

Role of Collagen Patches in Facial Rejuvenation

Ravi Kumar Chittoria

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Abstract

The aging process of skin starts early even in mid 20s due to excessive damage of the skin due to sunlight exposure or various chemical pollutants, all these are ultimately associated with decreased collagen production and excessive collagen damage. Which will slow down the skin repair mechanism. The aged look on the face on the individual will influence the psychological well being of the patient as well as his confidence. There are various methods in practice to prevent or manage the aging process. The skin laxity is a feature of the aging process which appears early over the face. The skin laxity associated with facial aging has been traditionally addressed with various forms of surgical intervention. However, demand for alternative treatment options which has less pain, less risk of scarring, less healing downtime, and as well as cost have driven advances in non-surgical tightening techniques. This article share our experience of using a non-surgical technique for skin tightening using gel eye patches which contains collagen.

Keywords: Facial Rejuvenation; Collagen Gel Patches; Collagen; Anti-aging.

INTRODUCTION

Skin laxity and the appearance of fine lines and wrinkles are inevitable results of aging and chronic sun exposure. Patients often turn to skin tightening measures for a more youthful look. Non-surgical methods of skin tightening have grown popular over the past few decades because they are effective in treating mild to moderate skin laxity, offer decreased downtimes, and carry a lower risk of complications, scar and pain as compared to surgical interventions.

The dermis of the skin is mainly made up of fibroblasts and extracellular matrix (ECM). Fibroblasts are responsible for the synthesis of collagen fibers, elastic fibers, and amorphous matrix proteins (such as proteoglycans and glycosaminoglycans), which are deposited in the ECM. The contours and fullness of the skin are a result of the tightly wound, triple helical structure of collagen fibers, and the absorption of water by amorphous proteins. The elastic fibers are responsible for returning the skin to its normal structure after being stretched or deformed.

During the process of aging, there is loss of collagen due to decreased synthesis by fibroblasts.

MATERIALS AND METHODS

This study was conducted in the Department of Plastic Surgery at a tertiary care center. The departmental ethical committee approval as well as informed written consent was obtained. A 50

Author's Affiliation: Professor, Department of Plastic Surgery, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry 605006, India.

Correspondence Author: Ravi Kumar Chittoria, Professor, Department of Plastic Surgery, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry 605006, India.

E-mail: drchittoria@yahoo.com

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year old gentleman was with bilateral saggy eyes (Fig. 1). He was provided with gel eye patches containing acqua, glycerine, paraffinumliquidum, dimethicone, cetearyl alcohol isopropyl palmitate, sorbitan stearate, propylene glycol butylene glycol, phenoxyethanolhydrolzed collagen. total 6 pairs were applied, 1 pair every week for 6 weeks. After washing and cleaning the face with water, face was dried, and the gel patched were applied over the saggy eyes. (Fig. 2). The patches were left in place for 20 minutes and then carefully removed followed by massage of the area with finger tip.

The assessment was done using visual assessment using two independent evaluators who both were kept blind about the treatment.

RESULT

The gel eye patches containing the collagen are effective in managing the skin laxity causing saggy eyes with any adverse effects.



Fig. 1: Before The Application of Gel eye patches.



Fig. 2: Gel eye patches applied.



Fig. 3: After the application.

DISCUSSION

During the process of aging, there is a net loss of collagen due to decreased synthesis by fibroblasts and increased degradation by matrix metalloproteinases (MMPs). The increased activity of MMPs is a result of the rise in reactive oxygen species, which is accelerated by sun exposure. Collagen fibrils themselves gradually become more fragmented and haphazardly arranged over time and lead to skin laxity]. While the number of elastic fibers in the papillary dermis increases with photoaging, in a process known as solar elastosis, their coarse and disorganized pattern renders them non-functional. Decreased tissue elasticity contributes to skin laxity and wrinkle formation. Skin tightening techniques target collagen and elastic fiber remodeling and synthesis to rejuvenate the skin.

Advances in non-surgical skin-tightening devices allow for effective skin tightening. Although fully ablative laser resurfacing devices are often considered the gold standard for non-surgical rejuvenation. The lasers are not very common in developing countries like India and even the Lasers centers present are mostly clustered in and around urban areas. So there is always a search for non-surgical cost effective methods for skin tightening and In this article we share our experience of using

gel eye patches to treat saggy eyes. And increased degradation by matrix metalloproteinases (MMPs). The increased activity of MMPs is a result of the rise in reactive oxygen species, which is accelerated by sun exposure. Collagen fibrils themselves gradually become more fragmented and haphazardly arranged over time and lead to skin laxity]. While the number of elastic fibers in the papillary dermis increases with photoaging, in a process known as solar elastosis, their coarse and disorganized pattern renders them non-functional. Decreased tissue elasticity contributes to skin laxity and wrinkle formation. Skin tightening techniques target collagen and elastic fiber remodeling and synthesis to rejuvenate the skin.

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CONCLUSION

Surgical intervention remains the gold standard of treatment for skin laxity. While non-surgical skin tightening technologies have gained popularity, they historically have not achieved the same levels of treatment durability and efficacy. For any skin tightening treatment, patient selection is crucial

to achieving desired results and ensuring patient satisfaction.

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