

BIO-REVOLUMETRY

the fourth dimension in Aesthetic Medicine

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Today, when everyone else is trying to elaborate more and more cross-linked fillers hoping to prolong the duration of the corrections, we are taking steps on a completely different pathway, aiming not only at naturalness of the results but also at the prevention and treatment of the facial aging process.

On the same token, we all know that the more a filler is manipulated and cross-linked the higher is the risk to make the correction visible compromising the result, and therefore it will not necessarily depend on an erroneous technique, but on the failure of the substance to integrate with the host tissue, meaning that the implant will remain alien and rigid and thus more visible with the movements of the face. Not to mention that due to the modification of the molecule, the body tends to isolate it considering it to be a foreign body.

The above, as well as several years of professional experience and the availability of new specific and unique injective products have led to the creation of an evolutional concept in aesthetic medicine, called "Bio-Revolumetry".

This word contains three main targets: "Bio" that stands for the use of bio-compatible and bio-reabsorbable substances, the "Re" synthesises the effects like regeneration and re-structuring and "Volumetry" refers clearly to the forming and restoration of a new volume.

Therefore, the term "filler" which stands functionally inertial substance that is only capable of occupying and filling empty spaces is being replaced by the term "Bio-Revolumetrics" that instead indicates substances that not only create volumes but - through interacting with the functions of the host tissue, - also perform a vital action of osmolar reintegration and stimulation for a new re-structuring of tissues. It is to say that we provide for volume and at the same time take care of the areas treated: the skin will result more turgid, hydrated and young, while the facial contours will improve as a whole.

But how was it possible to reach this target? The answer is: optimizing the material and production process respecting the patient and the environment we all live in. The patient is safeguarded because we use pure Hyaluronic Acid of the highest quality, and, thanks to a particular patented chemical process we are able to obtain high therapeutic efficacy while implementing very low amounts of the cross-linking agent BDDE. This is particularly important as these are the kind of treatments that need to be repeated over time, therefore, the less BDDE is used the better it is. This fact has also led us to speak about the "Green injections". In fact, in addition to what stated above, we certainly do not neglect the environment, because the machines we implement are at low energy consumption, and we also use recyclable materials and sophisticated water purification systems.

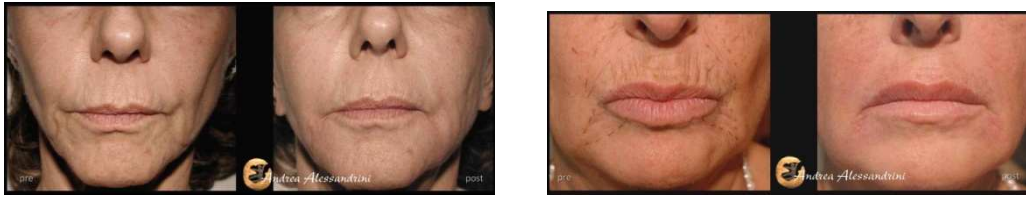
Currently there are two highly innovative products that enable us to fulfil this purpose, and that belong to the category of Bio-revolumetrics, and yet have different indications mainly related to their differences in formulation and to their different ways of interaction with the skin and thus to their diverse hypo-volumetric properties: the Bio-Expander by Regenyal Laboratories and IAL-System DUO by Fidia Farmaceutici.

When it comes to volumetric alterations of the face we can actually distinguish between Localised Hypo-Volumes, mainly characterized by a poor presence of the deep and/or superficial fat layer, and Hypo-volumetric De-structurings, mainly found in patients of medium-advanced age, where a more or less significant structural alteration of the dermal-epidermal frame work prevails over the hypo-volumetric aspect and is related to a reduced containment capacity of the fluid in the junctional and intra-cellular spaces.

The Bio-Expander, thanks to its peculiar network formulation of the slow-release HA with differentiated molecular weights that once injected captures the free HA, is characterised by a high degree of diffusivity (this is where the name Bio-Expander comes from), has the ability to penetrate into the most inaccessible interfibrillar and extra-cellular spaces. The share of free HA allows for a high degree of hydration of the tissue as well as of the implant at the initial stage. Therefore the Bio-Expander is indicated in cases where there is a more diffused reduction of the hypo-dermal buffer due to a greater damage of the dermal structure and to a reduced concentration of the fluid in the extracellular space with a consequent loss of osmolarity: in other words where there are hypo-volumetric de-structurings. Its ability to fill empty spaces is to be related to a constant and long-term receptor stimulation that becomes visible with time through a net improvement of the skin structure, whereby the latter will appear more elastic, turgid and bright.

It is therefore correct to assume that in such cases a poor presence of the hypo-derma and the spread of the problem might make the implementation of a common filler quite difficult, whereby the filler would become visible. Think about skin laxity that we often encounter in extended areas of the cheeks, mouth angles and that cause noticeable dislocations of

tissues with a consequent loss of facial contours. Not to mention the perioral area and especially the barcode in various forms of de-structuring. It is particularly in these cases that the Bio-Expander can give us a hand.



The Bio-Expander in Hypo-volumetric de-structurings

In order to maximally unfold its action, this product must be injected into the superficial layers of the hypo-derma in order to create a supportive buffer and to interact bi-laterally (derma and hypo-derma). From the beginning the Bio-Expander was meant to be used with micro-cannulae, but it may also be used with small needles for a localized implant of a total re-structuring.

Things are different when the problem mainly concerns a hypo-volume followed by a low structural damage. Normally, in these cases, we deal with more or less limited areas, such as the temporal area, the frontal part of the malar area, the lower zygomatic area and the chin.

In such cases it is recommended to turn to **IAL-System DUO**. But what is it that makes it so unique? Here we are looking at a particular chemical manufacturing process that combines a BDDE cross-linked HA to an auto cross-linked HA through a patented etherification process which takes place between carboxyl and hydroxyl groups of the HA.

The **IAL-System Duo** combines its high degree of plasticity and elasticity to a fair level of compactness and resistance, and finds its main indication in the correction of hypo-volumes where the reduction aspect of the hypo-derma prevails over the de-structuring, whereby the latter has only reached its initial stage or is just a little bit advanced. The product needs to be positioned into deep hypodermal areas, by means of cannulae or needles.

What happens when the product is injected? Apart from an immediate restoration of volumes, the share of auto cross-linked HA gives rise to a hydrolysis process of the interstitial fluid, releasing in the course of the months to follow fractions of interactive HA with various molecular weights: this way a re-structuring process is performed, which on its turn provides the face with a unique and natural appearance.



IAL-System DUO in Localized Hypo-volumes

Quite often there cases where different problems co-exist and intersect across shaded borders: this means that we may come across areas of the same face that need a hypo-volumetric action as well as areas where a de-structured aspect prevails. In these cases it is possible to combine the two bio-revolumetrics by differentiating the implant in terms of depth and localisation.

Therefore, in the Bio-Revolumetry we surely combat the volume but we do also combat the time: this is the active phase of the Bio-Revolumetry.

I am firmly convinced that the pattern, we stepped on some time ago, is the right one because it does not concern the heightening of results – a fact that unfortunately we get to see more often – but aims at safety, naturalness and prevention and taking care of the skin ageing process..

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