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"The wayward eyelids"

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Nepalese Society for Oculoplastic Surgeon

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NESOS E-MAG

NESOS e-Mag is the official biannual electronic magazine of the Nepalese Society for Oculoplastic Surgeons (NESOS). This e-Magazine will be a concoction of scientific publications such as articles, reviews, opinions, tips and tricks, interesting cases, and out-of-the-track contents like interviews of eminent Nepalese oculoplastic surgeons, success stories, photo gallery and oculoplastic news.

The aim of the e-Magazine is to provide a platform for the oculoplastic surgeons from Nepal and abroad to discuss and engage on topics related to orbit, ophthalmic plastic and reconstructive surgeries, oculofacial aesthetics and ophthalmic oncology. This will also provide a platform for young oculoplastic surgeons and aspirants to learn from the experienced ones in the field. The e-Magazine also aims to disseminate important information and messages regarding the NESOS activities including the news and events.

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- Original research articles
- Case report/ case series
- Picture essay - Interesting oculoplastic pictures with short explanation

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While the word count is not rigid, it is advised that the authors follow following word limit for their articles.
- Major review and original research articles — maximum 3000 words
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IN THIS ISSUE:

COVER PAGE STORY:

Courtesy - Aashish Raj Pant, MD, ChM
Picture 1 (top right) - Young female with bilateral lower lid epiblepharon;
Picture 2 (top left) - Capsulopalpebral fascia demonstrated during Jones procedure;
Picture 3 (bottom right) - Bilateral upper lid ptosis (right>left);
Picture 4 (bottom left) - Left eye cicactrical ectropion of both upper and lower eyelid

MESSAGE : FROM THE PRESIDENT OF NESOS

BEN LIMBU, MD
President
Nepalese Society for Oculoplastic Surgeon

I would like to congratulate the NESOS eMag editorial committee led by Dr Aashish Raj Pant and Dr Hom Bahadur Gurung for the successful launch of the second issue of the NESOS eMag entitled “The wayward eyelids”.

NESOS eMag provides a platform for the members of the NESOS to share and learn their knowledge and experience regarding cases of oculoplasty and ocular oncology. Besides, the eMag also highlights the activities carried out by the NESOS during the past 6 months.

I would also like to thank the sponsers for this issue of the NESOS eMag - Vaishno Medisales, Biomed, NPL, Jyoti eye hospital and Global eye hospital. We hope for the continued support in the future.

My best wishes to the editorial team.

EDITORIAL

It is our great pleasure to bring forward the second issue of the "NESOS e-Mag": an official biannual e-Magazine of the Nepalese Society for Oculoplastic Surgeons (NESOS). The first issue "The highway of tears" was well received by our readers and we are thankful for the kind suggestions and warm appreciations made by the esteemed readers for the maiden issue.

The theme for this issue is "The wayward eyelids". The Oxford learners dictionary defines wayward as "difficult to control", thus, a wayward eyelid signifies a dystopic eyelid which is difficult to control, unless an appropriate intervention is performed by the oculoplastic surgeons. This issue is thus focussed on the common eyelid conditions in oculoplasty such as entropion, ectropion and blepharoptosis.

This issue is our effort to make it a fun-to-read eMagazine and not just pages of information. Apart from the review articles, opinions and, tips and tricks; we have continued the Interview section - this time we have interviewed one of the globally renowned pioneer of oculoplasty surgery from Nepal, Dr. Naresh Joshi. We have also started an Oculoplasty update section where we have reviewed some impactful articles published in the last 6 months in major oculoplasty and ocular oncology journals. We have also started a section "Video Bouquet where we have provided links for the oculoplasty videos of surgeries performed by the members of NESOS and other pioneers of Oculoplasty. We have also continued providing an update on activities conducted by NESOS while oculoplastic photostories have been covered through the "I-stories".

The objective behind the introduction of the e-Mag is to provide an ideal forum for exchange of information on oculoplasty through research papers, reviews and, case study/ series whilst retaining its character as an eMagazine with news, stories, photos and event coverages. We hope we are able to deliver that and promise to keep continuing the same in the days ahead. We appreciate the efforts of all the members of the NESOS executive committee, our esteemed authors, designers, and the sponsors for the tremendous support.

Feedbacks and suggestions are always welcome. You can contact us at nesosemag@gmail.com.

Hope you have a joyful reading.

REVIEW:

Clinical Anatomy of Eyelid Revisited

Nisha Shrestha
Lecturer, KIST Medical college

ABSTRACT

A sound knowledge of anatomy of eyelids is important for the successful outcome of eyelid surgery and helps in minimising the complications in difficult cases and maximising the outcomes. In this article, we revisit the clinical anatomy of eyelid based on static and dynamic components.

INTRODUCTION

Eyelids are complex anatomic structures and a sound knowledge of the eyelid anatomy (both form and function) is essential to achieve good surgical outcome in ophthalmic plastic and reconstructive surgery.1 The eyelids not only act to protect the anterior surface of the globe from local injury but also aid in tear production (lipid layer), tear film maintenance and distribution, tear drainage (lacrimal pump), aesthetic and also to aid in light regulation.
The anatomy of the eyelid can be divided into static or structural and dynamic or functional eyelid anatomy

Static eyelid anatomy:

- Surface anatomy
- Lid margin
- Anterior and posterior lamella
- Neuro-vascular-lymphatic supply

Dynamic eyelid anatomy:

- Eyelid opening
- Eyelid closure
- Lid creases and folds
- Lid position
- Lacrimal pump mechanism

1. FOREHEAD

It includes skin, connective tissue, muscle, subcutaneous areolar tissue and aponeurosis. The skin of forehead is the thickest in the face and is transversely oriented and forms a septae extending from the dermis to the frontalis.

The elevator of the forehead and eyebrow is the frontalis muscle which originates from the galea aponeurotica and it merges with skin of eyelids and nose.

The depressors include procerus, corrugator supercilia. Procerus is a triangular muscle originating from the fascia of nasal bone and inserting into the skin of glabella and forehead, between frontalis bellies. This muscle is responsible for the horizontal wrinkles over

nasal bridge; draws medial angle downward.

Corrugator supercilia originates from the nasal process of the frontal bone and extends obliquely over the supraorbital rim where it interdigitates with fibers from the frontalis and orbicularis muscles and inserts into the deep surface of the skin. It pulls the forehead and eyebrow in an inferomedial direction giving frown lines, glabellar folds, rhytids. It is supplied by the buccal division of 7th cranial nerve.

Depressor supercilii originates from the medial orbital rim, near the lacrimal sac and inserts into the medial aspect of the bony orbit, inferior to the corrugators supracili. The muscle acts as an accessory depressor of brow.

2. EYEBROWS:

Male have straighter orientation of brows whereas female have more arched with apex laterally. Medially it is angular and has lateralized cilia whereas laterally it is in a decreasing degree. The upper end is directed downward and lateral from the vertical plane whereas lower end is directed upward and lateral thus incisions need to be beveled to prevent lash follicles. In cases of Lateral brow ptosis, frontalis contraction is decreased, gravitational pull from heavy cheek and lateral facial tissues leads to elevation of lateral brow more. Retro Orbicularis Oculi Fat pad (ROOF) is responsible for eyebrow volume and mobility of the lateral eyebrow and eyelid.

3. EYELIDS:

Eyelids are the pair of mobile, flexible multilamellar structures that cover the globe anteriorly. Eyelid skin is the thinnest due to attenuation of dermis. They measure 30 mm horizontally. Lateral canthus is 5-7 mm medial to orbital rim and 2mm above medial canthus and up to 5mm in mongoloids. In cases of antimongoloid slant however the lateral canthus lies below the medial canthus. Medial canthus is more obtuse and moved away from globe in Treacher Collins syndrome, mandibulofacial dysostosis..

Lid margin

It is 2 mm wide and from anterior to posterior lies lash line, grey line, meibomian gland opening and posterior mucocutaneous junction respectively. Lower lid margin is distinct and is separated by papillae lacrimalis containing punctum (0.4-0.8 mm) into (1/6th) medial lacrimal part & (5/6th) lateral ciliary part. There are 100 lashes in upper lid and 50 in lower lid. They originate from anterior lamella in two or three irregular rows. Several sebaceous Zeiss glands empty into each lash follicle while Moll sweat glands are located between follicles. Grey line is an important structure in eyelid which corresponds to muscle of Riolan. It separates eyelid margin into anterior and posterior lamella. Meibo-

Applied anatomy of eyelids:

- Abnormalities of lashes: trichiasis, pseudo trichiasis, distichiasis, trichomegaly.
- Ectropion, Entropion
- Blepharitis – anterior and posterior
- Chalazion, Hordeolum

Clinical aspects of anterior lamella include:

- Stretching of skin with age provides excess tissue available for reconstruction, dermatochalasis, blepharoplasty.
- Full thickness skin graft uptake is good due to rich vascular supply and no subcutaneous fat.
- There is no vertical excess lower eyelid skin so incisions should be vertical in Lower lid, at lid crease in upper lid.
- If thick graft is used, small bite should be taken at thick skin and large bite at thin skin.

mian gland line is an opening of ducts of Meibomian glands. They are approximately 25 in upper lid and 20 in lower lid and are vertically oriented.

Eyelid constitutes skin, subcutaneous areolar tissue, muscles of protraction (striated), submuscular areolar tissue, fibrous layer- orbital septum and tarsus, retractors, conjunctiva from anterior to posterior. The balance of anterior and posterior lamella is integral for normal lid architecture. Anterior lamella consists of skin and subcutaneous tissue. Skin is thinnest and consists epidermis, attenuated dermis, sebaceous and sweat gland and melanocytes. It is slightly thicker at infrabrow laterally. Subcutaneous tissue is a loose connective tissue containing no fat.

Orbicularis oculi is the protractor of the eyelids. It is divided into orbital and palpebral part. Palpebral part is further divided into pretarsal and preseptal part. The pretarsal part contains superficial and deep heads. Deep head originates from posterior lacrimal crest and lacrimal fascia. Superficial head originates from anterior limb of the medial canthal tendon. The upper and lower eyelid segment fuse in lateral canthal area to become the lateral canthal tendon and insert into the lateral orbital tubercle. The preseptal is also divided into superficial and deep heads. It originates from upper and lower margins of the medial canthal ligament and gets inserted lateral to the orbital rim on the zygoma. It overlies the orbital septum and orbital rim separated by a fibrofatty layer the post orbicularis fascia.

