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The use of Trichloroacetic Acid For Malar Bags

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1. Summary

1.1. Background: Malar bags pockets are generally treated with aggressive techniques, not with good results. All the techniques are aimed at resuspending the orbital-malar ligament and suspending the soft tissue. Chemical peel dermabrasion was used for its treatment. Objective: To evaluate the therapeutic and aesthetic results of the application of 35% trichloroacetic acid, in a single session, in patients with malar fat bags.

1.2. Methods: Descriptive study of a case series that included 20 patients with malar fat bags. The following variables were analyzed: age, sex, complications and aesthetic result of the treatment. Results: The largest number of patients was between 45 and 70 years old, the female sex predominated with 80% in the study; only one patient presented complications, which were reversible with medical treatment.

1.3. Conclusions: The efficacy of deep chemical dermabrasion with 35% trichloroacetic acid was demonstrated in patients with malar fat pockets. Complications were minimal and all reversible with medical treatment.

2. Introduction

The practice of chemical peel remains an important aspect of the non-surgical techniques available to the cosmetic surgeon when approaching skin rejuvenation. Despite past predictions of its demise in favor of lasers, the general use of chemical peels by plastic surgeons continues to grow. In the last two decades, the techniques available to the physician have evolved in safety and efficacy based on the dermatological investigations of various individuals, including Obagi, Hetter, and Stone. The versatility, clinical endpoint predictability, and favorable risk profile of chemical peels offered by these latest advances affirm that this modality is essential to the practice of the plastic surgeon treating patients with wrinkles [1,2]. If CO2 laser resurfacing appears to be an extremely effective technique, its aggressive nature on dissected skin is not easily controllable. Adding to this, the high frequency of prolonged erythema, the risks accumulated with its indication are important, to be cautious in the treatment. Treatment of malar bags can restore a youthful appearance to the periorbital region; however, surgery alone often cannot address the problem of periorbital lines. All the techniques are aimed at resuspending the orbital-malar ligament and suspending the soft tissue (Figure1). The literature is replete with publications on the efficacy of trichloroacetic acid peel, however, there is little information that specifically addresses periorbit peels. We present a series of patients who underwent exfoliation with trichloroacetic acid combined with blepharoplasty, or exfoliation alone, in order to improve apparent malar bags, expression lines and / or hyperpigmentation. The surgical method and complications with this technique and how it fits into the cosmetic surgeon's arsenal for periorbital rejuvenation are described.

Chemical peel is a procedure that reduces blemishes on the sun-damaged face, uneven pigmentation, or areas of fine lines by removing the superficial layers of the skin. The principle of chemical exfoliation is to apply special chemical agents to the skin in order to produce epidermolysis and skin turnover. New skin growth can replace damaged areas and minor blemishes, producing cosmetic improvement. Chemical peels vary according to their specific ingredients and strength. The depth of action of the scrub can also depend on factors such as how long it stays on the skin, the

type of solution if applied gently, or whether applied excessively or with force. Chemical exfoliation allows us to quickly obtain a homogeneous epidermolysis, insisting on the pigmentary alterations present in elderly patients [3,4]

Material and method. We use trichloroacetic acid at a concentration of 35%. Trichloroacetic Acid (TCA) is an organic acid, derived from acetic acid, in which three hydrogen atoms of the methyl group have been replaced by chlorine atoms. The skin preparation, in those patients who present phototypes 3 and 4, it seems prudent to provide a pigmentation stabilizing treatment, at least 15 days before the intervention, associated with a slight desquamation induced by the application of acidic vitamin A [5,6,7,8]. Anti-herpetic treatment was not used systematically. Trichloroacetic acid is especially effective in treating dark-skinned patients. This is used to achieve deep exfoliation effects, depending on the concentration and the way of application. (Photos 10 and 13) [9]. The application of TCA in a chelated state (Mene et Moy) allows a more homogeneous application. This solution in turn presents a progressive action that adapts very well to the needs, minimizing the mosaic appearance present in the juxtaposition of several areas with different depths of action, achieved in almost all deep chemical exfoliators. A descriptive study of a series of cases was carried out that included 20 patients, in good general and physical condition, who were carriers of malar fat bags, who attended cosmetic surgery, within a range of ages 45 and 70 years, of both sexes. Verbally informed consent was obtained from all patients on this article. The complications presented by the patients were observed and the aesthetic and therapeutic results were measured. Patients with excessive exposure to sunlight, and those with a history of keloid scars, were excluded. The following variables were analyzed: age, sex, complications, and aesthetic result of the treatment [3]. The patients were advised that to carry out the treatment they had to purchase a cream to protect themselves from the sun, with a protection factor of more than 30, as well as any moisturizer, since the product could produce adverse reactions. The TCA is applied with cotton swabs. The complete application takes approximately 1 minute. TCA is a chemical cauterizer that, when applied to the skin, coagulates proteins to form a whitish area, which appears 10 to 20 seconds after application. (Figure 2) When a higher concentration of TCA is applied, the freeze is whiter and appears earlier, which means that a deeper reaction has been reached. After frostbite develops, the patient's face is washed with clean water to remove any excess TCA and neutralize it. Nourishing post-exfoliation creams or antibiotic ointments are then applied to lower the inflammatory response or discomfort. On application there is a slight burning sensation, but it is minimal as the solution also acts as an anesthetic. After the exfoliating solution has worked on the skin, it can be neutralized with water. After the TCA peel, the post-peel skin will darken and become less elastic. (Figure 3) [10]. Patients should use skin ointments or topical antibiotics twice a day. For approximately 5 to 7 days after exfoliation the necrotic epidermis will exfoliate and the new, pink and regenerated skin will develop. [11,12]. Patients should not remove partially exfoliated skin that will cause erythema or scar formation until re-epithelialization is complete (Figures 4). Patients should return for clinical evaluation within eight days and every week after peeling. Any changes in the skin or growth of lesions should be evaluated and treated immediately. Sun exposure should be avoided, and sun blockers (SPF> 30) should be used after TCA and glycolic acid peels. [13,14,15]

