

Aesthetic and Cosmetic dermatology, and Lasers

Combination Of Different Molecular Weights Hyaluronic Acid Able To Reduce The Signs Of Aging In The Dermis

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INTRODUCTION:

Injectable Hyaluronic acid (HA) have been heavily used to recover skin volumes, however HA topical applications are challenge due to lower skin penetration. To improve skin conditions and restore dermis different HA molecular weight could be used in cosmetic formulas, but investigational studies are steel necessary.

OBJECTIVES:

The aim of this study was to evaluate the efficacy of a combination of different molecular weights HA to reduce the signs of aging mainly by dermis improvement.

MATERIALS AND METHOD:

10 volunteers applied studied formula with an association of HA with different molecular weight in a water gel formula, twice a day for 56 days. Clinical grading, biophysics measurements and self-assessment questionnaires were conducted after 28 and 56 days of use to evaluate product efficacy.

RESULTS:

Statistically significant reduction in TEWL showing that the product was able to improve skin barrier, due to the high molecular weight HA. Dermis evaluation by ultrasound showed efficacy to significantly reduce thickness of dermo epidermal junction degraded with age. Viscoelasticity analysis showed significant reduction on retraction time of skin and increase on skin elasticity. These results suggested that low molecular weight HA were able to penetrate dermis and restore dermo epidermal junction and improve dermis conditions. Clinical evaluation showed improvements on skin hydration and reduction of wrinkles. Self-assessment questionnaires demonstrated that the subject perceived the skin moisturized, softness and luminous, firm and pores reduction.

CONCLUSIONS:

Combination of different molecular weights hyaluronic acid in topical application were able to reduce the signs of aging in the dermis and epidermis. This study demonstrated important results of the topical application of hyaluronic acid, demonstrating that the association of different HA significantly improve skin conditions mainly by means of dermis, showing that the use different HA could be more than moisturizing for skin, helping to treat signs of aging.