Surface anatomy of eyelid

The orbital part originates from maxillary and frontal bones and ends as medial canthal ligament. It overrides the orbital rims and inserts at the same location as the preseptal orbicularis. Orbital part is responsible for the firm lid closure and squeezing of eyelids. The action of the orbital part of the orbicularis is antagonized by occipitofrontalis. Palpebral part causes gentle lid closure and involuntary eyelid movements (blinking). Its action is antagonized by levator palpebrae superioris. The muscle of Riolan is the ciliary portion of orbicularis and corresponds to gray line at lid margin. At the anterior lamella it causes meibomian gland discharge whereas at posterior lamella it leads to lash position and movement. Horner's muscle (pars lacrimalis) is the deep pretarsal head of the orbicularis. Its contraction pulls the eyelids medially and posteriorly which in turn compresses the canaliculi and lacrimal ampullae pushing tears toward the lacrimal sac. Paralysis

Orbital septum applied anatomy

- Age related herniation of orbital fat due to its weakening, weakest at the medial part of lower lid - Dermatochalasis
- Barrier against the spread of infection
- Orbital cellulitis (behind the septum) vs preseptal cellulitis (anterior to the septum)

Applied anatomy of fat pads

- Imparts fullness and smoothness to lids
- Atrophy of the fat pads results in sunken looks, involutional enophthalmos, deep sulcus
- Hypertrophy or prolapse of fat pads causes baggy eyes
- Fullness of upper lateral part of the eyelids may be due to lacrimal gland and not to be confused with fat pad
- Identification of Levator aponeurosis and CPF during surgery is made easier by the fat pads
- Contiguous with posterior orbital fat pad – upper central, lower all
- Fat prolapse/ baggy eyelids may require blepharoplasty with fat reduction
- Should not be directly cut due to the vasculature - cauterize and cut
- Inferior oblique muscle is located between inferior central and lateral pocket of fat pads

Applied anatomy of LPS

- Ptosis which may be due to LPS muscle paralysis (3rd nerve palsy) or LPS aponeurosis dehiscence/ detachment due to old age, surgery, trauma or inflammation.
- Lid crease – LPS detachment/ dehiscence leads to absent lid crea se. Asian eyelids typically have no lid crease. In these cases, lid crease can be formed by LPS orbicularis suturing at intended lid crease
- Retracted eyelids – patients with retracted eyelids can be treated by LPS weakening by full thickness blepharotomy
- Patients with Marcus Gunn Jaw winking can be managed by Detachment of LPS and frontalis sling.

or senile weakness of the muscle causes eye closure weakness, ectropion and epiphora.
Fibrous layer is formed by the orbital septum which is a thin, multilayered sheet of fibrous tissue. It arises from the periosteum over the superior and inferior orbital rims at the arcus marginalis. Centrally it is continuous with the tarsal plates. Laterally it is superficial and lies anterior to lateral palpebral ligament. Medially, it is behind lacrimal part of orbicularis oculi. In the upper eyelid, it fuses with the levator aponeurosis 2-5mm above the superior tarsal border whereas in the lower eyelid it fuses with the capsulopapebral fascia at or below the inferior tarsal border.

The inferior tarsus is smaller, thin, elliptical vertical diameter of about 5 mm. Meibomian glands are aligned vertically within tarsus.

Upper eyelid retractors include Levator palpebrae superioris and levator aponeurosis, superior tarsus muscle (Muller muscle) and Whitnall's ligament as support. Lower eyelid retractors include Capsulopalpebral fascia (CPF), inferior tarsus muscle and Lockwood's ligament as support.

Levator palpebrae superioris originates from the apex of the orbit from the periorbita of lesser wing of sphenoid. Muscular part is 40 mm length and aponeurosis is 14-20 mm length. It is divided into anterior and posterior portion. Anterior portion is fine strands of aponeurosis and is attached to the pretarsal orbicularis muscle bundle and the skin. Posterior portion is firmly onto the anterior surface of the lower half of the tarsus. Lateral Horn of

the levator forms a prominent fibrous sheet that indents the posterior aspect of the lacrimal gland, and so defines it's orbital and palpebral lobes. It is inserted into the lateral orbital tubercle. Medial Horn of the levator blends with the intermediate layer of the orbital septum and gets inserted into the posterior crus of the medial canthal tendon & the posterior lacrimal crest.

Mullers muscle originates from undersurface of levator aponeurosis, 12-14 mm above the upper tarsal margin and inserts into the superior tarsal margin. It helps in widening palpebral fissure with resultant 2mm elevation(approximately).

Lower eyelid retractors: Capsulopalpebral fascia originates as the capsulopalpebral head from attachments to the terminal fibers of inferior rectus muscle. Anterior to inferior oblique two portions of the capsulopalpebral head fuse to form the Lockwood suspensory ligament and gets inserted into the inferior tarsal border. Its functions are lid excursion on downgaze - 3–5 mm, inferior fornix depth and white infratarsal band.

Palpebral conjunctiva is adherent to tarsal plate and forms the posterior layer of eyelids. It is composed of non keratinised squamous epithelium and contains mucin secreting goblet cells and accessory glands of Wolfring and Krause.

BLOOD SUPPLY:

Arterial supply is through vascular arcades. The lateral palpebral Artery a branch of lacrimal artery and the medial palpebral artery branch of ophthalmic Artery forms Marginal arcade, superficial branches of medial palpebral artery form the Peripheral arcades and superficial temporal, transverse facial and infraorbital artery forms tarsal artery supplying the eyelids. Venous drainage is through Ophthalmic and angular vein and superficial temporal vein from the medial and lateral part of eyelid respectively.

NERVE SUPPLY: Upper eyelid is innervated by supra orbital nerve, supra trochlear nerve, infra trochlear nerve and Lacrimal nerve. Lower eyelid is innervated by Infra trochlear nerve and infra orbital nerve

LYMPHATIC DRAINAGE: Upper lid, lateral 1/3rd of lower lid and lateral canthus drains to preauricular lymph node and deep parotid nodes then to cervical lymph nodes. Medial part of upper lid, medial 2/3rd of lower lid and medial canthus drains to internal jugular veins through submandibular nodes.

DYNAMIC LID ANATOMY:

Lid opening: Palpebral fissure height at primary gaze is between 9-10 mm and it is primarily the function of levator palpebrae superioris (LPS action 14-17 mm). Other contributing muscles are Muller muscle (2mm lift) and lower eyelid retractors. Frontalis contraction also adds up to lid

Applied anatomy of Mullers muscle

- 1-2 mm ptosis which is due to Lesion of the cervical sympathetic chain with resultant Muller muscle paralysis
- Horner's syndrome – a triad of Ptosis, miosis and enophthalmos (Note: Ptosis + mydriasis - 3rd nerve palsy)
- The peripheral arterial arcade –between the levator aponeurosis and muller muscle is a useful surgical landmark to identify the muller muscle

Applied anatomy of Capsulopalpebral fascia:

- CPF dehiscence/ detachment leads to entropion
- Retractor reattachment, plication for involutional entropion

opening. LPS-Superior rectus muscle complex helps upper lid to follow globe in its movements. Anderson's Myomectomy surgery for Blepharospasm changed concept who proposed a dynamic classification of orbicularis oculi - extracanthal and intracanthal orbicularis oculi. During Myomectomy for blepharoplasty, intracanthal portion is left intact due to lack of provocative stimulation causing blepharospasm

Structural classification:

Pretarsal – spontaneous blink
Preseptal – both
Orbital- forceful closure

Dynamic classification:

Intracanthal: Maintenance of lower eyelid tone and position, blinking, and the tear pump. This part is supplied by the Buccal branch of facial nerve

Extracanthal: Squeezing, animation, expression, and ocular protection from flying objects. This part is supplied by the zygomatic branch of facial nerve

Blinking:

Blinking could be Spontaneous blinking that occurs at regular basis without an apparent external stimulus. It facilitates the drainage of tear film. It is present in blind as no retinal stimuli are required. Reflex blinking can be due to various stimulus. Tactile as in corneal touch due to cortical connection. Diminution of sensitivity seen in contact lens wearer. Dazzle seen in bright light facilitated by Optic nerve through superior colliculus. Menace when there is sudden presence of near object. It is carried out by optic nerve through cortical connection.
Lid crease could be dynamic/soft or hard/static.

Lid position and movement:

Normal position of the upper eyelid is 1-2 mm below superior limbus and lower lid at inf limbus. Upper lid is gently curved with highest point nasal to the center of pupil. Lateral canthus sits 2 mm higher than medial canthus; it may be more in Asian.

Abnormalities of the lid position includes upper lid ptosis, retraction, lid lag or lower lid ptosis and retraction.

Abnormality of closure can be seen in Facial nerve palsy, Ectropion of lower lid, Coma vigilance, Bells phenomenon and inverse bells phenomenon.

Different types of Asian eyelids :

- Single eyelid (no visible lid crease)
- Low eyelid crease (low-seated, nasally tapered, including hidden fold).
- Double eyelid crease, infold type: the height of the upper lid crease is lower than the epicanthal fold.
- Double eyelid crease, on fold type: the height of the crease is right on the epicanthal fold.
- Double eyelid crease, outfold type: the height of the crease is higher than the epicanthal fold (asterisk).
- Double eyelid crease, outfold type without an epicanthal fold

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Clinical case:

Congenital ptosis in three siblings!

Sabin Sahu, MD
Jyoti Eye Hospital, Janakpurdham, Nepal

Congenital Ptosis can have familial occurrence. Three siblings presented with simple congenital ptosis with poor levator functions since birth. Eldest brother was 18 years old, younger brother was 12 years old and youngest sister was 6 years old. Ptosis correction with frontalis sling using silicone rod was done in all three cases with excellent functional and cosmetic outcome.

Picture legends:
Top - Congenital ptosis with poor levator action in three siblings
Bottom - Preoperative and postoperative pictures of the patients after tarsofrontalis suspension surgery.

Tips and Tricks:

Choosing appropriate surgical technique for lower lid involutional entropion

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INTRODUCTION:

Entropion is a common eyelid disorder with reported prevalence of 2.1% over age 60 years, however, the impact this condition can have in one's quality of life is tremendous, from foreign body sensation, watering and itching to corneal abrasions, corneal ulcers, scarring, and vision loss. Involutional (age related or senile) entropion of lower eyelid is the commonest one occurring due to the stretching or overuse of the eyelid retractors, tarsus or due to overaction of orbicularis oculi muscle. Over 90% of involutional entropion occurs in lower eye lid and hence, our article is focused on the lower eyelid entropion. There are plethora of surgical choices for involutional lower lid entropion. Surgical decision making for involutional entropion may be challenging sometimes as the underlying mechanisms may be varied. "One size fits all" may not be a good approach and result in complications such as undercorrection, overcorrection and recurrences. We firmly believe that the decision making for the choice of entropion surgery should be guided by the predominant underlying mechanism for entropion and thus preoperative evaluation for identifying the underlying mechanisms is of utmost significance.

