NESOS E-MAG

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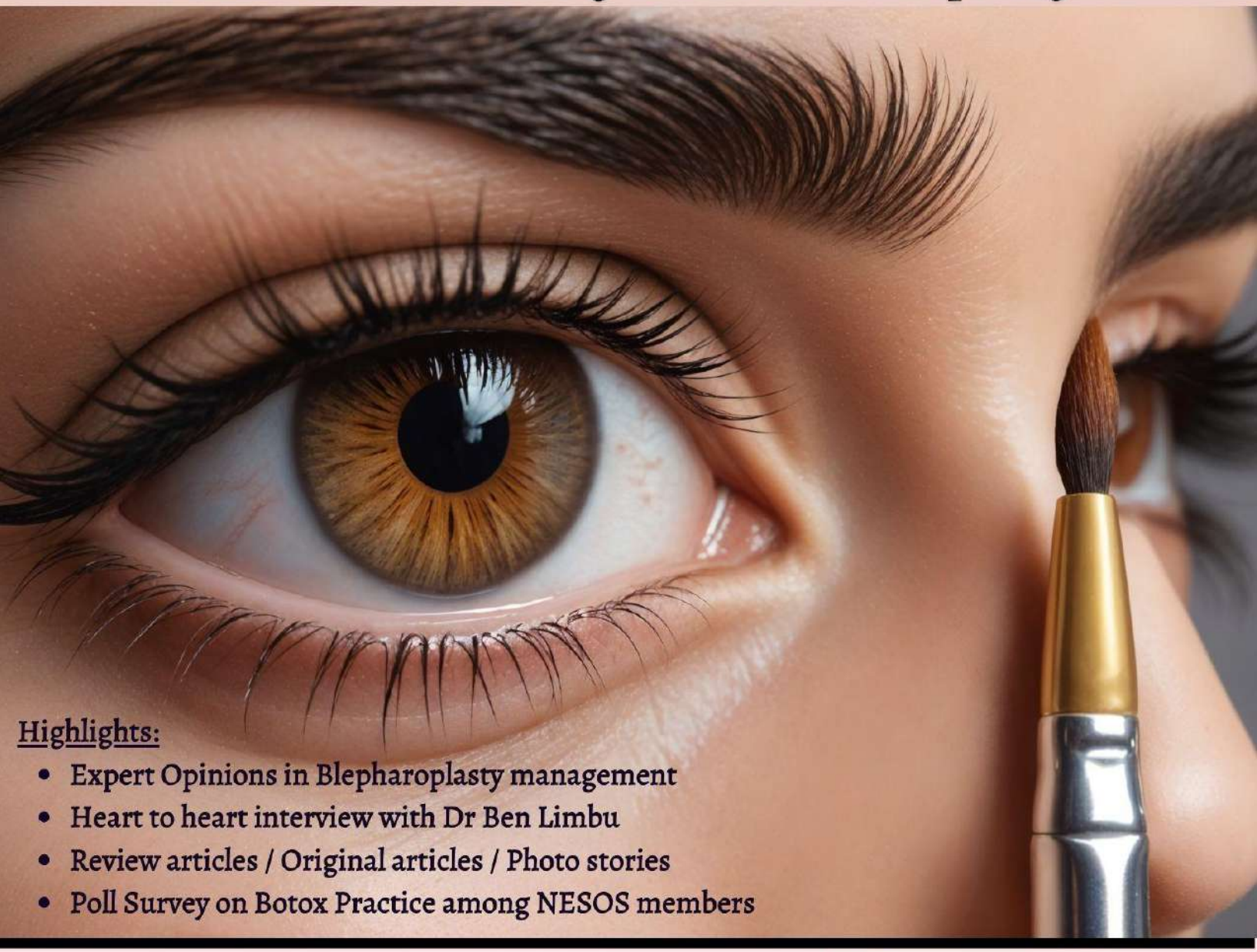
"Transforming Eyes: The Art and Science of Cosmetic Oculoplasty"



Highlights:

- Expert Opinions in Blepharoplasty management
- Heart to heart interview with Dr Ben Limbu
- Review articles / Original articles / Photo stories
- Poll Survey on Botox Practice among NESOS members

an Official biannual e-Magazine by: NESOS Nepalese Society for Oculoplastic Surgeons

Message from President

Dear friends and esteemed readers.

It is with great enthusiasm and thrill that I welcome you to this latest edition of our E magazine which is dedicated to the dynamic and ever evolving topics of Oculoplastic surgery. The recent issue of E magazine is a full parcel packed with topics related to different aspects of Oculoplastic surgery and practice. Furthermore,you will encounter with the contributions made by leading experts who explore ground breaking techniques, explain in details about the surgical procedures, tricks and trades in concerned topics.