Again, pre-peel regimens (glycolic acid, tretinoin), cosmetics, or bleaching agents (hydroquinone or kojic acid) may be prescribed 1 to 2 weeks after peel. The use of sunscreen is necessary after exfoliation, especially in individuals with darker skin or after a deeper exfoliation. The complications of peeling are not exceptional, they depend on 3 factors such as: the doctor, the stability, quality and type of product used and thirdly the idiosyncrasy of the patient, the type of skin and very important the follow-up of the aftercare. Among the complications, prolonged erythema appeared in a patient who untimely removed the exfoliated skin. (Photos 5) [16,17].

Figure 1: All the techniques are aimed at resuspending the orbital-malar ligament and suspending the soft tissue.

Figure 2: The characteristic "whitish" appearance after application is obtained quickly.

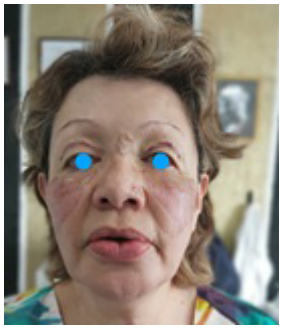
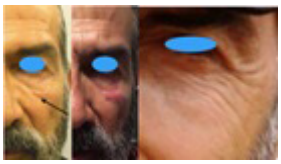
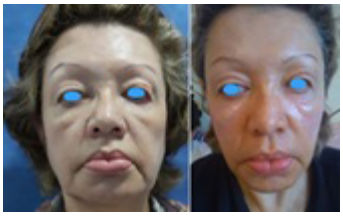


Figure 3: post peel skin will darken and become less elastic.

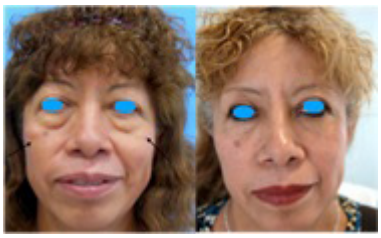


Figures 4: The patient removed the coagulated kerate epithelium causing erythema.



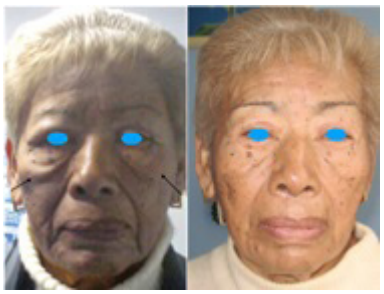
Figures 5: Before and 10 days after. Some clinical cases: Figures6;7;8;9;10;11;12;13;14 and 15.

Figures 6: Before and 8 days after.

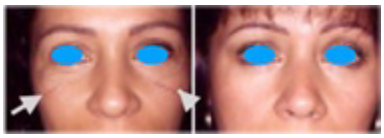


Figures 7: Before and 3 months after.

Figures 8: Before and 3 months after.



Figures 9: Before and 3 months after.



Figures 10: Before and 6 months after.

Figures 11: Before and 6 months after.

Figures 12: Before and 6 months after.

Figures 13: Before and 7 months after.

Figures 14: Before and 12 months after.

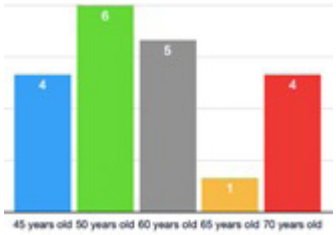
Figures 15: Before and 12 months after.

3. Results

Sex: 16 female patients. Four male patients.

Age: (Table 1)

Table 1: 45 years old 50 years old 60 years old 65 years old 70 years' old.



4. Complications

One patient with prolonged erythema. (Figures 4) Results: 80% Excellent; 20% Good. Some clinical cases: Figures 6;7;8;9;10;11;12;13;14 and 15.

5. Conclusions

The sensible use of trichloroacetic acid as a chemical peel in the periorbital region can be done successfully with little or no complications. It can be applied as an independent procedure or as a complement to blepharoplasty surgery. The efficacy of deep chemical dermabrasion with 35% trichloroacetic acid was demonstrated in patients with malar pockets on the face. When these techniques are combined, there is a significant improvement in the laxity of the lower eyelid and the reduction of the malar pockets without the need for invasive techniques, the orbitomalar ligament continues to retain tissue but the loose skin retracts. It is a cost-effective treatment with long-lasting results, and minimal complications are reversible with medical treatment.

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