MECHANISMS:

The main mechanisms underlying the involutional entropion are:

1. Horizontal Lid Laxity (HLL): This occurs due to the repetitive stretching of the eyelid support structures such as medial and lateral canthal tendon. This is the most commonly described underlying mechanism for involutional entropion.
2. Vertical Lid Laxity (VLL): VLL occurs due to the instability of the eyelid retractors such as dehiscence, disinsertion or detachment of the capsulopalpebral fascia for the lower eyelid.
3. Overriding of preseptal orbicularis over pretarsal, which is the most directly attributable cause for entropion.
4. Others such as relative enophthalmos, orbital fat atrophy, etc.

Preoperative tests (See box below)

CONCLUSION:

The main idea is to correct the underlying mechanism. So, wherever there is horizontal lid laxity, a lid shortening procedure is needed. When there is not significant lid laxity, Wies or Jones procedure may work better. All in all, combined procedure act on multiple mechanisms and are always the best choice. Quickert procedure seems to tick all the boxes for the management of most important underlying mechanisms however it is associated with complexity of the procedure with lid margin repair and increased surgical time.

Our recommended surgical

Preoperative checklist for lower eyelid entropion:

a) Vertical Lid Laxity

1) Eyelid resting position on primary gaze: MRD II - Inf. MLD -
2) Passive vertical eyelid distraction -
3) Inferior conjunctival fornix depth -
4) Lid excursion on down gaze -
5) Infratarsal band
6) Other-

b) Horizontal Lid Laxity:

Lid pulled away from globe, distance traversed in mm -

Snapback test (Lid pulled downward & away from globe gently)

0 - returns immediately
I – returns in 2-3 s
II - returns in 4- 5 s
III – returns in >5 s –returns with blink
IV – does not return even on blink/ needs manually repositioning

MCT Laxity: (lid pulled laterally): Mobility in mm -

LCT Laxity: (lid pulled medially): Mobility in mm -

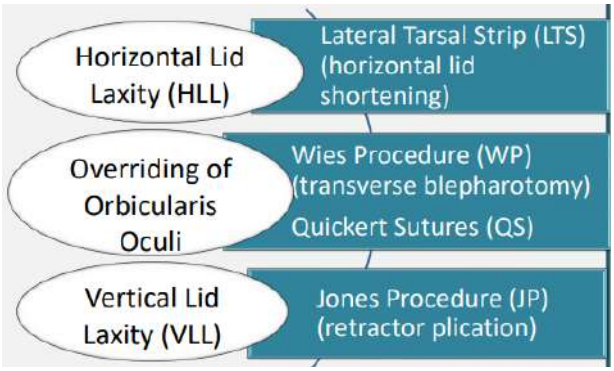
Appearance of lateral canthus -

c) **Overriding of pretarsal by preseptal :** (Upon lid closure; Upper border of tarsus moves towards globe whereas lower border moves away from globe) Present/ absent

plan is as follows:

HLL<6 – Correct vertical laxity and/or orbicularis overriding as evident with

HLL>6– Combined surgery with HLL correction + either of VLL/orbicularis overriding



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ARTICLE

Entropion surgery from classic to recent approaches

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INTRODUCTION:

Entropion is a condition where the eyelid margin turns inward against the globe, one of many causes of eyelid malposition. Entropion or any eyelid malposition will affect the palpebral aperture and can affect the physiologic integrity and clarity of the ocular surface which are dependent on properly apposed eyelids and smooth eyelid margins. Thus, early recognition and correction of eyelid entropion are critical to successful long-term health of the eyes procedure and surgical outcomes that are comparable to other procedures.

1. Involutional Entropion:

Involutional entropion is the most common type of entropion. Management should be directed at the specific mechanical failures of horizontal and vertical lid laxity, lower lid retractor weakness, and orbicularis oculi override. Addressing more contributing factors has a greater chance at achieving resolution. The approach depends on disease severity, patient comorbidities and goals of care.

Non-invasive treatment:

Patients can achieve temporary relief with taping of the lower lid to the malar eminence or with application of a cyanoacrylate liquid bandage to evert the lid margin. These treatments are beneficial as temporizing measures until the patient can have surgery for definitive repair, or if the patient is too ill to be a candidate for surgical intervention. Temporary relief from involutional entropion can also be achieved with botulinum toxin injections to the preseptal orbicularis, to combat override. Carbon dioxide laser skin resurfacing has been proposed as a conservative means of managing involutional entropion.

Surgical treatment:

General principles of management include either addressing one of the factors alone or whenever possible addressing the 2 main causative factors: lower eyelid laxity and reattachment of lower eyelid retractors. In the elderly and debilitated patients, minimally invasive and brief procedures may be attempted first albeit with reduced success rates.

Rotational or everting sutures:

Full-thickness eyelid sutures (Quickert sutures) can be placed at the bedside or in the office as a quick procedure to offer patients immediate relief from entropion symptoms. A double-armed 4-0 chromic or vicryl sutures is placed from the deep inferior fornix below the inferior tarsal border, through the lower lid retractors exitting through the skin superior to the level of insertion. Exiting more superiorly causes more lid eversion. This procedure indirectly tightens the lower lid retractors and forms scarring between the retractors, orbicularis and skin to prevent override. Recurrence is common.

Horizontal Lid Tightening:

This may be performed through a lateral canthototmy (Lateral Tarsal Strip) or through canthotomy sparing procedures such as Modified suture canthoplasty/pexy with or without lateral canthal tendon release.

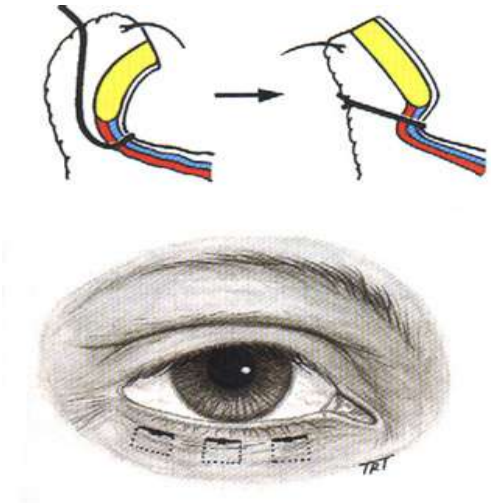

Figure:Diagrammatic representation of Quickert sutures

A. Lateral Tarsal Strip

Horizontal lid laxity can be addressed surgically with a tarsal strip. A lateral canthotomy and inferior cantholysis is performed to release the lower lid. The mucocutaneous junction is removed from the lid margin, and the anterior lamella is excised off the tarsus. Conjunctiva is debrided from the posterior tarsus. A horizontal incision through the superior tarsal plate creates a strip that is trimmed to achieve the desired amount of tightening. The strip is attached to the internal aspect of the lateral orbital rim.

B. Modified Suture Canthoplasty

A lateral upper eyelid incision may be employed to gain access to the superotemporal orbital rim and overlying periosteum. The Lateral canthal tendon may be released based on the degree of laxity and tightening desired. A lateral lower eyelid margin suture (4-0 Maxon) may be placed through a scratch incision with the double armed suture engaging the lateral tarsus, lateral canthal tendon which is then anchored to the superotemporal orbital periosteum. The upper eyelid wound is then closed.

Lower lid retractor reinsertion:

Lower lid retractor disinsertion can be reversed surgically with posterior advancement of the retractors. This may be performed through the posterior (transconjunctival) or anterior (transcutaneous) approach. These may be performed with or without a lateral canthotomy.

Transconjuncitval approach:

An incision is made through the conjunctiva and lower lid retractors spanning from the lateral canthus to just lateral to the inferior punctum, taking advantage of the bloodless plane just below the inferior tarsal border. The conjunctiva and retractors are then separated from the anterior lamella to expose the orbital septum overlying orbital fat.

Transcutaneous approach:

More easily a subciliary incision with dissection below the pretarsal orbicularis oculi exposes the orbital septum. Once this layer is opened up, the preaponeurotic fat of the lower eyelid helps identify the lower eyelid retractors, aided by the patient being asked to look up and down.The lower lid retractor which is immediately posterior to the fat compartments and adherent to the conjunctiva is identified with the patient asked to look up and down.

Regardless of approach above, a strip of orbicularis may be excised or ablated inferior to the tarsus, to reduce the preseptal orbicularis override. The retractors may be separated from the conjunctiva with cautery, and sharp dissection allows for exposure of the anterior surface of the inferior tarsal plate. A single or multiple 6-0 vicryl sutures are then used to reattache the lower eyelid retractor to the anterior inferior tarsus to evert the lid margin.

Combining tarsal strip with retractor advancement takes an average of 13 minutes more than retractor advancement alone, and gives a 96.7% success rate.The dual procedure is more effective in treating invo-

lutional entropion with horizontal lid laxity than retractor advancement alone.External approach can be used if there is absent lid laxity, significant festoons or prominent lower lid dermatochalasis.

Orbicularis override preventing procedures:

A. Wies Procedure : After full thickness incision ,sutures are passed through the conjunctiva and lower lid retractors .Sutures are passed anterior to the tarsal plate to exit inferior to the lashes.

B. Jones procedure : Horizontal Skin Incision is made ,the lower border of the tarsal plate is exposed , reflection of orbital septum and the fat pad to expose the lower lid retractors and then tightening of retractors by plication .

