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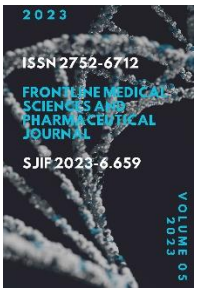

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Research Article

"BLEPHAROCHALASIS: MODERN APPROACHES TO DIAGNOSIS, TREATMENT, AND RESULT OPTIMIZATION IN AESTHETIC SURGERY. A REVIEW ARTICLE."

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ABSTRACT

The article represents a comprehensive exploration of the issue of blepharochalasis, focusing on its medical and aesthetic aspects in the context of biological aging. Attention is given to the impact of aging processes on the soft tissues of the eyelids and periorbital areas, with a focus on eyelid deformations and their significance in both functional and aesthetic aspects. Using various sources, including scientific databases, the authors conduct a literature review, identifying key aspects of age-related changes in the eyelid area and their influence on the quality of life for patients. Based on modern research and technological advancements, the article highlights the evolution of approaches to rejuvenating surgical procedures, particularly in the correction of blepharochalasis. Various diagnostic and treatment methods are described, including surgical interventions, their effectiveness, and potential complications. Attention is given to the role of the surgeon in the careful selection and examination of patients, as well as in the individualized approach to correcting age-related changes in the eyelid area. In conclusion, the article emphasizes not only the importance of restoring the natural appearance of the face but also improving visual comfort and the quality of life, which is a significant aspect of the successful treatment of blepharochalasis.

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Interventions in the field of aesthetic surgery, especially on the face, require a high degree of responsibility and careful consideration of patient expectations to achieve optimal results.

KEYWORDS

Blepharochalasis, ptosis, blepharoplasty.

INTRODUCTION

Aging of the soft tissues of the face is part of the general biological aging process and is determined by the same laws. The appearance of the eyes directly depends on the condition of the eyelids and periorbital tissues. The aesthetic role of the eyelids is important, as they constitute a functional part of the face. The skin in this area is predominantly prone to aging, loss of elasticity, and sagging. [1,3,5] Deformation of the eyelids can lead to a serious impairment of function and negatively impact the appearance. Eyelid problems can be caused by congenital diseases, inflammatory conditions, injuries, burns, aging, and postoperative complications.[1,12,15]

Age-related changes in the skin typically become apparent after the age of 35. There is a thinning of the epidermal layer, and the skin becomes lax, more dry due to a disruption in the hydrobalance and microcirculation. Along with the development of folds, fine wrinkles appear, and gravitational ptosis progresses.[3,6,18]

As plastic aesthetic surgery has advanced, so has the perception of rejuvenating facial surgical procedures. One of the common reasons patients seek medical advice is for the correction of age-related blepharochalasis.

Blepharochalasis is a physiological condition characterized by an excess deposition of skin on the upper eyelid, leading to a loss of tone and elasticity. This issue has gained increased attention due to its significant impact on the functional and aesthetic aspects of ophthalmology and plastic surgery.[11,14,17,24] The condition was first described by Beer in 1817 and later named by Fuchs in 1896. Most cases appear in an atrophic state, and it is unknown whether they have ever passed through a so-called hypertrophic stage. Small nodules of the

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skin have been described (Verhoff and Friedenwald, 1922), but they may be only a secondary phenomenon after a previous surgical operation. Herniation of fat through a weakened orbital septum also occurs (Schmidt-Rimpler, 1899). The lower eyelids can also be affected (Stein, 1930), and overall tissue laxity can lead to blepharophimosis (Friedenwald, 1923). [5,9,13]

This can be attributed to the natural aging of the body, genetic factors, or external influences. As a result, the eyelids become swollen, which can create problems both from a functional and a cosmetic perspective.[6,8,17,22]

Blepharochalasis is indeed an ophthalmological condition in which there is atrophy of the skin of the upper eyelids, leading to the formation of excessive folds. This condition often causes discomfort and can impact visual comfort. It is primarily caused by the dilation of blood vessels, resulting in the loss of tissue elasticity and the atrophy of the epithelium of the eyelid skin. [4,14,20,25]

