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Heterologous collagen type I as new injectable for skin rejuvenation

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Introduction: Heterologous collagen has known over the past years for wound healing and skin regeneration. Here it was micronized and put into sterile vials for injective usage. Through rehydration of the vial, collagen undergoes spontaneous hydrolysis, producing collagenous amino acids and tripeptides. Tripeptides (mainly Pro-Hyp-Gly) are biologically important as growth factor, leading to improve fibroblasts anabolism and cell cycle, and inhibit metalloproteinase of extracellular matrix. Furthermore, amino acids support collagen production according to Michaelis-Menten kinetics.

Materials & Methods: Three different amount of equine collagen were previously tested and a 100 mg formulation was chosen for better results and less side effects as patient discomfort and skin irritation. The collagen powder was reconstituting with 5 ml of saline solution and injected intra-dermally at 2cm point-by-point meso technique. Punch biopsies and photography documentation were collected before and after treatment, a self administered questionnaire was recorded by patients.

Results: Treatment was effective in skin rejuvenation goals. Biopsies revealed a significant improve of fibroblasts number and dermal matrix proteins, leading in some case to normalize the same matrix framework, also increasing dermal papillae height and skin thickness. Visual and self-evaluation show better features of skin hydration, brightness and texture. Side effects were similar to other injective treatments as transient bruising, redness and heating.

Conclusions: This novel product has interesting effects on skin regeneration, consisting mainly in stimulating an increase in the number of fibroblasts. The new and younger fibroblasts produce new collagen, which is expected to be predominantly of type III.

Biography

Andrea Corbo is a Doctor specialized in Dermatology and Professor at the University of Camerino. He has decades of experience in aesthetic medicine and is point of reference for the training of doctors in this area also as Director of the Medical Spa, organization dedicated to clinical and training in the field of aesthetic medicine and dermatology.

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