

Laser Treatment of Acne Scars

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1. Abstract

Cosmetic surgery and skin regeneration techniques are carried out in the same surgical act, to save time and improve patient recovery. Acne scars, signs of photoaging such as pigmentation and changes in skin color are treated with the skin regeneration technique. Many surgeons, for the neck and cheeks usually perform as mentioned the facelift technique. Using these two techniques, a full-face restoration is obtained with a single surgical procedure. The patient's recovery is faster, and the result obtained is much better. 764 cases were performed with this procedure and minimal complications have been observed.

2. Introduction

To improve acne scars we use different techniques, in those cases where a facial lifting is not needed, CO2 and Erbium: YAG are used simultaneously. For cases with skin laxity, it is important that we start restoring acne scars with the SMAS facial lifting and plication procedure. Next, skin rejuvenation is performed at a surgical stage. However, it takes 3 to 4 weeks for recovery of skin regeneration with CO2/erbium laser. This procedure takes less recovery time and the edema, redness and discomfort for the patient are short. We started in 1995 to carry out both techniques with Erbium: YAG and CO2 lasers. Blepharoplasty is also performed on the upper lid and transconjunctival technique on the lower lid with the CO2 laser in cutting mode when necessary.

3. Technique

Once the patient is marked in the places to be corrected, the procedure begins with intravenous anesthesia combined with local anesthesia (tumescent technique). Some patients request general anesthesia, in those cases special endotracheal tubes are used to guarantee a safer procedure. When local anesthesia has been

placed on the neck, cheeks, and forehead in patients with ptosis of the skin, the incision in the pre- and post-auricular area is started with the CO2 laser in 6 Watt cutting mode. The skin dissection is performed using scissors, from the zygomatic arch to the nasolabial folds and the entire neck. In the end, hemostasis, and plication of the SMAS are performed with Nylon 3-0. Excess skin is removed, and staples are placed in the area.

After finishing both sides of the face, if necessary, blepharoplasty is performed. It is important to remember to use laser eye protectors in all patients to avoid eye damage.

If it is necessary to carry out an endoscopic approach to the forehead or coronal, it is possible to combine the procedures with skin regeneration at the same time.

Laser regeneration is performed with parameters: Rate 10, Fluence 14 of Erbium: YAG and 2 Watts of CO2, Scan was not used in a first step. The laser removes layers of skin by vaporization; Therefore, it is important to know the amount of energy that is transmitted to the skin surface to control the depth of penetration and to prevent skin damage. Remember that Erbium and CO2 lasers work in different ways, Erbium penetrates more skin layers in one step than CO2, giving less heat to the skin, and CO2 produces more skin heating with less penetration. and more collagen formation.

Skin regeneration is carried out with the Erbium: YAG and CO2 laser on the forehead, the upper and lower eyelids, the inner and outer corner of the eyes, the nose, the cheeks, the perioral area, and the chin. In those areas we sometimes carry out one or two passes. Allowing the treatment of fine and deep acne scars, blemishes, and photo aging. The fluence of the laser is increased or decreased depending on the depth of acne scars, sun damage, the thickness, texture, and color of the skin. In the first step, the laser is applied

to the area to be treated. Once the first step is done, we leave the burned skin in place. The second step is done by lowering or maintaining the same laser energy. Sometimes at the crossing of the borders or the perioral area, a third step is carried out.

However, in the areas where the surgical procedure was performed, we only used the CO2 laser at 5 Watts in a single pass. The laser is usually applied to the areas described above, during the same procedure. It is important to understand that the laser should be deeper in the central part of the face and lighter in the area where the surgical procedure was carried out.

With this method redness and pigmentation changes disappear at the same time in both areas, taking only 3 or 4 weeks in patients with skin types 3, 4 and 5 to achieve the same skin texture.

In cases where it is not necessary to perform a facelift, we only use the Erbium/CO2 laser combination. Once the anesthesia was performed, as described above, we used the CO2 laser in the cutting mode at 2 Watts. Laser energy is applied to the skin in a blurring fashion, to achieve skin retraction in deep scars. After that, Erbium: YAG laser skin regeneration is performed at different parameters depending on skin tone.

When the procedure is done, an occlusive dressing is worn for 48 hours to help the skin heal more quickly. Followed by a 100% sunscreen moisturizer all over face in the morning. At night, cortisone cream is recommended that helps reduce redness, dry skin and prevents hyperpigmentation.

4. Results

Figure 1-4.



Figure 1:



Figure 2:



Pre op lateral view

Post op lateral view 30 days later

Figure 3:

Pre op oblique view

Post op Oblique view Close up 30 days later

Figure 4:

5. Conclusions

We have seen that by performing these techniques, the results of the patients are much better. If the facelift is carried out at the same surgical time with the regeneration of the skin, the recovery of the patients takes less time and discomfort. In 30 days, the patient's skin color is improved.

The skin looks much younger, smoother and the facial restoration is highly satisfactory. Acne scars improve with both procedures by 60 to 90 percent, depending on depth. It is possible to perform different facial techniques at the same time, such as fat grafting, chin implant, forehead endoscopy, etc.

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