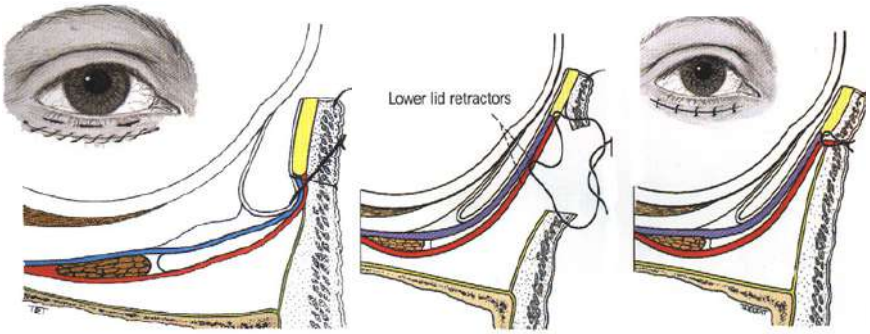

Figure:Diagrammatic representation of Right - Wies procedure and Left - Jones procedure

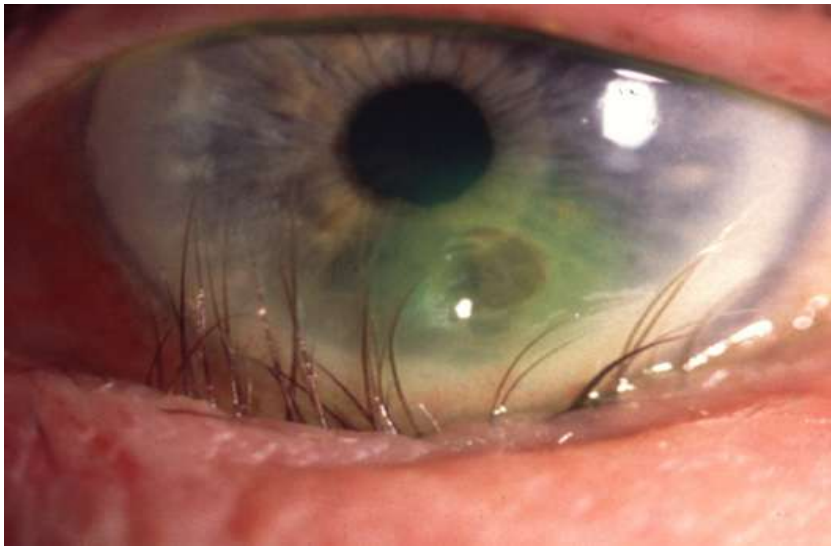

Figure:Spastic entropion due to corneal ulcer

2. Spastic Entropion:

Spastic entropion is thought by some to be a subset of involutional entropion often intermittent, and may be a precursor to persistent lower eyelid malposition. Muscle spasm of the orbicularis can induced by local irritation, infection or recent ocular surgery can unmask asymptomatic involutional changes resulting in intermittent entropion.

Treatment

First line treatment is to relieve the instigating condition by treating underlying condition. Hubbard and Kanski in 1973 described injecting 80% alcohol into the orbicularis oculi to quell spasm with high rates of success. Presently, botulinum toxin injection to the orbicularis and full thickness eyelid sutures have been used.

3. Cicatricial Entropion:

Treatment of cicatricial entropion should always include medical control of the underlying pathologic condition when present. Surgical technique depends on the severity of disease and etiology of symptoms.

If there is mild disease with symptoms from lashes abrading the corneal surface, skin resection may be sufficient to rotate the margin. If offending lashes are arranged in a sectoral pattern, eyelid margin

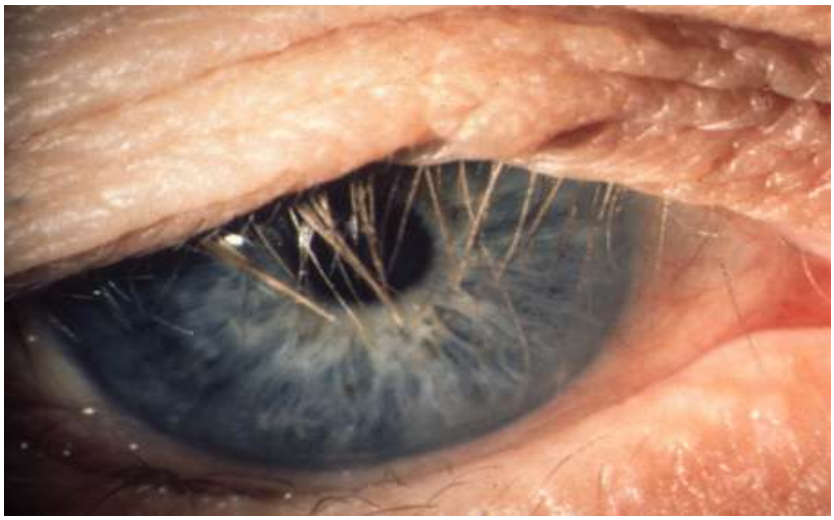

Figure:Cicatricial entropion of upper lid secondary to trachoma

splitting with lash root, cryotherapy may be considered. Lash follicle excision can also be considered for segmental lash malpositions. Follicle excision is achieved by splitting the lamella posterior to the lashes and excising the lashes with sharp Westcott scissors. The base of the lash follicles may be cauterized to prevent regrowth. Functional success of 90% has been demonstrated with no return of trichiasis at 6-24 months.

In moderate disease affecting the upper lids, tarsal fracture is a viable surgical option that preserves the lashes with acceptable cosmesis. An external partial tarsectomy is performed through a lid crease incision. A double-armed 6-0 vicryl is placed partial thickness through the tarsus and externalized. A full-thickness tarsotomy is then performed to direct the lid margin away from the globe. Everting sutures are placed to keep the lid margin rotated anteriorly, and the skin is closed.

Transverse blepharotomy and marginal rotation has also been used to treat cicatricial entropion. In this procedure a full-thickness incision is made 4mm from the lid margin and 5-0 absorbable suture is passed partial-thickness through the anterior tarsus and lower lid retractors of the proximal lid and then through the orbicularis and skin of the distal lid. The suture is tied in horizontal mattress fashion over a bolster near the lash line, and skin is closed. The sutures and bolster remain in place for 10 days. This procedure has an 85% success rate for upper and lower lid cicatricial entropion repair.

Bilamellar Tarsal Rotation (BLTR)

The eyelid is fixed with waddle type clamp of appropriate size .The full thickness incision is made through anterior and posterior lamella, parallel to and 3 mm above the lid margin .Three sutures are placed to rotate externally and fix the eyelid.

For severe cicatricial disease, the posterior lamella must be lengthened while releasing scar tissue and lid retractors. In these instances the posterior lid retractors can be weakened by recession or lysis with a spacer. Hard palate graft, other mucous membrane graft or allograft can be used to support and bolster the posterior lamella. Graft choice is especially important when operating on the upper lid, as the graft will be in constant contact with the cornea. Free tarsoconjunctival grafts may provide good results.

4. Congenital entropion:

Treatment include lubrication to limit mechanical trauma, taping the lower lid to the malar prominence, or injecting low doses of botulinum toxin into the orbicularis to weaken the muscle and prevent override. Surgical therapy provides definitive treatment.

COMPLICATIONS:

The most common complication following entropion repair especially cicatricial entropion,

Figure:Congenital entropion

is recurrence. Transconjunctival involutional entropion repair has a recurrence of 3.3% while involutional entropion should be optimally corrected, recurrence in cicatrial entropion may be minimized by aiming for mild overcorrection. Excessive overcorrection may result in an ectropion however. Ectropion can also result from repairs that attach the inferior lid retractors to the anterior surface of the tarsus rather than the inferior aspect especially when lower eyelid laxity has not been adequately addressed. Overly aggressive shortening of the lower lid retractors or excessive skin removal can produce lower lid retraction and inferior scleral show. Using local anesthesia allows the surgeon to assess lid height, motility and contour during the procedure and make any necessary adjustments promptly to prevent induction of ectropion. Lid-splitting surgical approaches risk fistula formation. If encountered, these should be excised and repaired.

The surgeon should be cognizant of the marginal arcade during entropion repair , especially in recurrent cases, to prevent necrosis at the lid margin. Any full-thickness incisions through the lid should be made inferior to the inferior margin of the tarsus, at least 4mm inferior to the lid margin, to avoid vascular compromise.

Overall, transconjunctival entropion repair has a low rate of complications, with Erb et al noting a 4% rate: stitch abscess and conjunctivochalasis 0.7% each and lateral tarsal strip dehiscence and lateral canthal dystopia.

CONCLUSION:

Entropion is a common eyelid condition with varied etiology, often multiple mechanisms and management techniques.

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INTERVIEW

Heart to Heart with
Dr Naresh Joshi

Dr Naresh Joshi is an Oculoplastic Surgeon based in London. An astounding surgeon, a prolific teacher and a great human being. He was kind to record an interview for NESOS emag despite his busy schedule.

Synopsis of Interview by
Hom Bahadur gurung, MD

Namaste and good morning, sir,
Dr. Naresh Joshi is a big name in oculoplastics all over the world. How was your journey to being one of the best oculoplastic surgeons in the world?
Well first of all, I would like to qualify that I'm a small person in the big game of oculoplastics. I happened to be fortunate enough that I'm recognized by a few individuals, but I do not consider myself a big name in the world of oculoplastics. As for being the best, I suppose patients often turn up and say, we hear you're the best in your field. And I always qualify by saying, there's no such thing as the best surgeon, there is no competition involved and it's very difficult to assess. But I tell them that I will always do my best for you. If I'm known in the world of ocular plastics, it's through some hard work, a lot of good luck, knowing a lot of the right people, coming in on the scene at the right time. And also, I hope because I've tried my best to be the best that I can be, and I really try to focus on ensuring that my patients are well cared for, and that I have done my best for them. I hope that I've never compromised care for any individual human being. In all our specialties, the outcome really depends on the patient's perception of, what is perceived as the right thing.

Dr Naresh Joshi
DO, FRCOph

Consultant Oculoplastic surgeon at Chelsea and Westminster Hospital NHS Trust London
Honorary Consultant to the Royal Marsden
Honorary Senior Lecturer in the Faculty of Medicine, Imperial College London
Founder member of the British Ophthalmic Plastic surgical Society (BOPSS)

How do you see the changes in oculoplastic procedures when you started then, and now?

Well, firstly surgery changes very little. And what I have learned is that whenever you think you've come up with an amazing, innovative new leap in surgery, if you look very carefully, it's been thought before, by decades, maybe even by centuries. The human brain has just been discovered for millennia. So, just look around, you might find that it has already been done. What we are able to do is to make fine adjustments to the techniques that have been handed down. We've had the privilege of learning from great teachers from before and so we make fine tuning. That's what I've done. I hope I've fine-tuned some aspects of treatment, patient care (not just the technical aspects) and thinking about their perspective, which of course were hugely assisted by advances in technology. I think that is what has really changed. I think we involve our patients a lot more in the decision-making. We ensure that they and their families are enrolled in what is best for them, coming to a mutually accepted decision. So, the changes I see in oculoplastic as both in terms of the individual, trying to be the best that they can and having the assistance of amazing equipment that we have around which assists us in surgery. It perhaps enhances our techniques of identification, of localization, maybe even some of the aspects of the surgeon itself is assisted, but ultimately, I think 90% is still us, the surgeons doing the work. How would it change? Well, I say to all my trainees and my fellows and some of my colleagues, of course, surgery is the most archaic form of treatment. It has changed little over thousands of years. And if you think that as a surgeon, you are the pinnacle of a patient's treatment. That actually is not how the patient perceives it. I mean, of course, if you had any diseases or problems, how you'd like to be treated is with a pill or an injection, the wave of the laser, but you don't really want to be cut and opened and stitched. That's such an old-fashioned way of doing things. So, if

OUTSIDE THE BOX

HOW DO YOU ENJOY YOUR LEISURE TIME?