The E magazine is a beautiful platform for sharing ideas, knowledge and a platform that facilitates innovative thoughts. The articles and literatures embraced within it are gems of dedicated personalities and stalwarts in this field. The thought provoking papers will definitely bring new insights our clinical practice.

I am indebted to all the contributors for their beautiful papers and their efforts. The editorial team deserves a big thank for their tireless commitment .

With sincere thanks and best wishes !!!

Dr Sulaxmi Katuwal

President

NESOS

Editorial

Dear readers,

Welcome to the fourth edition of the NESOS e-Magazine, the official biannual publication of the Nepalese Society for Oculoplastic Surgeons (NESOS). Our mission is to deliver scientific knowledge and engaging insights in a smooth and captivating format.

In this issue, themed "Transforming Eyes: The Art and Science of Cosmetic Oculoplasty," you'll find a wealth of valuable content, including thought-provoking articles, comprehensive reviews, expert opinions, practical tips and tricks, intriguing case studies, and a collection of unconventional offerings. The contributions from esteemed oculoplastic surgeons such as Naresh Joshi, Hirohiko Kakizaki, and Debraj Shome have greatly enriched this issue.

Our magazine serves as a bridge between generations, providing young oculoplastic surgeons with the opportunity to learn from seasoned practitioners, while established experts share their insights to shape the future of cosmetic oculoplasty in Nepal and beyond.

We extend our gratitude to the NESOS executive committee and our esteemed authors for their tremendous support. Any feedback or suggestions related to design, content and presentation of e-Magazine are much appreciated.

Happy reading!

Sincerely,
Dr Sabin Sahu
Editor-in-chief
NESOS e-Magazine

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In this Issue / Contents

About NESOS

Introduction to Nepalese Society for Oculoplastic Surgeons NESOS

Brief History of the subspeciality

Nepalese Society for Oculoplastic Surgeons (NESOS) is a professional medical organization dedicated to advancing the field of oculoplastic surgery in Nepal. It was formed on 15th October, 2014 with small number of passionate and skilled oculoplastic surgeons in Nepal, who have had training or fellowship and experience in this highly specialized field of Orbit and Oculoplastic surgery. The society had Prof Dr Rohit Saiju as the founding executive committee President.

The objectives of NESOS are to promote the academic trainings, research and quality of clinical practice in the area of plastic, reconstructive and aesthetic surgery of eyelids, orbits and lacrimal system. By nurturing young talents and encouraging research activities, the society aims to contribute to the global body of knowledge in oculoplastic surgery.

The society serves as a platform for oculoplastic surgeons across Nepal to collaborate, share knowledge, and enhance their expertise through conferences, workshops, and seminars.
NESOS also plays a crucial role in raising awareness about oculoplastic disorders and treatment options among the general public and other medical professionals. By conducting outreach programs and public health initiatives, the society endeavors to improve eye health and overall well-being within the Nepalese community.

Registration number: 362/ 2071/6/29

Executive members and number of members

NESOS currently has 53 full members with few international honorary and associated members.

Founders:

- Dr Rohit Saiju
- Dr Basant Raj Sharma

Executive committee members (2023-24):

- President – Dr Sulaxmi Katuwal
- Immediate Past President – Dr Ben Limbu
- Vice-President – Dr Ranjana Sharma

- General Secretary – Dr Puja Rajbhandari
- Treasurer – Dr Sabita Palikhe
- Joint Secretary – Dr Suresh Rasaily
- Joint Treasurer – Dr Diwa Hamal
- Scientific Chair – Dr Hom Bahadur Gurung
- Editor-in-chief – Dr Sabin Sahu
- Members – Dr Aashish Raj Pant, Dr Tina Shrestha, Dr Nisha Shrestha, Dr Prerna Arjyal Kafle, Dr Gaurav Dhungana

Past Presidents:

- 2021-2022 - Dr Ben Limbu
- 2019-2020 –Dr Basant Raj Sharma
- 2017-2018 – Prof Dr Rohit Saiju
- 2015-2016 – Prof Dr Rohit Saiju

