

Combining adipocyte/stem cell injection and melatonin/resveratrol topical application for facial beauty restoration

The most important concept in the facial rejuvenation procedure is transforming the skin itself into a more youthful, healthy condition. During the aging process, several factors cause the skin and the facial anatomy deterioration, due to external factors such as photo-aging, life style etc, and internal hormonal changing like menopause, internal organ deterioration, etc.

We are combining topical treatment with composition containing Melatonin, Vitamin C (LAA) 15% serum and resveratrol (antioxidant contained in the grape skin) and surgical volume replacement using fat and stem cell.

Hystology of the fat tissues shows that in the stromal structure are contained stem cell. The improvement of the facial structure, condition is due to several factors.

1) Adipose tissue, like bone marrow, is derived from the embryonic mesenchyme and contains a stroma that is easily isolated. Preliminary studies have recently identified a putative stem cell population within the adipose stromal compartment. This mesenchymal cell population, can be isolated from human lipoaspirates and, like MSCs, differentiate toward the osteogenic, adipogenic, myogenic and chondrogenic lineages.

2) Vitamin C, Melatonin and Resveratrol play a key role as antioxidant in the process of improving sun-damaged skin, aging skin, much more than could be expected from merely restoring the volume with the injected fat. With the routinary use of topical antioxidant in combination with Melatonin is possible to condition a dramatic skin improvement progress for up to 5 years.

Replacing fat is something much more important than merely replacing volume. The newly injected fat appears to be contributing to the healing of tissue around where it is placed. So in a face where the sins of dermal collagen deterioration are evident, the correction of this is doe to the contribute of the stem cell and their transformation in cells producing collagen,Vitamin C is a key element in stabilizing the enzyme prolilidroxilasis first process in the collagen formation procedure.

Material and Method: we have treated 100 patients starting from January 2008 to date. The patient selection was done according all skin type gender and age range from 16 to 70 years old . Acne/acne scars, photoaging, chronoaging, precancerous lesion and skin collagen and volume deterioration due to hormonal menopausal changes, where included in the study.

20 Days before surgery, the patient was instructed to prepare the skin in such manner:

- Cleaning with a cleanser containing vitis Vinifera and to reduce the ph
- Stimulate collagen building with Vitamin C serum LAA containing Melatonin and resveratrol.
- enhance tissue repairing and healing with cream containing Melatonin, resveratrol and Peptides together with vitis vinifera, polihenols in combination.

Same protocol was conducted after the surgery for a minimum of 3 year.

The surgical technique was performed using the Body Jet from Humanmed (Germany) system for fat harvesting. The fat volume injected was various depending the anatomic structures and the skin condition, the quantity vary from a minimum of 20cc to a maximum of 180 cc for the entire facial restructuring process. The injection was performed following the several anatomical structures of the face in a multiplan technique, including crossing layers.

Results: the compliance to the creams treatment was very high for all the patients.

In 15 cases was necessary, after surgery, to add a skin tone balancing cream to modulate and avoid the post inflammatory hyperpigmentation process due to the release of alfa melanocyte stimulating hormone, Et1 citokine and Tnf alfa together with prostaglandines.

In 27 smokers patients, after 1 year from the treatment, was necessary to perform a refilling with Adipocyte graft to reestablish volume, although the skin conditions was improved in all cases.

The rest of the patients had a 25 % reduction of the volume at the first 20 days , this go up to 50 % for the first 4/7months.

Conclusions: the Fat tissue grafting is a suitable technique easy to perform with the Body Jet System in experienced hands. The highest compliance of the technique and the long terming effects of the esthetic result is achieved and enhanced by the synergistic combined use of Melatonin ,vitamins and resveratrol.

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