I think that my most fun is interacting with other human beings.

LATEST NEPALI MOVIE, ANY NEPALI MOVIE YOU'VE WATCHED?

The first and only Nepali movie I watched is the first Nepali movie "Ama" and the main actor was Shiva's shankar. He was known to my family and he was our next-door neighbor.

WHAT IS Y OUR MANTRA TO SUCCESS?

Success is love. To be successful, you have to love what you do. If you execute whatever you do, surgery or any other form of caring, with total passion for what you do and total care for them, then you'll be a successful.

QUOTES YOU LIVE BY?

as long as those around you are happy and you help them to be happy, whether it be your patients, your friends, your children, your wife, your anything else. If you can help them to be happy, you will be happy yourself.

STRESS BUSTER?

rarely stressed. I don't think, I can't remember when I was last stressed. maybe watching television or occasionally listen to music, but more watching than listening

TALENT, WE DO NOT KNOW ABOUT YOU?

I used to play the guitar a lot. I used to be a very good tennis player and I'm very good at opening bottles of wine without damaging the cork.

PROCEDURE YOU LOVE TO DO?

I love to do every surgical procedure. I love doing every procedure and I like to always push myself to do it to the best possible level that I can.

you think as a surgeon, you are the ultimate but you're actually the most old-fashioned. I would like all my diseases to disappear with a tiny pill. Taken once a day for maybe a week. That's how I'd want my problem solved. I would like a cream or an injection to get rid of my basal cell carcinoma or my invasive sebaceous gland carcinoma. Consequently, not a disfiguring surgery, which we consider with such bravado and with pride. So that's what I like to see change in and inevitably, it will change.

Where do you see yourself in 10 years from now? Future aspirations?

Well, actually I'm towards the end of my career. I'm 59 years old. I will continue to operate for perhaps 10 years. We have worked abroad as a group and that has been a great joy working with other people, and learning and teaching together. I hope my future will be more and more working abroad, and working in centers to teach and learn from others in countries that need me more. And that of course includes my own country. So that's where I see myself in 10 years if I'm still healthy. And of course, if this present situation of Corona and COVID, doesn't suppress our travel.

You have been near to the Nepalese society of oculoplastic surgeons (NESOS) since the birth of it, and also its life member. As a founding member of British oculoplastic Surgery Society (BOPSS), you have a lot of experience. How do you see NESOS growth?

I think inevitably it's a very young, very keen and very dynamic society. It's full of very enthusiastic young people. Some societies have older members who are in the top echelons of the membership. Of course, it's relatively small in number, which is always the case when you first start. But, it's not so small for a small country. I think it will grow and I hope it will focus on quality, rather than quantity. I would rather be part of a society that really looked hard at itself and try to better everything that it did, work together cohesively and helped each other and had forums where you could discuss your complications (which we inevitably will always have), without fear, without a ridicule. I think that would be a society I'd like to be part of. And I think NESOS will be. It has great leadership within and it has great young members and I'm sure that as the years go by, it will become a force, that will be recognized throughout. I know that there are many members within NESOS who are already well recognized, and I'm sure that the young people from the NESOS will grow in stature and on the world stage.

Any message you want to send to an aspiring oculoplastic surgeon in Nepal?

I would say to any oculoplastic surgeon, anywhere in the world, Work on anatomy, work on all the basics, to attend as many lectures, observe many surgeons, watch their behavior, watch the techniques, read, subscribed to journals and watch YouTube videos. Do all those things to really optimize your own potential/ability. So, when you've gathered all that information, when you've gathered all your knowledge and you will have a core basis on which to go out, of course, if you watch the great and the good it's like standing on the shoulder and seeing even further, you don't always have to start at the bottom. Those who have preceded you will help you start at a higher position from their experience, from their mistakes. I think most people would love to teach. It's inherent in medics to want to teach. Never be embarrassed about asking questions. Ask even the most stupid questions, and sometimes you get wonderful answers that will help you. What I've done is to constantly look at myself, to praise myself, to reflect back on myself each year. At the end of the year, I look back at all my cases in my operations, and I think what could I have done better? Where did I not do as well as I could have done? I think that's very important to really look into yourself and see how you can improve every aspect of your care.

Family reunion in time of Corona Nepal 2021 with Dr Narendra and Mrs. Sarala Joshi

From how you inject a patient to make the first cut, to do the stitch, but also, how could you be better in the whole journey of the patient? Not just the surgery. I mean, often surgeons think of the surgery, but for the patient, it's the whole journey from the beginning to the end, from the beginning, when they first see you and they consult you to when you discharge them. So, think how you can improve each aspect of the journey. When the patient first turns up to your clinic, how will you greet them, when they walk into a room will you stand up and smile and make them feel at ease. All those things are just as important because for you, it might be the three-millimeter ptosis correction. But for the patient, it's a lot more than the three millimeters. It's that whole journey. And I can tell you that surgical success is not dependent on those three millimeters. If you have patients with you throughout the journey. Then the three millimeters is less important. What you consider your failures might actually be success. So, I would say look hard at the whole journey as a young person reflect, constantly see how you could be better at every phase, not just the surgery, the whole journey.

Wedding reception 1996, Arts Club London UK

How is Dr. Naresh Joshi as a family man?

I have a boy and a girl; Sarala and Naren and my wife Anne. Sarala is now 24 and about to be a doctor. She's at Imperial college, London. Naren is a medical student. He's at Kings college London. My wife is my total support and she has ensured that we as a family are cohesive and move forward together. It really is not just one individual but the whole unit. The success of the unit is dependent on the happiness of every individual. We tried to ensure that the four of us are happy together. I think, whatever your successes are, certainly for many of us, our success will only be defined by the success of our children and our family. You will know that from all the lectures that I gave, that I always show pictures of my

family, because everything that I am is because of the family that I have.

Your childhood days?

I was born in Nepal, 1962, 1st of March. At an early age, my father, who was a pioneer in ophthalmology and many of you know him, left to work in Brunei in 1965 which was very small and relatively poor country in those days. He worked there for a considerable period of time. I came back at about six years of age to Katmandu to study at St. Xavier's boarding school initially at Jawlakhel and then to Godawari. When I was about 11 years old or maybe 12, I left Nepal in 1973 and I went to boarding school in England to a school called Mill Hill school in London. There on, I went to Guy's hospital, medical school in London, and then I did my training thereafter. My childhood in Nepal was relatively short actually having said that it's the first decade off and on between Nepal and Brunei, but it was mostly, American Jesuit school, in the Himalayas and the mountains, which was an amazing school; brutal in its own way. But, put me in the right path probably.

What would Dr. Naresh Joshi be if not an ocular plastic surgeon?

I toyed with the idea of being a designer, a fashion designer. I want to design cars. I want to design all sorts of things. I suppose, working with my hands. I was good in painting. I won most of the prizes in painting. my school pottery was another forte of mine. I still, enjoy working with my hands, but on people, as opposed to objects. But I think I would've liked to being and I still hope that I would one day do more designing. I've designed most of the things in my house, stack cases, tables, chairs, whatnot, so design interests me hugely. Perhaps I would have been an architect maybe, of course one assumes that whatever you do, you would be the best at it. I know that most architects have a tough time. There are very few well-known whereas most doctors I think do okay and earn a living. So maybe I did the right thing.

A regular family dinner outing 2018
Hide Restaurant London

Few closing remarks to Readers

I am a Nepali and proud to be one. And as I get older, I become more Nepali. I have lived in England since a very early age. I am married to an English lady and we've been together for forever. And I have two wonderful children. We have a wonderful family and that at the end of the day is my success. I wish you all the very best. I know that there are many of you who aspire to be successful, but look hard and think what success is because some successes are rather empty. As long as your family's okay and you're okay and you have an adequate amount of money then you'll have a happy life.
Thank you.

Modified suture canthoplasty

Prerana Kansakar, MD
Grande International Hospital

Gangadhara Sundar , DO, FRCSEd, FAMS
National University Hospital, Singapore

Lateral Canthal Angle Reconstruction is an important component in the rehabilitation of the aging face. The lateral canthus unites half of the upper eyelid-forehead continuum with the lower eyelid-midface continuum. Aesthetic reconstruction of the canthal angle is hence crucial to achieve a youthful outcome.

Indications of lateral canthal reconstruction are as follows:

1. Horizontal lid laxity
2. Entropion
3. Ectropion
4. Lateral canthal dystopia
5. Aesthetic rejuvenation following lower eyelid blepharoplasty.

Features of Lateral Canthal Tendon Dehiscense:

1. Rounding and vertical displacement of the lateral canthal angle on primary gaze
2. Loss of temporal scleral triangle
3. Incomplete blink and closure in the absence of anterior lamellar shortage
4. Temporal eyelid imbrication
5. Pseudoretraction of upper/lower eyelids

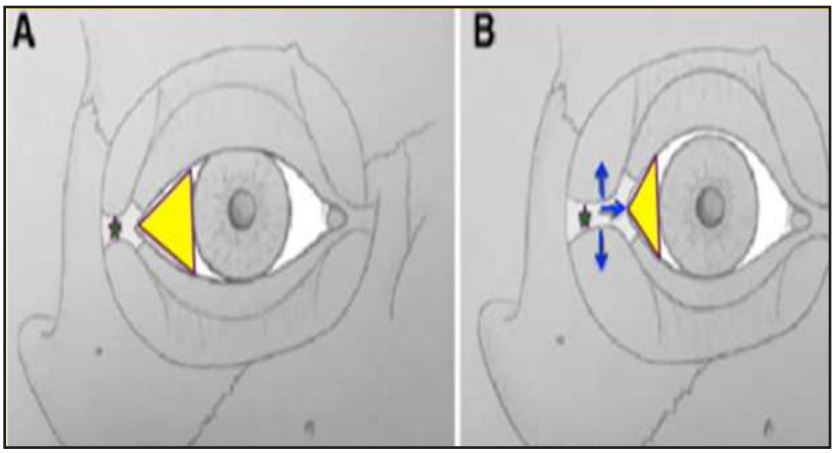

Figure: Lateral canthal tendon dehiscence

Traditionally we have been doing the Lateral Tarsal Strip Procedure to address this issue. It's a simple procedure which adresses both horizontal as well as vertical lid laxity and has a fast recovery. However, there is significant disruption of the lateral canthal angle which can result in rounding of the angle and web/scar formation. There also occurs length disparity between the upper and lower limbs of LCT which results in misalignment of the muco-cutaneous junction.

We hereby talk about Modified Suture Canthoplasty which involves tightening of the lateral canthus without shortening the eyelid and preserving the lateral canthal angle.