Activities

- Organizing regular conferences (NESOSCON conference every 2 years), workshops, and seminars on oculoplastic surgery topics.
- Providing continuing medical education (CME) programs for its members to enhance their knowledge and skills.
- Hosting guest lectures and inviting renowned oculoplastic surgeons from around the world to share their expertise.
- Facilitating collaborative research projects and encouraging research activities in the field.
- Regularly updating members on the latest developments and technological advancements in oculoplastic surgery.
- Publishes an e-magazine bi-annually covering important topics and updates related to orbit, lacrimal and oculoplastics. It publishes scientific articles and journals to disseminate research findings and advancements in the field.
- Provides travel grant for its members to attend national and international conferences.
- Provides awards to members with outstanding contributions in the field like “Young Oculoplastic Surgeon Award”
- Conducting public awareness campaigns about oculoplastic disorders and the importance of eye health.
- Supporting and mentoring young oculoplastic surgeons through fellowship programs and career guidance. It also encourages young Ophthalmologists to pursue career in the field of Oculoplasty.
- Advocating for the advancement of oculoplastic surgery within the broader medical community in Nepal.
- Collaborating with other medical societies and organizations to promote interdisciplinary approaches to eye health.

- Contributing to the development of guidelines and standards for oculoplastic surgery practice in Nepal.

The activities NESOS, showcase its commitment to advancing oculoplastic surgery, improving patient care, and raising awareness about eye health in Nepal.
The society is always ready to affiliate or associate with other institutes, societies and organizations to upgrade the quality of the service in this field by sharing the skills and knowledge together as well to overcome the challenges and explore the possibilities in the future.

List of NESOS members:

1. Dr Rohit Saiju
2. Dr Basanta Raj Sharma
3. Dr Eliya Shrestha
4. Dr Purnima Rajkarnikar Sthapit
5. Dr Lila Raj Puri
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52. Dr Ashesh Koirala
53. Dr Binita Thapa

Expert's Corner

"Current Practice pattern for Blepharoplasty management"

Blepharoplasty is a cosmetic surgery that needs a lot of precision and accuracy to meet patient expectations. There are many controversies in this field, and surgeons' methods can vary widely depending on their location and experience.

Let's draw from the wisdom of our mentors and guides to understand and tackle the challenges of blepharoplasty.

The questions have been prepared by Dr Sabin Sahu (SS); Consultant Ophthalmologist and Oculoplastic Surgeon from Jyoti Eye Hospital, Janakpurdham.

Experts:

Dr Naresh Joshi (NJ): Consultant Oculoplastic surgeon at Chelsea and Westminster Hospital NHS Trust London and Honorary Consultant to the Royal Marsden.

Dr Hirohiko Kakizaki (HK): MD, PhD, Professor, Department of Oculoplastic, Orbit and lacrimal surgery, Aichi Medical University Hospital, Japan

Dr Debraj Shome (DS): Consultant Facial Plastic Surgeon, Oculoplastic Surgeon & Cosmetic Surgeon at Apollo Specialty Surgery and The Esthetic Clinics, Mumbai, India.

Dr Puja Rajbhandari (PR): MD, National Eye & Cosmetic Surgery Centre, Kathmandu, Nepal

Meet the Expert Panel

Naresh Joshi
NHS Trust London,
United Kingdom (UK)

Horihiko Kakizaki
Aichi Medical University,
Nagoya, Japan

Debraj Shome
The Esthetic Clinics,
Mumbai, India

Puja Rajbhandari
National Eye & Cosmetic Surgery
Center, Kathmandu, Nepal

SS: Q1. Approximately how many blepharoplasty procedures do you perform annually in your clinical practice?

NJ: About 150-170

HK: 600 or more

DS: We run a chain of "Esthetic clinics" with multiple surgeons in 6 major cities all over India. Every year around 500-600 blepharoplasty surgeries are being performed. I, personally perform around 100-120 blepharoplasty surgeries annually.

PR: 40 to 60

SS: Q2. How do you decide between transconjunctival and transcutaneous approaches in lower blepharoplasty?

NJ: Skin quality (whether skin resection required), Lid position (an increased MRD2), Excess horizontal lid laxity, Negative orbital vector status, Revisional transcutaneous blepharoplasty

HK: +/- skin redundancy

DS: I rarely perform transcutaneous blepharoplasty. I believe even if there are some extra skin which happens in older people, it makes sense to do transconjunctival blepharoplasty. There are many ways to tighten the skin. One can always use laser and multiple other mechanisms to tighten the skin even after the surgery. In my practice, majority of cases are transconjunctival (98%) and in only around 2% cases I do transcutaneous approach. Some of the disadvantages of transcutaneous approach include visible scar, pigmentation of scar especially in Asian-Indian skin and sometimes ectropion if proper skin excision is not done.

