

I COMBINATION OF COLLAGEN THERAPY WITH COLLOST® AND NEEDLE RF-LIFTING

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The demand for skin quality remains one of the main reasons for contacting a cosmetologist. An even tone, a smooth surface, and no wrinkles – this is what cosmetologists and their patients strive for.

The quality of skin at the cellular level is determined, first of all, by the condition of the dermis. The dermis is a dense, irregular fibrous connective tissue, the bulk of which consists of fibers, mainly collagen. To a lesser extent, the fibrous structures of the dermis are represented by elastic and argyrophilic fibers [4].

Collagen is a diverse group of fibrillar proteins that provide strength and volume characteristics to connective tissue. Collagen provides turgor, tone, and the ability of the skin to restore shape after various types of deformations that occur during facial expressions and sleep.

In addition to maintaining the structure of the tissue, collagen fibers provide support for fibroblasts, create conditions for their directed migration, and maintain functional activity of dermal cells.

It is noteworthy that fibroblasts themselves synthesize collagen and other components of the intercellular matrix (elastin, glycosaminoglycans), that is, they create conditions for maintaining not only the skin quality, but own functioning as well [4, 5].

It is known that from the age of 20–25, the activity of fibroblasts decreases, the synthesis and renewal of connective tissue fibers, primarily collagen, slows down. This applies to all types of connective tissue, but from the point of view of aesthetic medicine, we are especially interested in the dermis, the ligamentous apparatus of the face, and subcutaneous fat. A decrease in the synthesis and content of collagen in the dermis and ligamentous apparatus of the face leads to the formation of visible signs of aging - folds, furrows, static and expression wrinkles.

For the correction and prevention of age-related changes, preparations based on native collagen have been used successfully for a long time. The product Collost®, which contains non-restructured bovine type I collagen, has been used on the Russian market for over 20 years.



It is known that dermal collagen is mainly represented by this type of fibrous protein. In addition to programs for correcting signs of aging, Collost® has proven itself to be excellent for preparing and rehabilitating skin after aggressive procedures such as laser resurfacing, needle radiofrequency lifting, and medium peeling. Collagen in the product Collost® creates conditions for the regeneration and restructuring of the dermis, increasing its potential and providing support for fibroblasts, accelerates healing, and prevents formation of coarse scar tissue. When working with scar tissue, Collost® creates conditions for the migration of fibroblasts into altered tissues, which is especially important for the correction of atrophic scars (stretch marks, post-acne).

In these pathological scars, there is practically no dermis, which means there are no conditions for the normal functioning of fibroblasts and tissue restoration. Acne scars pose a particular problem for cosmetologists and their patients. Their importance in the practice of a cosmetologist is due to the high frequency of prevalence, the complexity of therapy and the psychological aspects of this pathology [7].

Needle radiofractional lifting in the correction of post-acne scars

Needle radiofractional lifting is the method of choice for the correction of atrophic post-acne scars [1, 2]. Analysis of literature data shows high efficiency of this method both in monotherapy and in combination with various hardware and injection procedures.

By damaging the surface tissues and stimulating the dermis, this technology triggers skin renewal, resulting in a smoother microrelief. This mechanism allows working with age-related changes (wrinkles, sagging skin), promoting the renewal primarily of fibrous structures of connective tissue, and with cicatricial and atrophic deformations of the skin, activating the production of the main substance and fibers by fibroblasts [3].

Clinical case

Patient A., 36 years old, visited the clinic for correction of atrophic post-acne scars. History: botulinum therapy twice a year for 7 years, biorevitalization (periodically) (**Fig., A–B**).