Procedure:

1. Local injection of lidocaine 2% with epinephrine.
2. A limited lateral or standard

upper eyelid crease incision is performed. A stab incision is then made at the grey line in the lower eyelid near the lateral canthal angle.

3. Through the lateral extent of the upper eyelid incision, blunt and sharp dissection, using Stevens scissors is done to expose the lateral canthal tendon and orbital rim.
4. With one tip of the scissors in the orbit and the other outside, the lateral canthal tendon fibers are dissected from their periosteal attachments.
5. A double armed, absorbable suture (4-0 Maxon/ 4-0 Polydioxanone) is used to reattach the lateral canthus to the Whitnall's tubercle inside the orbital rim, at the appropriate vertical height.
6. We modified this technique by reinforcing the permanent suture being used by tying multiple surgical knots in order to prevent it from cheese-wiring through the incision.
7. The 2 needles are both passed through the same spot in the lateral aspect of the lower eyelid tarsus at the gray line.
8. With appropriate tension on the lower eyelid, the suture was then tied and the knot tucked below the orbicularis of the lateral eyelid crease incision.
9. This technique can be combined with upper eyelid blepharoplasty and direct browlifts.

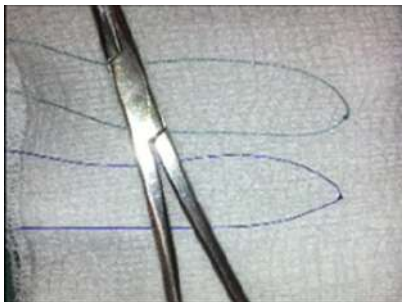

Figure:Sutures needed for the technique

Advantages:

- No disruption of lateral canthal angle
- Aesthetically more predictable
- Decreases the risk of scarring/ malposition at the muco-cutaneous junction
- Better proctects the lymphatic drainage and orbicularis oculi muscle.

Disadvantages:

- Cannot address severe horizontal lid laxity
- Learning curve

Figure:The 2 needles are both passed through the same spot in the lateral aspect of the lower eyelid tarsus at the gray line

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1. Taban, Mehryar M.D.*; Nakra, Tanuj M.D.†; Hwang, Catherine M.D.*; Hoenig, Jonathan A. M.D.*; Douglas, Raymond S. M.D., Ph.D.*‡§; Shorr, Norman M.D.*; Goldberg, Robert A. M.D.* Aesthetic Lateral Canthoplasty, Ophthalmic Plastic & Reconstructive Surgery: May 2010 - Volume 26 - Issue 3 - p 190-194 doi: 10.1097/IOP.0b013e3181baa23f
2. Hesse RJ. The tarsal sandwich: a new technique in lateral canthoplasty. Ophthal Plast Reconstr Surg 2000;16:39–41.
3. Fagien S. Algorithm for canthoplasty: the lateral retinacular suspension: a simplified suture canthopexy. Plast Reconstr Surg1999;103:2042–58

Snippets from the oculoplasty and ocular oncology journals in the past 6 months

Science is beautiful because it is evolving. Journals are a way to keep up to the change. In this section we serve you the recent articles related to our profession.

Aashish Raj Pant, MD
Hom Bahadur Gurung, MD

Building your brand: Analysis of Successful Oculoplastic Surgeons on social media

DOI: 10.1097/IOP.0000000000001654
Author: Sally S E Park, Sruti S Akella, Jee-Young Moon, Bryan Zarrin, Sheel Patel, Hiten Doshi, Anne Barmettler
Published in: Ophthalmic Plastic Reconstructive Surgery 2020 Nov/Dec
Highlight: Study analyzed successful Instagram accounts of ASOPRS members. Social media is an important communication and marketing tool, especially in esthetic fields like oculoplastics. The influence of social media is rapidly growing and can be strategically harnessed by oculoplastic surgeons to educate both patients and healthcare providers, collaborate with colleagues, and for referrals and marketing.

A Novel method of video recording Ophthalmic surgical procedures.

DOI: https://doi.org/10.2147/OPTH.S267951
Authors: Kruger AD, Hendler K, Kruger JM
Published in: Clinical Ophthalmology 2020
Highlights: A divergent lens is suspended immediately below the objective of the microscope, thereby increasing the microscope's working distance. The microscope can be suspended high above the patient, out of the surgeon's field of view, yet still provide excellent video recording of the surgical procedure who operate with surgical loupes.

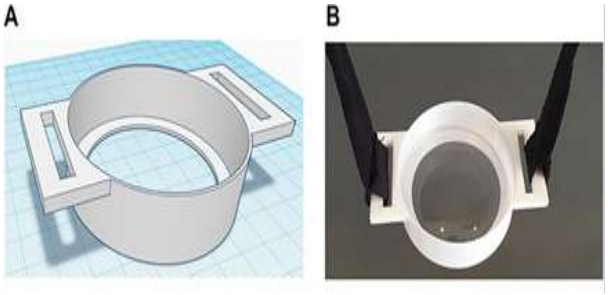


Figure 1 3D printed plastic adapter (A) graphic design, (B) photograph of the adapter holding a divergent lens with fabric straps attached to the side handles (courtesy original article)

Sutureless Transconjunctival insertion of eyelid weights: A Novel Technique

DOI:10.1097/IOP.0000000000002069
Authors: Elahi, Ebby, Afshin, Evan E., Guthrie, Ashley J., Lo, Christopher
Published in: Ophthalmic Plastic and Reconstructive surgery 2022
Highlights: This case series demonstrates that the transconjunctival approach for metal eyelid weight insertion is practical, relatively easy to perform, and associated with functional outcomes that are comparable to those achieved with the traditional approach, however, without external incision or placement of sutures.

Overall survival benefit with tebentafusp in metastatic uveal melanoma

DOI: 10.1056/NEJMoa2103485
Authors: Nathan P, Hassel JC, Rutkowski P, et al
Published in: New England Journal of Medicine, September 27, 2021
Highlights: Tebentafusp is a bispecific protein consisting of an affinity-enhanced T-cell receptor fused to an anti-CD3 effector that can redirect T cells to target glycoprotein 100–positive cells. In this multicenter, randomized, phase 3 trial, they compared tebentafusp with the investigator's choice of treatment as first-line systemic therapy in patients with metastatic uveal melanoma. Treatment with tebentafusp resulted in longer overall survival than the control therapy among previously untreated patients with metastatic uveal melanoma.

Nation- wide trends in incidence -based mortality of patients with ocular melanoma in USA:2000 to 2018

DOI:10.2147/IJGM.S299144
Authors: Valasapalli S, Guddati AK
Published in: International Journal of General Medicine, August 5, 2021
Highlights: The Surveillance, Epidemiology, and End Results (SEER) database was queried to find the incidence-based mortality for all patients diagnosed with ocular and orbit melanoma for the years 2000 to 2018 in USA. Ocular melanoma and orbit melanoma are rare entities that are predominantly seen in Caucasian/White patients. This study shows that incidence-based mortality has been worsening for these patients in the past two decades. These entities have a poor prognosis and have not been studied extensively in immunotherapy trials.

Retinoblastoma in children older than 6 years of age

DOI: https://doi.org/10.1159/000509040
Authors: Meel R• Kashyap S. • Bakhshi S.• Singh Bajaj M. • Wadhwani M
Published in: Ocular Oncology and Pathology 2020
Highlights: This is a retrospective study of 48 pts over 6 years old at presentation. This is the largest study of older age retinoblastoma and shows that it forms a significant percentage of retinoblastoma in developing countries, is misdiagnosed in one-third of cases, and may present at an advanced stage in 46% of cases.

Optical Coherence Tomography of Peri-Ocular Skin Cancers: An Optical Biopsy.

DOI: https://doi.org/10.1159/000511188
Authors: Bergeron S.• Arthurs B. • Sanft D.-M. • Mastromonaco C.• Burnier Jr. M.N.
Published in: Ocular Oncology and Pathology 2021
Highlights: They have highlighted findings of basal cell carcinoma, squamous cell carcinoma and sebaceous carcinoma. They provide evidence supporting the use of OCT for the evaluation of peri-ocular cancers. OCT enables visualization of the skin layers in vivo, before biopsy. Their results show that certain OCT features can contribute to include or exclude a diagnosis of basal cell carcinoma. By integrating this non-invasive imaging methodology into the routine assessment of peri-ocular skin lesions, especially in health care centers where access to specialists is limited, OCT imaging can increase clinical precision, reduce delays in patient referral and enhance patient care.

Statins for graves orbitopathy (STAGO): A phase 2, open-label, adaptive, single center, randomized clinical trial

DOI: https://doi.org/10.1016/S2213-8587(21)00238-2
Authors: Lanzolla G, Sabini E, Leo M, et al
Published in: The Lancet Diabetes & Endocrinology| October 22, 2021
Highlights: The authors tried to assess the efficacy of the addition of a statin, atorvastatin, to intravenous glucocorticoids (ivGCs) on Graves' orbitopathy outcomes in patients with hypercholesterolemia. A randomized, open label, phase 2, adaptive, clinical trial was done. Addition of oral atorvastatin to an ivGC regimen improved Graves' orbitopathy outcomes in patients with moderate-to-severe, active eye disease who were hypercholesterolaemic. Future phase 3 studies, which could potentially recruit patients regardless of low-density lipoprotein cholesterol concentration, are required to confirm this association.

Teprotumumab and Hearing Loss: Case Series and Proposal for Audiologic Monitoring

DOI:10.1097/IOP.0000000000001995

Authors: Irina Belinsky, Francis X Creighton Jr, Nicholas Mahoney, Carisa K Petris , Alison B Callahan, Ashley A Campbell, Michael Kazim, H B Harold Lee, Michael K Yoon, Lora R Dagi Glass

Published in: Ophthalmic Plastic and Reconstructive surgery 2022

Highlights: Teprotumumab used for treating thyroid eye disease may cause a spectrum of potentially irreversible hearing loss ranging from mild to severe, likely resulting from the inhibition of the insulin-like growth factor-1 and the insulin-like growth factor-1 receptor pathway. Due to the novelty of teprotumumab and the lack of a comprehensive understanding of its effect on hearing, the authors endorse prospective investigations of hearing loss in the setting of teprotumumab treatment. Until the results of such studies are available, the authors think it prudent to adopt a surveillance protocol to include an audiogram and tympanometry before, during and after infusion, and when prompted by new symptoms of hearing dysfunction.

Thyroid eye disease survey: An anonymous web-based survey in the Indian subcontinent.

