment heads send a message to the dermal fibroblasts and triggering modification of their behavior within the extracellular matrix.

Material and Methods: 10 subjects, 9 women (61.6 +/- 6.5 years) and 1 man (52 years) were undergone 16 sessions of 30 minutes of Endermolift, 2 sessions per weeks for 8 weeks. They were evaluated by Clinical quotation, Cutometre® for skin elasticity, Videocapileroscopy for Skin microcirculation, Skin Radiation and Self-evaluation Questionnaire before and after the end of the treatments

Results: The results showed the significant development of skin firmness ($p < 0.05$), skin Radiance ($p < 0.05$), capillary density ($p < 0.01$) and self subject satisfaction.

Conclusion: Mechano-stimulation is a non invasive, non aggressive and safe technique delivered by flaps micro-beats at different frequencies which can improve significantly the elasticity, microcirculation and radiance of the skin.

Key-words: Endermolift, mechano-stimulation, rejuvenation, microcirculation, skin firmness, skin radiance.