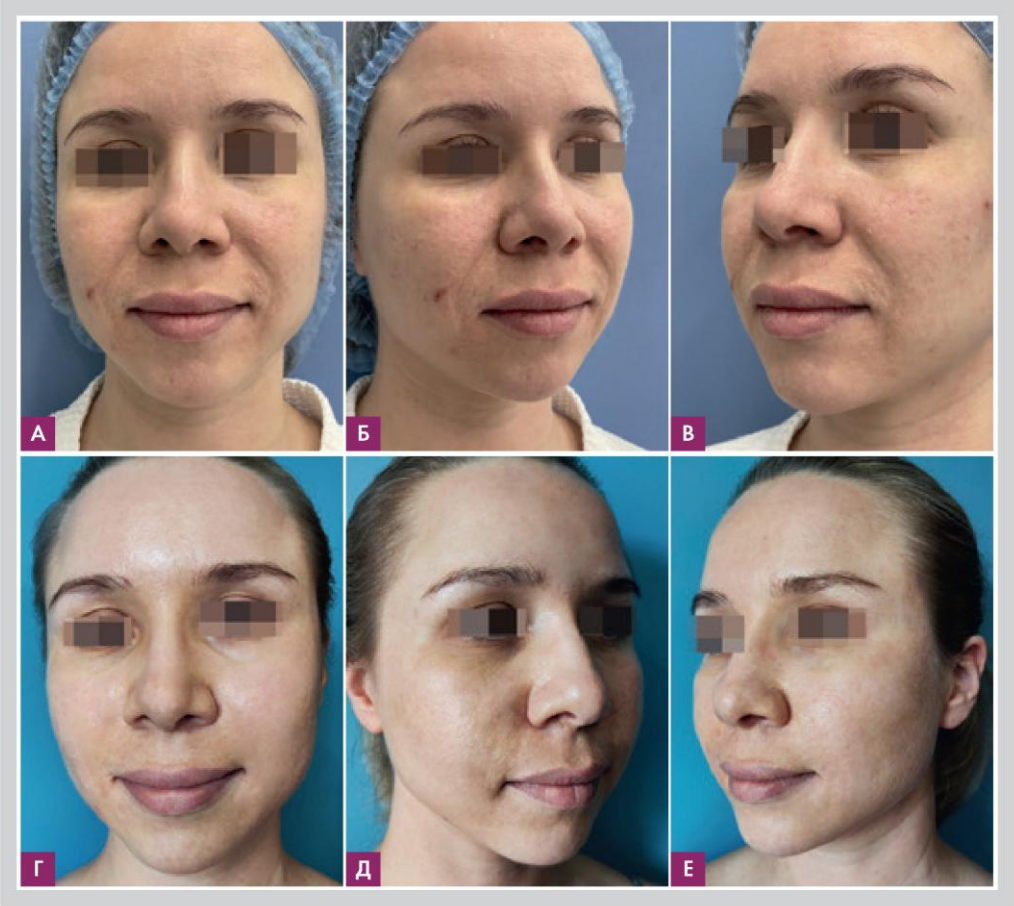


Fig.
Patient A., 36
years old, before
(A–B) and after
(D–E) the
procedures
performed

Correction protocol. At the first stage, needle radiofrequency lifting was performed with fixed non-insulated needles 0.5 mm long. Needles of this length have the maximum effect on the superficial tissues – the epidermis and the upper layer of the dermis, allowing to smooth out the microrelief of the skin and correct shallow atrophic scars. In addition, active impact on the skin surface helps to reduce the appearance of pores by stimulating collagen synthesis in response to dosed traumatic action.

Negative stimulation of the dermis was chosen as the first stage due to the patient's young age, sufficient tissue hydration level, and preserved regenerative potential of the dermis.

In the future, to potentiate the obtained effect, improve tissue regeneration, and prevent age-related changes, we added positive stimulation – collagen therapy with the product Collost® gel 15 %. In our clinical practice, for the correction of post-acne scars in young patients with dense skin, we choose this concentration of the product Collost® [6].

The product, after preliminary heating in a thermostat to a temperature of 38 °C, was injected popularly into the dermis with a 30G x 4 mm needle. We used 1 ml of the preparation on both cheeks.

It is important to emphasize that for optimal correction of atrophic scars, it is worth performing their separation with a needle, and then injecting the product Collost® gel with hypercorrection into the resulting space. Note that papules from the product Collost® persist for several hours, so the creation of "plus tissue" will not disrupt the activity of patients (Fig., G–E).

It is important to note the interval between the procedures of instrumental stimulation of collagenogenesis and injections of native collagen. After aggressive instrumental procedures (ablative laser, RF lifting), active healing and tissue renewal processes with the participation of immunocompetent cells occur in the dermis for 3–4 weeks. Complete healing with the subsidence of aseptic inflammation occurs by the end of the first month after the procedure. To reduce the risk of adverse events in the form of inflammation, injection procedures, in particular, the injection of collagen-based products, should be carried out at least 3–4 weeks after the instrumental exposure.

The course of collagen therapy with Collost® depends on the initial condition and severity of the problem. In case of treatment of cicatricial deformation and correction of post-acne scars, we recommend a course of 3 to 10 procedures with an interval of 1.5–2 months. Such

a long interval is due to the duration of collagen synthesis (6–8 weeks). It is important to carry out photo documentation of the procedure results in order to track positive dynamics, which will help not only the doctor, but also the patient to see the result.

In this case, 3 collagen therapy procedures were performed with Collost® gel 15 % with an interval of 2–3 months. If the problem of cicatricial changes is more pronounced or upon the patient's requests, the course can be continued in the following variation: radiofrequency exposure once every 6–8 months, a course of collagen therapy of 3–5 procedures with an interval of 1.5–2 months.

And in conclusion

Correction of cicatricial deformations, including post-acne, is a complex issue that requires a comprehensive approach and often a long-term treatment. In our practice, the approach of combining instrumental methods (laser ablation, needle radiofrequency lifting) and collagen therapy with the product Collost® has proven to be effective. According to our data, the most effective product for treating atrophic scars in young patients is Collost® gel 15 %. Optimal results in the treatment of cicatricial deformities are observed with regular procedures by the end of the first year of therapy.

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