

BLEPHAROPLASTY: REVISITED

THESIS

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Index

List of figures	a
Introduction	1
Review of literature	4
History of blepharoplasty.....	6
Relevant Anatomy.....	8
Aesthetics of the eye.....	23
Anatomic changes that occur with aging.....	27
Preoperative assessment.....	32
Upper eyelid blepharoplasty.....	42
Lower eyelid blepharoplasty.....	52
Complications of blepharoplasty.....	65
Patient and methods	75
Results	87
Discussion	105
References	112

List of figures

Figure number	Comment	Page
1	Anatomy of eyelid protractors	10
2	Anatomy of orbital fat	13
3	Anatomy of upper eye lid	14
4	Anatomy of the lower eyelid	15
5	Anatomy of tarsoligamentous sling "posterior lamella"	16
6	Anatomy of periorbital region	17
7	Anatomy of medial canthal tendon	18
8	Arterial arcades of the eyelid	19
9	Innervations of orbicularis oculi muscle	21
10	Relation between the eyebrow and eyelid structures	23
11	Vertical and horizontal dimensions of palpebral fissure	24
12	The lateral canthus lies cephalic to the medial one	25
13	Optimal anatomical measurements of the eyelid	26
14	Hester classification of the midface aging	31
15	Clinical photograph of complete face used in preoperative evaluation	38
16	a. Snap test. b. Distraction test	40
17	a. Positive vector. b. Negative vector.	40
18	Incision of upper eyelid blepharoplasty	42
19	a. Upper lid incision b. Skin and fat resection.	46
20	Excision of excess fat	47
21	Closure of skin with running	47
22	Lateral extension of lower lid incision	56
23a.	Triangular orbicularis oculi flap is elevated	62
23b.	Pivot of orbicularis flap point slightly medial to lateral canthus	63
23c.	Traction is applied to orbicularis flap and its apex is retrieved from the upper incision	63
24	Postblepharoplasty chemosis	67
25	Postblepharoplasty right eye ptosis	68
26	Postblepharoplasty lagophthalmos	69
27	Postblepharoplasty ectropion	69
28	Postblepharoplasty hollowed upper eye lid	70
29	Post blepharoplasty inclusion dermoid cyst	73
30	Sex distribution of patients included in this study	88
31	Outline the surgical management of the patients included in this study	89

32	Outline muscle work done for patients in this study.	90
33	Non aesthetic complications following blepharoplasty in this study	91
34	Aesthetic complications following blepharoplasty in this study	92
35	Patients' satisfaction following blepharoplasty in this study	94
36	Plastic surgeons' satisfaction following blepharoplasty in this study	94

List of tables:

Table No;	Table	Page
1	Classification of periorbital aging	30
2	Table of 1st group: muscle work.	84
3	Table of 2 nd group :no muscle work	86
4	Table of Results and complications	96
5	Table of patients photos	104

Abstract

The patients who will benefit from muscle resection in the lower eyelid are those who complain of lower eyelid bags due to orbicularis oculi hypertrophy. We can avoid the risk of muscle work by preservation of the pretarsal part of the muscle.

Key Word

REVISITED

Surgery

BLEPHAROPLASTY

INTRODUCTION

INTRODUCTION

The eyes are one of the most striking features of a person's face. They transmit emotions and feelings and form part of personality and soul of a person. Eyelid changes occur with aging and are influenced by genetic factors. **(Byrd, H. S. and Burt, J. D, 2002)**

Initially, blepharoplasties were performed to correct acquired (i.e., secondary to trauma or carcinoma) or congenital deformities, not for cosmetic purposes. However, once the physiological changes of aging became better understood, new blepharoplasty techniques were developed for their correction. Even though modern cosmetic blepharoplasty techniques have been around for 50 years, only in the last 2 decades has the number of blepharoplasty procedure increased worldwide. **(March AR and Pinedo JT, 2009)**

Looking sleepy or tired because of physiologic changes is considered a sign of aging rather than a sign of maturity. To look young is fashionable. Furthermore, a younger-looking face is extremely useful in this competitive world in which the transmission of a good image is more important than ever before in the public, professional, social and private environment **(March AR and Pinedo JT, 2009).**

Classic blepharoplasty involves removal of herniated fat through a weakened orbital septum this can be accomplished through transcutaneous or transconjunctival approach. **(Kitzmilller WJ and Archer LP, 2008).**

Introduction

Upper eyelid blepharoplasty is performed to correct age related upper eyelid changes including dermatochalasis and irregular contours due to bulging of post-septal fat pads . Additionally, upper lid ptosis can be repaired in an anterior approach through the blepharoplasty incision when indicated. These procedures are gratifying and have relatively low associated morbidity. **(Gladstone H.B, 2006)**

Pre-operative assessment includes observation of excess upper eye lid skin, bulging fat pads, lid position, and location of supratarsl crease. Most excess skin is located centrally and laterally. The most common bulging fat pad is the nasal fat pad; however the central fat pad also frequently requires excision. Lower lid blepharoplasty traditionally is considered a more complex procedure than upper lid blepharoplasty. More factors affect the success of procedure and complications are more frequent. In lower lid blepharoplasty the following anatomic features are observed pre-operatively and are often modified surgically: lateral canthus position, interpalpebral slant, lower lid position, size and shape of the lateral sclera triangle, lower lid fat pads bulges, lower lid tone, lid cheek junction, tear drop deformity. **(Mowlavi A et al, 2002)**

