

Revision of mild upper eyelids dermatochalasis with plasma exeresis: A case report

Elfa Wirdani Fitri, Ninda Sari*

Dermatovenereology Department Dr. Zainoel Abidin General Hospital Banda Aceh, Faculty of Medicine Syiah Kuala University Banda Aceh, Indonesia.

* NCB Skin Clinic Banda Aceh, Indonesia.

Abstract

Dermatochalasis is often associated with tissue aging and causes several functional and cosmetic problems. Plasma exeresis has recently been proposed as a therapy for dermatochalasis and periorbital wrinkles. This method is well tolerated, provides long-term results with a high level of satisfaction, a shorter healing period, and a very low complication rate. We present the case of a 35 years old woman with mild dermatochalasis of the upper eyelids. History of keloids, allergies of anesthesia or other drugs; as well as infection in the eyelid area are absent. Application of topical anesthesia is carried out before the procedure. Evaluation of the results of plasma exeresis measures is carried out one month after the procedure. There were significant improvements in the upper eyelids, without any scars or post inflammation hyperpigmentation. This report showed significant clinical improvement in mild dermatochalasis even only one-session of plasma exeresis. We conclude that plasma exeresis is a nonsurgical treatment option for mild dermatochalasis that is both safe and effective. If carried out appropriately, the surgery has no major side effects. Comparative study is needed to evaluate the number of plasma exeresis sessions in mild and moderate dermatochalasis.

Key words

Dermatochalasis; Periorbital rejuvenation; Upper eyelid revision; Plasma exeresis.

Introduction

The eyes are a vital component of the face's appearance since they are located in the center of a face anatomy that is required for the rejuvenation procedure, called the "periorbital region". As a result, the physical look of the eyes has a significant impact on the aesthetic perception and aging of the overall face. The skin of the periocular region is elastic and free of sun damage during adolescence; the eyebrows are full, firm and do not descend; there is a

clearly visible crease of the upper eyelid, with minimal dermatochasis; the lower eyelid is tight and well-positioned. The main characteristics of aging on the upper part of the face are the appearance of dark circles on the eyelids, crow's feet lines, eye bags, dermatochalasis (loosening of the skin of the upper eyelid), also thinning and drying of the skin. Loss of volume, with deflating and emptying of the upper eyelid; and the appearance of sunken eyes, with deep grooves in the upper part, are other symptoms.¹

Treatment options for eyelid dermatochalasis include both invasive and noninvasive procedures. The procedure used is determined by the surgical risk of the patient, the patient's preferences, and the operator's experience.² For many years, traditional blepharoplasty has been the treatment of choice for upper eyelid dermatochalasis. Non-invasive methods are currently promising rapid, scar-free solutions for dermatochalasis instances without lipoptosis.

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Address for correspondence

Dr. Ninda Sari,

NCB Skin Clinic Banda Aceh, Jl. Keuchik Amin No. 1C, Beurawe, Kec Kuta Alam, Banda Aceh 23124, Aceh, Indonesia.

Ph: +62817270481

Email: ninda.sari2000@gmail.com



Figure 1 Black spots (micro spots) appeared above the crease of the eyelids. Post-procedure the eyelids area were erythema, accompanied with edema in 3 days, and wound healed in about 10 days.

The employment of plasma exeresis technology is one of these ways. By producing plasma voltaic arcs, this induces retraction and alteration of the epidermis and superficial dermis. This method is well tolerated, provides long-term results with a high level of satisfaction, a shorter healing period, and a remarkably low complication risk. In addition, the procedure is carried out under a local anesthesia in a regular practice room. Thus, the cost of treatment is also lower than invasive blepharoplasty. The clinical result of the procedure is felt every session of the procedure and communication between practitioners and patients can optimize the results for both.³ We report a case of revision of mild dermatochasis by plasma exeresis method.

Case Report

A 35-year-old woman presented with complaints

of lower upper eyelids and feeling puffy eyes (**Figure 1**). No history of eyelids interventions ever performed. History of keloids, and allergies of anesthesia or other drugs; as well as infection in the eyelid area were absent. Application of topical anesthesia was carried out before the procedure. Evaluation of the results of plasma exeresis measures was carried out one month after the procedure (**Figure 2**).