As implied by the name, blepharochalasis in the elderly is part of the aging process. In such patients, ptosis not only causes aesthetic issues but also functional problems, such as entropion, disturbances and narrowing of the visual field, and eye pain. In most elderly individuals, skin sagging and ptosis occur simultaneously. The development of elastosis and its thinning contribute to the sagging or relaxation of the skin.[10,15,19,23]

Over time, the excess skin becomes permanent and is visible even at rest. The progression of blepharochalasis can reach a point where the skin actually hangs over the upper eyelashes, restricting the field of vision from above and above-laterally.

The folds that form may cover the eyelashes and, similar to the drooping of the eyelids, can reduce the upper field of vision by descending onto the pupil. The degree of manifestation of signs of skin atrophy and fat "hernias" in the area of the upper and lower eyelids can be visually determined. [4,9,13,21]

To diagnose blepharochalasis, methods involving history-taking and a physical examination of the patient are employed. It is important to note that specific diagnostic methods for this condition have not been developed. Histological examination conducted in cases of blepharochalasis often reveals characteristic

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changes, such as the loss of elastic fibers in the dermis and collagen, as well as capillary dilation. Perivascular infiltrates containing lymphocytes, histiocytes, plasma cells, and sometimes eosinophils are detected during this examination. (Image 2a and 2b) [2,13]

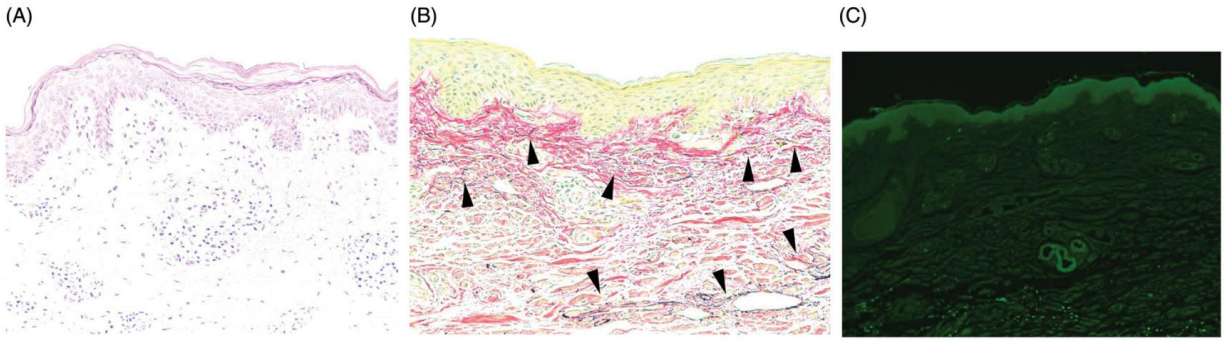

Image 2. (A) The eyelid skin shows epidermal spongiosis and perivascular infiltration of lymphocytes, indicating superficial dermatitis compatible with blepharochalasis (hematoxylin and eosin, 200). (B) Elastic fibers are reduced in the superficial dermis and undergo fragmentation (arrow, elastic van Gieson, 200). (C) Immunohistochemical staining reveals perivascular deposits of IgA (arrow, 100). [13]

Currently, within the context of active research, technological advancements, and increased interest in aesthetic surgery, the study of the effectiveness of upper blepharoplasty methods in cases of blepharochalasis is becoming a scientific priority. [5,19] With the increasing number of patients experiencing pain and deformation of the upper eyelids, scientists and surgeons are focusing their attention on optimal approaches to treating blepharochalasis. This is justified not only by patients' desire to restore the natural appearance of their faces but also by the improvement of their visual comfort and overall quality of life. [8] Optimal approaches to treating blepharochalasis are capturing the attention of scientists and surgeons in the pursuit of achieving the best results in restoring the functionality and aesthetics of the upper eyelids. A variety of methods and techniques are actively being researched and applied in clinical practice. The primary approach to treating blepharochalasis is surgical intervention, including upper, lower, or full blepharoplasty. Excess skin should be excised, and prolapsed lacrimal glands can be repositioned and sutured in place. Minor ptosis