The following findings significantly affect surgical execution but are not modified surgically: presence of dry eyes/tear quality and the presence of relative enophthalmos or exophthalmos. **(Gladstone H.B, 2006)**

Review of literature

HISTORY OF BLEPHAROPLASTY

Regarding eyelid surgery in general, a knowledge of the history that brought us to the present provides many advantages, most of which relate to warning of potential unfortunate events, or encountering concepts that have been already discovered. If one knows the history, one can benefit from the experiences of others, or even endeavor to improve upon existing methods. Cosmetic eyelid surgery has been described for over a century. **(Fagien and Laurence B.Katzn , 2008)**

Cosmetic eyelid surgery today has the benefit of 2000 years of development and refinement of surgical techniques and instruments. Ali ibn Isa (AD940-1010) describe the procedure just quoted more than 1000 years ago , at a time when his medical treatment for "edema of the lids" was letting blood from the head , and treating the eye with preparation celandine , sandalwood, and endives. **(Fagien and Laurence B.Katzn , 2008)**

Aulus Cornelius Celsus, a Roman encyclopedist and philosopher in the first century, was probably the first to comment on the skin excision in upper eyelid in his De re Medica, published in 1478. Arabic surgeons, in the beginning of 10th century, noted that the excess of upper eyelid skin impaired vision and designed ways to excise it. **(Durairjai VD et al, 2009)**

In 1818, Von Graefe used the term blepharoplasty (from the Greek blepharon, meaning eyelid, and plastos, meaning formed) to describe a case of eyelid reconstruction after excision of eyelid carcinoma. **(Durairjai VD et al, 2009)**

In 1830, several authors described imaginative techniques for cosmetic and reconstructive eyelid surgery. Famous during this time, were Mackenzie, Graft, Dupuytren, and Alibert they described effective methods to excise excess upper eyelid skin. In 1844 Sichel described in full details the herniated fat pads but he didn't create a wave of surgical excisions because surgery at that time was performed only for functional reasons. **(Durairjai VD et al, 2009)**

In 1869, Fuchs first used the term “blepharochalasis” and also recognized the importance of the weakness of facial bands connecting the skin and orbicularis with the tendons of the levator in the development of excess skin fold. In 1903, Miller described multiple incisions to correct different eyelid deformities. In 1911, Kolle wrote about eyelid wrinkles .In 1924, Bourguet describes the transconjunctival for lower eyelid blepharoplasty .In 1925, Spaeth, in *Newer Methods of Ophthalmic Plastic Surgery* explained lower eyelid reconstruction techniques. **(Fagien and Laurence B.Katzn , 2008)**

In 1929, Bourguet was the first author to promote fat removal for eyelid surgery as he was the first surgeon to describe the two separate fat compartments of the upper eyelid. **(Durairjai VD et al, 2009)**

In the 1940s, fat removal was already part of the description of blepharoplasty in medical literature. May's work in fat removal in blepharoplasty was published in 1947, Padgett and Stephenson's work was published in 1948, and Spaeth's work was published in 1949. In 1951, Castanares published a full description of the different fat compartments in the orbit, their relationships to the eyelids and orbicularis oculi muscle. In the 1950s and 1960s, many authors (Castanares in 1964 and 1967, Convers

in 1964, Gonzales Ulloa in 1961, Rees in 1969, Lewis in 1969, Silver in 1969) created various blepharoplasty techniques that were differentiated only by small details. In 1970s, blepharoplasty techniques were advanced to include resection of the hypertrophied orbicularis muscle (described by Loeb in 1977) and fixation and suspension of the lower lid (described by Furnas in 1978). In the 1980s, the transconjunctival approach of lower eyelid blepharoplasty became popular. This approach was practiced by great number of blepharoplastic surgeons trying to avoid lower eyelid retraction associated with subciliary approach. In the 1990s, the new concept of fat sparing rather than fat removal was developed. This concept involved repositioning of the fat pads. By using this technique, the vertical descent of the orbicularis muscle and the midface area could be suspended and elevated at the same time. **(Fagien and Laurence B.Katzn , 2008)**

RELEVANT ANATOMY

Eye lid is a bilamellar structure comprising an anterior lamella and posterior lamella. The anterior lamella consists of skin and orbicularis oculi muscle; the posterior lamella includes the tarsoligamentous sling, which is comprised of tarsal plate and medial and lateral canthal tendon, along with the capsulopalpebral fascia and conjunctiva. The septum originates at the arcus marginalis along the orbital rim and separates the two lamellae. **(Codner M A. and Ford DT, 2007)**

A. Eyelid skin:

Is the thinnest skin in the body, with an average thickness 0.5:0.7 mm, the upper eyelid is being slightly thicker than the lower eyelid. The extremely thin nature of the eyelid skin provides advantages such as decrease scar visibility and rapid wound healing, however easy wrinkling and faster stretching leading to premature aging represent the disadvantages. **(Guyron B, 2000)**

Although not readily apparent to naked eyes, the eyelids are covered with numerous fine hairs that thickened and coalesce into rows, forming the eyelashes. The eyelid skin contains a plethora of sweat glands –a potential source of postsurgical cysts – and few sebaceous glands that are sparsely distributed here than anywhere else in the body. **(Hassan AS., 2004)**