Discussion

Improving the appearance of the eyes is a primary goal of all anti-aging treatments.¹ Upper eyelids blepharoplasty surgery is a better choice for severe dermatochalasis conditions with excess skin. In addition, surgical blepharoplasty is also more suitable for cases related to steatoblefaron, ptosis, lacrimal gland prolapse, or eyelash disorders.⁴ Today non-surgical techniques have evolved to achieve the necessary aesthetic results, with minimally invasive or non-invasive methods, safe, effective, lower cost and can be performed on patients with surgical contraindications.^{1,2,4}

Non-surgical blepharoplasty with plasma exeresis results in accurate removal of the skin, without bleeding, incisions or surgical sutures. This method is associated with pain, edema, and minimal healing time as compared to the standard surgical procedure blepharoplasty. The potential for irreversible skin damage can be avoided because it is not as invasive as

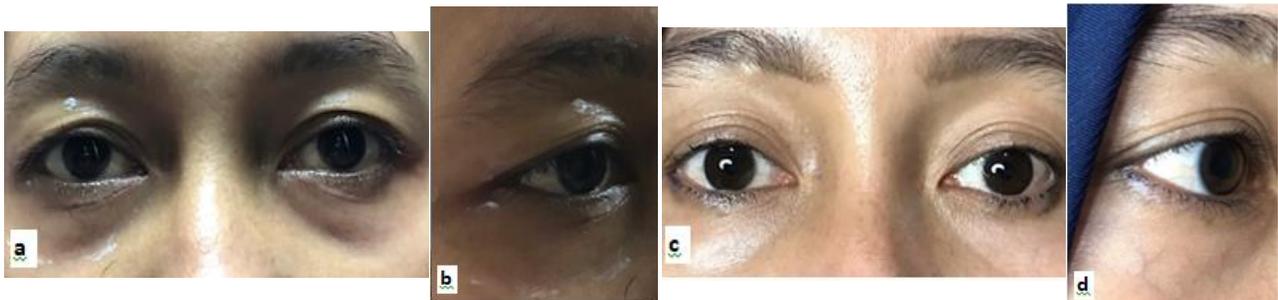


Figure 2 (a) and (b) mild upper eyelids dermatochalasis before procedure of plasma exeresis; (c) and (d) One month after plasma exeresis, there were significant improvement in the upper eyelids with no side effects of post inflammation hyperpigmentation or scars.

traditional laser tools. When performing plasma exeresis procedures, no special eye protection is required, and pain perception can be reduced with the use of local anesthetic cream before each session. In general, the micro spot approach has the benefit of reducing the time that is required to re-epithelialize treated tissue to a few days and lowering the risk of infection.³

The histological picture of the skin after treatment with plasma exeresis technique is the induction of changes in the conformation of collagen fibers.⁵ Local redness and edema recover spontaneously after 2-3 days, as well as little crusts that fall off after 10 days, are the only post-procedure complications.¹ There are only a few minor complications reported in the literature. These include delayed healing, bacterial skin infections, herpes simplex virus infections, scars, and post-inflammatory hyperpigmentation (most common).⁵

Patient in this report had upper eyelid revision with the micro spot plasma exeresis technique and was satisfied with the result. Upper eyelid retraction is more maximal in mild dermatochalasis, even after only one-session of plasma exeresis. A clinical study conducted by Abdollahimajd *et al.* (2022) on 56 women with mild and moderate dermatochalasis, demonstrated considerable clinical improvement in dermatochalasis and palpebral sagging. The majority of participants were satisfied, with no serious adverse effects.⁶ Another clinical study by Hassan *et al.* (2022) also conducted three sessions of plasma exeresis in 40 women with dermatochalasis, showing decreased eyelid sagging and increased marginal crease distance (MCD) after treatment.⁷

Conclusion

Plasma exeresis is a nonsurgical treatment for mild dermatochalasis that is both safe and effective. If carried out appropriately, the

surgery has no major side effects. Comparative study is needed to compare the number of plasma exeresis sessions in mild dermatochalasis and moderate dermatochalasis.

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Author's contribution

EFW: Identification and management of the case, manuscript writing, final approval of the version to be published.

NS: Diagnosis and management of the case, critical review, final approval of the version to be published.

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