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can be successfully treated with the Fasanella-Servat method (1961). This method allows surgeons to correct excess skin and tighten muscles. [5,8]

Severe degrees of ptosis may require more extensive surgery, but incorrect diagnosis can easily lead to overcorrection. [11] Since this type of surgery is recommended during a resting period, which may last from 6 to 12 months, additional treatment stages include addressing ptosis (drooping), canthoplasty (eyelid shape correction), and procedures for tissue repositioning and fat grafting. These methods are applied in addition to reconstructive procedures aimed at restoring tendons, aponeurosis, and lacrimal glands. [2,7,20]

Aesthetic blepharoplasty is performed to eliminate excess skin folds and fat "hernias'' in the eyelid area. Blepharoplasty procedures are standardized, but during the operation, the operating surgeon may make adjustments such as lifting or suturing a prolapsed lacrimal gland, shortening the intra-muscular fat pad, lifting the muscles of the upper eyelid, reconstructing tendons and aponeurosis, and incorporating other additional techniques. [9,13,19,20] Blepharoplasty procedures are standardized, but there is room for variations in the surgical approach based on the surgeon's experience. Blepharoplasty options include the classic method, where access is through the eyelid skin, the transconjunctival method, where access is through the lower eyelid conjunctiva, and the mixed method, which involves using both approaches during the operation. The choice of a specific method may depend on the surgeon's experience and preferences, as well as the characteristics of each individual case of blepharochalasis. [7,10,18]

The performance of aesthetic surgeries, especially on the face, entails a high level of responsibility on the part of surgeons. One of the key factors determining the effectiveness of surgical intervention in blepharochalasis is patient expectations and the assessment of quality of life after the procedures. [11,15] Modern scientific research in the field of plastic surgery has shown that patients facing blepharochalasis seek not only to restore the aesthetics of the upper eyelids but also to improve visual comfort and overall quality of life. This demonstrates the level of patient engagement in the treatment process and underscores the importance of considering their

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individual expectations. This is due to the fact that any complication is perceived by patients with a tragic nature, considering the impossibility of hiding them from the public eye. In such cases, patients typically do not show understanding, and this can lead to the creation of a negative reputation for the physicians, as well as undermine the trust of other patients. [11,15,18] Blepharochalasis can cause complications both during the progression of the disease before surgery and after the procedure. According to the results of the latest observation before surgical intervention, at least one complication was identified in the majority of patients with blepharochalasis (94%). The most common complications before surgery were ptosis (48%), prolapse of lacrimal glands (44%), canthal angle deformation (29%), and lower eyelid retraction (17%). [8,16,20] Given the above-mentioned statistics of identified cases, surgeons today pay special attention to potential complications and develop strategies to prevent them, ensuring patient safety and enhancing the quality of upper blepharoplasty procedures in cases of blepharochalasis.

CONCLUSION

In conclusion, recent scientific research emphasizes that blepharochalasis not only has an aesthetic nature but also significantly impacts the functional aspects of ophthalmology and the overall quality of life for patients. Modern aesthetic surgery views the treatment of blepharochalasis as a true art that requires high expertise.

Considering the identified issues, the surgeon's primary task is careful patient selection and examination, assessing the degree of ptosis, detailed planning for correcting age-related changes and eyelid characteristics. A balanced approach takes into account specific circumstances and the choice of the optimal method in each individual case.

This is necessary not only for restoring the natural appearance of the face but also for improving visual comfort and the quality of life, which becomes a significant aspect of the successful treatment of blepharochalasis. Thanks to performing blepharoplasty with attention to surgical nuances, not only is hospitalization unnecessary, the procedure can be done under local anesthesia, but also the postoperative period is relatively painless. Patients quickly recover, returning to their normal lives and work,

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highlighting the outstanding effectiveness of skillfully conducted blepharoplasty in addressing the multifaceted issues of blepharochalasis.

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