Correction of a periorbital zone with product, based on sodium succinate and not stabilized hyaluronic acid

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Introduction

The most common problems of a periorbital zone (which aren't bound to hernias of a lower eyelid) are: periorbital puffiness, dermal pigmentation, loss of volume in a lower eyelid, superficial visable vessels. All this is perfomed as a dark circles under eyes. Usage of succinate-containing products are very important in correction of dark circles under eyes because of frequent insufficient efficiency of augmentation of a lower eyelid with hyaluronic filler.

Methods

To correct dark circles under the eyes, we used a combined product containing 1.1% high-molecular not stabilized hyaluronic acid and sodium succinate.
Succinate causes constriction of subcutaneous blood and lymphatic vessels through the mechanism of activation of succinate dependent receptors on the vascular wall *(Aguiar CJ, Andrade VL, Gomes ER et al. Succinate modulates Ca(2+) transient and cardiomyocyte viability through PKAdependent pathway. Cell Calcium 2010; 47(1): 37-46)*
High-molecular hyaluronic acid reduces the level of proinfammatory cytokines, reduces leukocyte infltration and tissue edema, reduces the permeability of the vascular wall, provides mechanical support of tissues. *(Rayahin, J. E., Buhrman, J. S., Zhang, Y., Koh, T. J., & Gemeinhart, R. A. (2015). High and low molecular weight hyaluronic acid differentially influence macrophage activation. ACS biomaterials science & engineering, 1(7), 481-493)*
Vasoconstriction and reduction of periorbital edema leads to a decrease of circles under the eyes, as in cases of preliminary augmentation of the tear through by the HA-filler and without it.

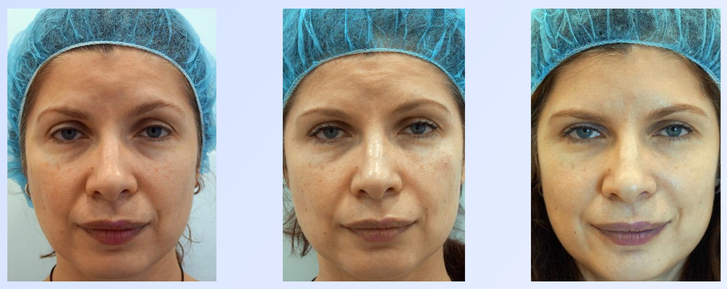
Procedures

To correct dark circles under the eyes, we used subcutaneous injections of a combined product containing 1.1% high-molecular not stabilized hyaluronic acid and sodium succinate.
The product was injected with linear fan technique by blunt cannula with entry point in malar area. Product was located in hypodermic layer in the periorbital and cheek area.
Patients received a course of injections of the product on 3 procedures with an interval of 2-3 weeks.

Results

The patient had dark circles under the eyes because of a superficial locating of vessels and periorbital puffiness.

Correction of periorbital region with subcutaneous injections of a combined product containing 1.1% high-molecular not stabilized hyaluronic acid and sodium succinate:



1 2 3

1 - Before correction
2 - The right eye before correction. The left eye right after correction with succinate-containing product.
3 - A month after course of succinate-containing product injections

Results (Continued)

The second patient had dark circles not only because of a superficial locating of vessels, but also because of a Loss of volume in periorbital region. She received HA- filler in periorbital region at first correction with good, but insufficient result. She received correction by succinate-containing product in a month after filler injection.

Correction of periorbital region with HA-Filler and subcutaneous injections of a combined product containing 1.1% high-molecular not stabilized hyaluronic acid and sodium succinate:

1 2 3 4

1 - Before correction
2 - A month after Filler injection
3 - Right after succinate-containing product injection
4 - A month after course of succinate-containing product injections

Patients received a course subcutaneous injections of a combined product containing 1.1% high-molecular not stabilized hyaluronic acid and sodium succinate on 3 procedures with an interval of 2-3 weeks.

We received result of the expressed decrease of dark circles under eyes.

Conclusion

It's important to include in therapy of dark circles under eyes correction of a periorbital zone product, based on sodium succinate and not stabilized hyaluronic acid because it can affect different parts of etiopathogenesis in this challenging problem.

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