# Soft Aesthetic Medicine:

# A pilot Study

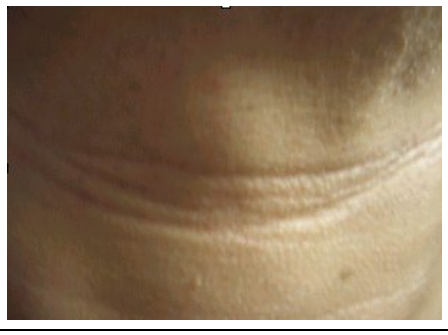
**A protocol for the face rejuvenation utilizing non surgical methodologies and carried out by means of a pool of active substances applied by a new transdermal delivery technology.**

The first signs of skin aging , that begin around age 30, are often characterized by fine lines or tiny wrinkles and they are a tangible sign of a diminished elasticity and hydration of the skin.
With the progressive aging a 20% reduction of the dermis is noticed. This is due to the decreased fibroblasts activity (fibroblasts are responsible for the Hyaluronic acid production) and a decreased amount of elastic fibers that are also, from a structural stand point, less efficient and have even shorter ammminoacids chains. These ammminoacids are broken somewhere in their chains and more easily attackable from the Enzymes removal action.
This means to have a loss of support capacity of the collagen fibers and also a loss of elasticity of the elastic fibers themselves.

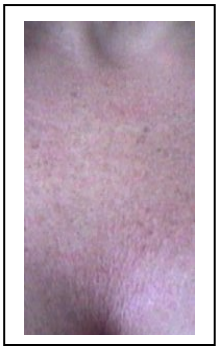
Based on the well known properties of Hyaluronic acid, Vitamin C and elemental amminoacids (proven either clinically and on Esperimental patterns to antagonize skin aging by means anti-oxidants actions and stimulating/Hydrating demal structures ) a pilot study has been carried out including 24 cases. The Protocol included the use of topical-use elemental amminoacids vials, Hyaluronic acid vials and pH 7,8 slow release Vitamin C sterile vials (Nata Star Plus). These principles have been delivered through Dermoelectroporation™ (Ultrapeel® Transderm® Ionto System from Mattioli Engineering).

**Decollete' Before**

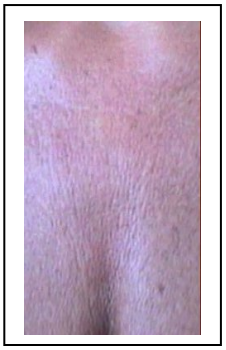
**Decollete' Before**



Neck Before



**Decollete' After**



**Decollete' After**

Neck After

This method allows the skin to transdermally absorb even macromolecules (Heparin, for instance, at 12000 Dalton - rif: *Italian Journal of Anatomy and Embryology, Vol.109 – Suppl. 1 – Fasc. 3 July – Sept. 2004).*
and includes a preliminary microdermabrasion using Corundum crystals in order to exfoliate the stratum corneum, reducing the skin impedance. Following this procedure, active principles are transdermally delivered through Dermoelectroporation™.

Contd' from page 27

This methodology allows the skin to transdermally absorb active principles by means of an electrical pulses delivery that make the skin more permeable to a huge variety of macromolecules otherwise not allowed to enter the skin in anyway.

As a matter of fact, Transdermal delivery occurs by means of a timely electrical pulses delivery allowing the cells to open up –so called – Hydroelectropore. These channels are "intercellular electrical doors" through which the active principles can easily enter the skin.

This allowed the transdermal delivery of bioactive principles such as amminoacids ( having a low molecular weight: 28-87 Dalton) and Hyaluronic (higher molecular weight : 105 – 106 Dalton).

10 off the 24 total selected subjects for the study, (6 females – 4 males) have been treated on decolletè, right cheeck, and neck. The remaining 14 subjects (10 females e 4 males) the solely decolleté has been treated.

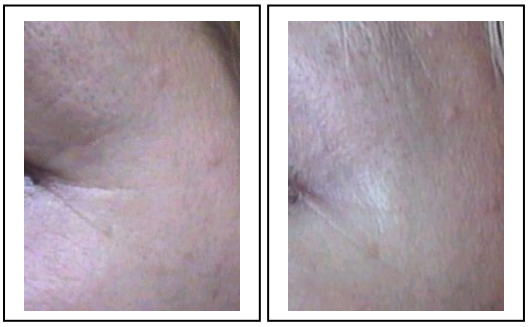
For the whole cases the same protocol has been used.

Dermoelectroporation™ has been carried out for 10min. time but with number of sessions and vials used differently. (See table 1).

## Conclusions

The use of topical-use elemental amminoacids vials, Hyaluronic acid vials and pH 7,8 slow release Vitamin C sterile vials (Nata Star Plus vials) provided clinical and harmonic data on the hydration improvement, cutaneous turgor and diminishing of fine wrinkles from the very first sitting.

The high quality of the results has been obtained by the easy penetration level due to Dermoelectroporation™.



**Round Eves Before** **Round Eves After**

**TABLE1**

| N°cases | N° sessions | N° Vials asi-oti |
|---|---|---|
| **10** | 2 per Week for 8 weeks | **1** |
| **14** | 2 per week for 4 weeks followed | |
| | by 1 session per week fpor 4 weeks | **2** |

The Initial suppositions made at the beginning for the characteristics of the pool of selected drugs and the pH lighlty Alcaline are confirmed and may request further investigations that, especially in the post –peeling and post- laser , from our stand point, they should confirm this pilot study.

## Bibliography:


•Dioguardi F.S.: *"Composition based on aminoacids for preventing and treating precursor deficiences in the synthesis of collagen*" United States Parented N° 5, 98, 465

•Lucà-Moretti M.: "Studio comparativo sul Map, associazione nutrizionale ideale di aminoacidi". La Med. Biol., N° 1, 1997. Pagg. 4-12.

Lucà-Moretti M.: *"Estudio comparativo de la utilizaciòn de aminoàcidos anabolizados confirma el descubrimiento del master amino acid plan". A*nales de la Real Academia de Medicina, Madrid 1998

•Mascolo E.: *"Gestione con pool di aminoacidi del turn-over del collagene. Applicazioni in Medicina Estetica"* – MF - Medicina Funzionale (2001)

• Pautasso Rovei C.: "Studio delle modificazioni dermiche a livello dei solchi naso-genieni con gli aminoacidi strutturali del collagene usati per via mesoterapica". Atti del Congresso Nazionale di Medicina Estetica Agorà, Milano 2001.

• Tamburlin N. *"SON Formula® nella nutrizione biologica*" Ed. Guna – Milano, 2001

•Tamburlin N.: *"Biorivitalizzazione del collo con pool aminoacidico*" Atti del 4° Congresso Nazionale di Medicina Estetica – Milano, 2003

•Tamburlin N.: "*Invecchiamento cutaneo prevenzione e trattamento*" Master di Nutrizione Biologica e Medicina Estetica Olistica (dispensa A.I.O.T.)

•Tamburlin N.: *"Trattamento olistico nell'invecchiamento cutaneo*" Atti del 2° Congresso Nazionale di Medicina Estetica – Milano, 2001

•Zerbinati N., Vergani R., Ambonati M., Carignani B.: *"Vitamina C topica: la nostra esperienza"* – Atti del 5° Congresso Nazionale di Medicina Estetica, Milano 2003.



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