DOI:10.4103/ijo.IJO_1918_19

Authors: Pradhan, Anuradha; Ganguly, Anasua; Naik, Milind N; Nair, Akshay Gopinathan; Desai, Savari; Rath, Suryasnata

Published in: Indian Journal of Ophthalmology august 2020

Highlights: The survey evaluated the current practice patterns in the treatment of thyroid eye disease (TED) in Indian subcontinent through a web-based survey of members of Oculoplastics Association of India (OPAI). Almost all favored a multidisciplinary approach. Grading severity and activity of TED was the rule rather than exception in TED management. While corticosteroids remained modalities of first choice, more than half preferred immune-modulators as the steroid-sparing agent for recalcitrant TED. Orbital radiotherapy was relatively an uncommon treatment choice. An increased awareness toward evidence-based disease-modifying treatment modalities may help in the development of multiple nation-wide centers for TED management.

Perioperative Prophylactic Antibiotics in 1,250 Orbital Surgeries

DOI:10.1097/IOP.0000000000001565

Authors: Aaron Fay et al

Published in: Ophthalmic Plastic and Reconstructive surgery 2020

Highlights: A prospective, nonrandomized comparative case series of all patients undergoing orbital surgery with participating surgeons between October 1, 2013, and March 1, 2015 was done. In this large series, antibiotic prophylaxis did not appear to have reduced the already low incidence of SSI following orbital surgery. Given the detriments of systemic antibiotics, the rarity of infections related to orbital surgery, and the efficacy of treating such infections should they occur, patients undergoing orbital surgery should be educated to the early symptoms of postoperative infection and followed closely, but do not routinely require perioperative antibiotics

Rhino-orbital mucormycosis following COVID-19 in previously non-diabetic, immunocompetent patients.

DOI:10.1080/01676830.2021.1960382

Authors: Akshay Gopinathan Nair, Namrata G Adulkar , Lynn D'Cunha , Priyanka R Rao et al

Published in: Orbit 2021

Highlights: They report a series of 13 immunocompetent patient who developed new onset uncontrolled diabeted mellitus following COVID 19 infection and presented as rhino-orbital mucormycosis (ROM). They suggest that those involved in the care of COVID-19 patients should be aware about the possibility of recent-onset DM, even in patients without a history of corticosteroid therapy. Rarely, recent-onset DM following COVID-19 may present as rhino-orbital mucormycosis, which requires aggressive surgical and medical intervention.

Rise of the phoenix: Mucormycosis in COVID-19 times.

DOI:10.4103/ijo.IJO_310_21

Authors: Ravani, Swati A; Agrawal, Garima A; Leuva, Parth A; Modi, Palak H; Amin, Krisha D

Published in: Indian Journal of Ophthalmology 2021

Highlights: retrospective, institutional cohort, inter-

ventional study. 31 patients were seen. They recommend, a high index of suspicion of rhino-orbital mucormycosis in COVID-19 era in all patients referred or presenting to the ophthalmologist with ophthalmoplegia and diminution of vision with or without history of concurrent uncontrolled diabetes mellitus. The numbers may represent just the tip of the iceberg. Further studies need to be done to document management modality and risk factors. Rhino-orbital cerebral mucormycosis and HbA1c ≥8 mmol/mol must be treated aggressively.

The first UK national blepharospasm patient and public involvement day; identifying priorities.

DOI:10.1080/01676830.2019.1657469
Authors: Fabiola R Murta, Jacob Waxman, Andi Skilton , Sadie Wickwar et al
Published in: Orbit 2020
Highlights: The authors innovative "Blepharospasm Day" in UK. Patient's priorities for research were identified, delegates understanding of blepharospasm increased and an independent blepharospasm patients-representatives' group was established; a first in the UK. Furthermore, short-fallings identified in the Blepharospasm disability index tool highlight the need for better severity-assessment tools. We demonstrate the benefits of the 'patient and public involvement' approach in the management of complex conditions such as blepharospasm

Cosmetic Filler Blindness: Recovery After Repeated Hyaluronidase Injections.

DOI:10.1093/asj/sjab334
Authors: Jennifer J Danks, James D Dalgliesh, Tom Ayton
Published in: Aesthetic Surgery Journal
Highlights: complications of cosmetic injectables are seen with the rise of their use. The authors report a case which revived with immediate injection, followed by high dose intra-orbital and extra-orbital injection of hyaluronidase. Recovery of vision was remarkable, from NPL to 6/6, documented at a tertiary referral eye hospital.

Epidemiologic Trends in Oculoplastics-Related Emergency Department Visits in the United States, 2006-2015.

DOI:10.1097/IOP.0000000000002047
Authors: Meleha Ahmad, Jiawei Zhao, Mustafa Iftikhar, Joseph K Canner, Fatemeh Rajaii et al
Published in: Ophthalmic Plastic and Reconstructive surgery 2021
Highlights: The authors identified an estimated 4.2 million ED visits in the United States with oculoplastics-related primary diagnoses, of which pathology was 80.8% eyelid/adnexal, 17.4% orbital, and 1.74% lacrimal. Overall, 31.3% of the visits were deemed to be nonurgent. Orbital pathology was more likely to be caused by trauma (70.6%), to be urgent (98.0%), and to require a procedure (45.6%) ($p < 0.001$).

The use of mobile devices in oculoplastic and oral and maxillofacial surgery: A systematic review.

DOI:10.1016/j.amjoto.2021.103282
Authors: Haniah A Zaheer, Abdur Rahman Jabir, Kevin Yang, Sammy Othman et al
Published in: American journal of otolaryngology 2021
Highlights: Mobile device use has become ubiquitous across cultures worldwide. The literature suggests that mobile phone use in oculoplastic surgery and OMFS may improve clinical practice in multiple settings. Mobile phone applications have versatile functions in ophthalmology, otolaryngology, and plastic surgery, such as increasing patient engagement in treatment, decreasing no-shows to appointments, and providing patient education, photography and medical references.

Gender and editorship in oculoplastics societal publications.

DOI:10.1080/01676830.2021.1975771
Authors: Edsel B Ing, Qinyuan Alis Xu, Bonnie He, Stuti M Tanya, Nancy A Tucker
Published in: Orbit 2021
Highlights: Women are underrepresented on the editorial boards of oculoplastic journals. Possible methods to improve gender balance include multicriteria objective decision-making criteria for editor nominations, mentoring peer reviewers that are women, and appointing a journal editor for equity, diversity and inclusi

Activities of the Nepalese Society for Oculoplasty Surgeons (July-Dec, 2021)

ACTIVITIES:

1st NESOS International Webinar "The Highway of Tears" - July 2021

The NESOS International Webinar "The Highway of Tears" (July 2021) was a hugely successful event with accolades from every corner of the country and abroad. The huge number of participants- more than 215 in the zoom webinar streaming and more than 200 in the YouTube live streaming (https://youtu.be/wESGmFHSgNY) spoke volumes on the success of the webinar. This was due to a wide range of extremely knowledgeable speakers and panelists from Nepal, India, Bangladesh, Thailand, and the Philippines covering nearly all aspects of lacrimal drainage disorders from external DCR to endoscopic endonasal, non-endoscopic endonasal DCR, failed DCR and canalicular trauma.

Professor Reynaldo Javate was the chief guest speaker for the event. Dr Prerna Arjyal Kafle, oculoplastic surgeon from Biratnagar Eye Hospital, took the responsibility of organizing the webinar as the scientific chair while Dr Aashish Raj Pant, oculoplasty surgeon from Mechi Eye Hospital, took the responsibility as scientific secretary.

1st issue of NESOS eMag - July 2021

The maiden issue of "the NESOS e-Mag" – an official biannual eMagazine of the NESOS was released by the Editor-in-Chief of the NESOS eMag, Dr. Jyoti B Shrestha during the NESOS International webinar. It was released online via anyflip (https://anyflip.com/fpoyg/obiq/) and the magazine was appreciated by all the panelists and the speakers.

Participation in OPSSA organized by BOSS - December 2021

A separate session for NESOS was provided in the OPSSA virtual conference 2021 "South Asian Trends in Oculoplastics" organised by the Bangladesh Oculoplastic Surgeons Society (BOSS).
Six NESOS members gave their presentation relating to the theme.

Participation in DOS

Dr. Aashish Raj Pant presented on Eyelid entropion surgeries on behalf of NESOS at the DOS conference.

Participation in NOSCON

NESOS members presented and participated in the Annual NOS conference held at Kathmandu.

MEETINGS:

Due to the current COVID crisis, regular 3-monthly physical meetings were replaced by virtual. A physical meeting was held during the annual NOS conference.
Virtual meetings – 3
Physical meeting - 1

NESOS members in action

NESOS founder president and NOS president Prof Dr Rohit Saiju inaugurating Jyoti Eye Hospital of NESOS life member Dr Sabin Sahu at Ramanand Chowk, Janakpurdham – 9, Madhesh Pradesh on 22nd January 2022.Our best wishes to Dr Sabin and his team

Congratulations and welcome to new oculoplastic surgeons in NESOS - Dr Anish Manandhar, Dr Dikshya Bista and Dr Varun Shrestha .

NESOS members in action

Jumbo NESOS team at Nepal Ophthalmic Society Annual Conference (December 4, 2021)

Speakers posing for photograph after NESOS session in the annual NOS annual conference with token of love

Ramp walk cum fashion show co choreographed by NESOS member Dr Prerana and Lead by Dr Rohit Saiju was the attraction of the day at the NOS Annual Conference

NESOS members in action

Dr Diwa Lamichhane started endoscopic endonasal DCR surgery at CHEERS hospital, BP Eye foundation.

Dr Naresh Joshi, Oculoplastic surgeon based in London always makes time for NESOS while he is in Nepal. NESOS president Dr Ben along with Member Dr Sabita Palikhe and Dr Varun Shrestha

NESOS members in action

Dr Sabin teaching Optometrist and Ophthalmic assistant at his Jyoti Eye hospital. He loves teaching besides his clinical job.

Dr Hom giving lecture on eye safety and first aid to factory workers at Hetauda.

Welcome to the fraternity

Newest members of the NESOS

Dr Anish Manandhar
Geta Eye Hospital, Kailali, Dhangadi, Geta

I did my MBBS from Kathmandu Medical College and my MD from BP Koirala Institute of Health Sciences, Dharan, Nepal.

I completed my fellowship in Oculoplasty and ocular oncology from Tilganga Institute of Ophthalmology.

I joined Oculoplasty due to the wide variety of surgeries in oculoplasty and the immediate good outcome in some surgeries. Besides, there are very few oculoplasty surgeons at peripheral eye hospitals.

Dr Dikshya Bista
Geta Eye Hospital, Kailali, Dhangadi

I completed my fellowship in Ludwig Maximilian University, Munich, Germany. I did my MBBS from Kathmandu School of Medical Sciences and my MD from BPKLCOS, TUTH.
During my residency days, I found orbital surgeries very challenging and always wanted to do such surgeries. I was immediately drawn towards the subspecialty as it gives quick result and patient satisfaction.
I always wanted to give my patient happy faces so I joined Opthalmology to give immediate happiness of vision after surgery. Oculoplastics not only help in regaining vision but also wipe out tear in eyes(literally). The perfect reason to create happiness.

Dr Varun Shrestha
Drishti Eye Care System

I completed my MBBS from Manipal (MCOMS, Pokhara) and MD from NEH. Post residency I completed my Anterior segment fellowship (EREC-P) and joined Drishti Eye Care, and pursued a fellowship in Oculoplasty (TIO) thereafter.
I always had a deep interest in Oculoplasty as I felt the profound impact this field has on the life of the patient and also the aesthetically pleasing end results of a well performed procedure.
Regarding my aims in this field, it is to slowly expand and improve my skills, learn from my seniors and peers and hopefully contribute in lessening the burden of oculoplasty related problems.

The I-STORIES: Oculoplasty in Photography

Photography is an asset to any oculoplastic surgeon. The work of an oculoplastic surgeon is an art which needs to be documented. The I -stories: Oculoplasty in photography section will feature the works of oculoplastic surgeons, their success stories and experiences. Consent should be taken from the patient by the respective author.

Moderate Ptosis with nevus (right); LPS advancement surgery left upper lid (left)

Dr Puja Rajbhandari

Congenital ptosis in right upper lid (right); Post frontalis sling surgery (left)

Dr Puja Rajbhandari

Lateral Tarsal Strip (LTS) surgery for senile entropion in Left lower lid. pre and post-surgery.

Dr Devraj Bharati

Lateral Tarsal Strip (LTS) and post auricular skin graft for cicatricial ectropion. pre- and post-surgery.
Dr Devraj Bharati

Blepharophimosis Syndrome. Post frontalis sling surgery y- v plasty.
Dr Prerna Arjyal kafle

Congenital ptosis pre and post frontalis sling surgery with silicon rod.
Dr Prerna Arjyal kafle

LPS advancement surgery pre, on table and post-surgery.
Dr Prerna Arjyal kafle

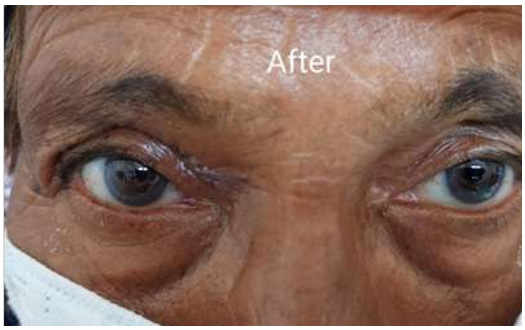
Dr Tina Shrestha

Dr Tina Shrestha

LTS surgery for bilateral lower lid ectropion
Dr Gaurav dhungana

Before: non epithelized tight skin all over-face,complete loss of eyebrow, cicatricial ectropion. After: extensive release of scar tissue, postauricular graft plus LTS procedure.
Dr Suresh Rasaily

Aponeurotic ptosis correction with LPS Resection
Dr Suresh Rasaily



Aponeurotic ptosis correction with LPS advancement
Dr Suresh Rasaily

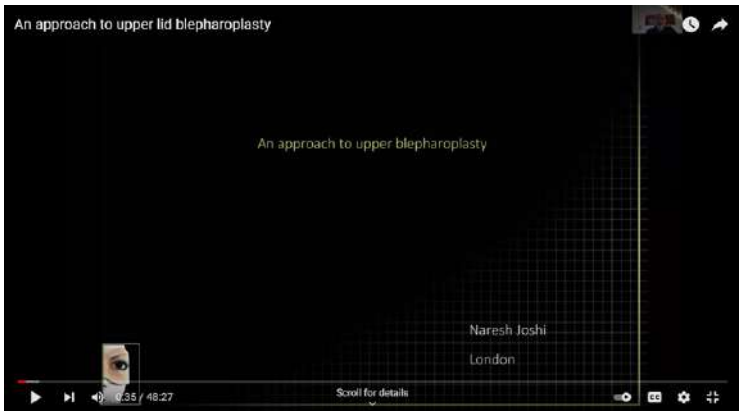
LPS resection for mild ptosis.
Dr Koshal Shrestha

VIDEO BOUQUET

Surgical Video Links provided by the NESOS members

Forehead flap lecture by Dr Naresh Joshi at NESOS Nepal youtube channel
https://www.youtube.com/watch?v=bqECYEBqC2s

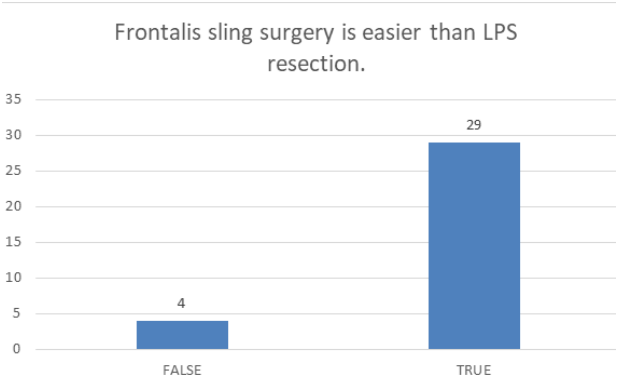
Lower Lid Blepharoplasty . lecture by Dr Naresh Joshi at NESOS Nepal youtube channel.
https://www.youtube.com/watch?v=q-j85kLFBODM

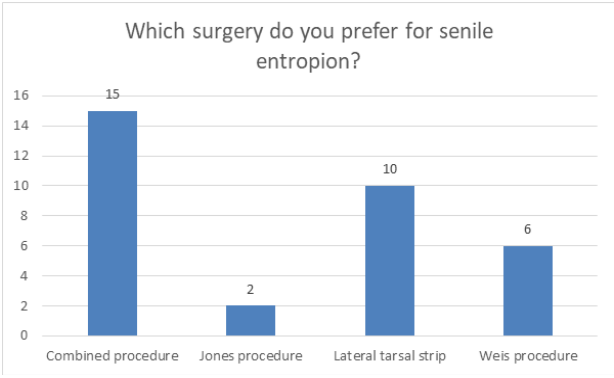


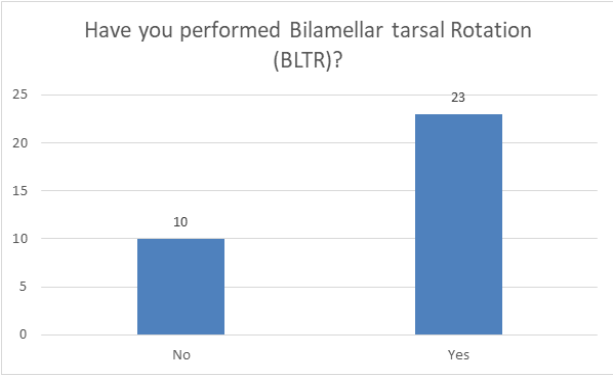
An approach to upper lid Blepharoplasty by Dr Naresh Joshi at NESOS Nepal youtube channel
https://www.youtube.com/watch?v=-4zwbaetc2Tg

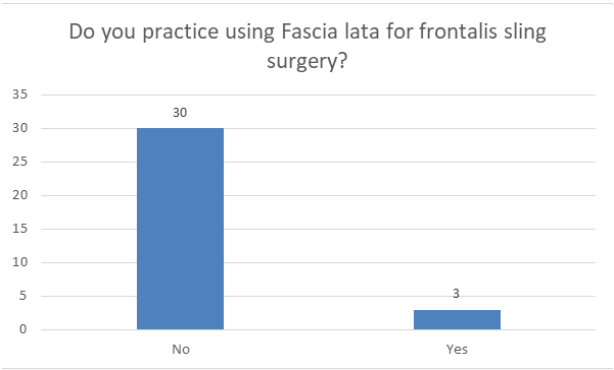
NESOS POLL

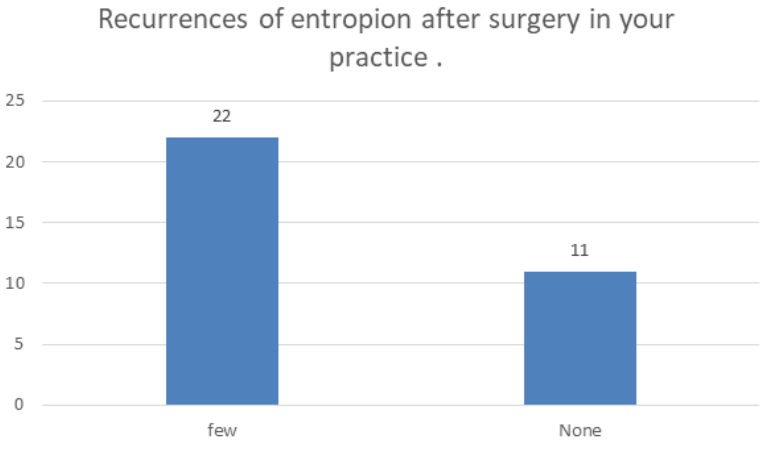
NESOS e-mag poll for Eyelid malposition











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Fellowship training, Aichi, JAPAN
Ex- consultant surgeon SCEH, LAHAN

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The SOM® 62 Ophthal *Advanced* is a multidisciplinary applicable fully motorized ophthalmic microscope and is suitable for every kind of eye surgeries, from cataract up to back ground. Thus it is the perfect choice for smaller OR rooms or laser centres.

Kaps operating microscopes combines easy and exact positioning, outstanding illumination with a bright high contrast red reflex as well as a optical quality.

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The compact size enables a short working distance for the surgeon to the operating field and is user friendly as well immediately ready to work. An additional advantage delivers the 0-210° binocular swivel tube, beyond that all control elements are easy to reach.

The apochromatic 1:6 zoom system provides a crisp and crystal clear image with high transmission and natural colours and offers in combination with the motorized fine focus high user comfort.

The multifunction control unit permits the surgeon to control almost all of the functions such as zoom, focus and XY without having to remove their hands from the operative field. All adjustments are done within seconds by simple knobs.

The integrated XY coupling allows movement changing of the microscope head, with one push on the centre button the head goes into the centre position and the microscope is prepared for the next surgery.

Small suspension systems

Owing to the compact design, the mobile stand with its large castors and brakes could be easily moved from one room to the other. For OR rooms with smaller space there is ceiling mounting version with a high action radius available.

Easy surgery

Place your microscope head in its standby position and the illumination is automatically switched off. Bring the system into its using position again and the light comes back on again. This saves you time and reduces your consumption halogen bulbs.

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