PR: Ultimatum goal of lower blepharoplasty is to bring back normal contour of eyelid and youthful appearance. Most of the time the age is the major factor to be decided the surgical approach as younger the age, less sagging is there and transconjunctival approach is the best whereas transcutaneous approach is quite beneficial for combined approach of lid and skin tightening procedure. However proper assessment and patient demand should always be considered before planning the surgery.

SS: Q3. How often do you correct ptosis along with upper blepharoplasty?

NJ: 10%

HK: 0%. Always separately

DS: Whenever I perform upper lid blepharoplasty, unless the patient is very young I prefer to put some stiches through the LPS in order to tighten the LPS. In cases with full blown ptosis, I do open the septum and perform LPS resection or whatever procedure is required to correct the ptosis as well.

PR: If there is ptosis, only blepharoplasty does not work. I will correct ptosis along with Blepharoplasty.

SS: Q4. What specific surgical techniques do you find useful to minimize scarring in blepharoplasty?

NJ: Upper lids use cold steel unless very thin skin, elderly and have bleeding tendency.

HK: skin only removal and gentle suturing.

DS: In upper lid blepharoplasty we do upper lid crease incision and in lower lid blepharoplasty transconjunctival approach is used, so the scar won't be seen. I don't find scarring to be a major issue after blepharoplasty surgery.

PR: Each and every step of surgical procedure is important for minimal scaring in transconjunctival approach.

a. Infra ciliary one stroke horizontal skin incision

b. Respect the anatomy during dissection

c. Less and light handling of tissue

d. Proper closure of wound

e. Post operative care of wound

SS: Q5. What are your views on the controversy surrounding fat removal versus fat repositioning in lower blepharoplasty?

NJ: During 2000-2010, in almost all lower blepharoplasty, fat re-draping used to be done. Review of cases led to change in practice. Now in both approaches, almost all resection only is done.

HK: Majority can be adjusted with repositioning. Limited cases, such as Graves' or steroid users, may be the candidates.

DS: I don't think there is any controversy between fat removal versus fat repositioning. I have never been removing the fat. In fact even earlier when I was not doing fat repositioning, I was only shrinking the fat. There is no extra fat there as such and therefore removing the fat is unnecessary.

You either reposition it or use some radio frequency to cauterize it and make it smaller to make it go back to where it came from. It's not needed to remove the fat and leave the hollow. So, I don't think there is a controversy, it's a question of what needs to be done in individual patient. Fat removal is always excess in my opinion.

PR: In my opinion there should not be controversy regarding fat removal or fat repositioning in lower blepharoplasty. We need to remove fat if it is much prolapsed and cannot achieve desire result with repositioning. We have to keep in mind the age of patient, facial contour, amount and group of fat prolapsed and our target should be always to give a youthful look after surgery.

SS: Q6. How have recent advancements in technology (e.g., lasers, radiofrequency) influenced your blepharoplasty practice?

NJ: I do not use laser but have used mono-polar since 1996.

HK: nil

DS: Well, all of these recent advances that you call like Lasers, radiofrequency are part of our practice now for more than decade and half. Utilizing the pigment lasers to remove under eye pigmentation or carbon-dioxide laser to tighten the skin post-surgery both the transconjunctival lower eyelid blepharoplasty works really well for us.

PR: Not much. Patients are free to choose any technology.

SS: Q7. What is your experience with and opinion on the use of botulinum toxin and dermal fillers as adjuncts to blepharoplasty?

NJ: I use botulinum toxin frequently NEVER fillers.

HK: No experience with those.

DS: It's always a combination therapy that makes big difference. Combination therapy means using botox, fillers, blepharoplasty, knowing when to use what is necessary. Combination therapy works really well. Use of other adjuncts including cream, lasers, injectables like botox, fillers also works well in combination with blepharoplasty in under eye area. Therefore I recommend strongly that everyone should have enough information of the skin, devices and injectables etc in order to make eyelid practice a very good practice. Fact of the matter is, the skin is the largest organ of human body. It's the organ through which you make an incision in blepharoplasty. If you don't know how to treat under eye skin with injectables, cosmeceuticals etc you will always end up with substandard results.

PR: I do not use dermal fillers. Yes, I like Botulinum toxin as adjunct to blepharoplasty and the result is quite satisfactory.

SS: Q8. What are the common complications you encounter post-blepharoplasty?

NJ: Fortunately no common complications.

Upper lids: occasional volume, crease and lid show mis-match

Lower lid: occasional chemosis, early lid position asymmetry which usually subsides.

HK: Mainly, bruising only.

DS: Luckily I don't have much complications post-blepharoplasty. My recommendation to young surgeons would be to measure twice before you cut once. Don't excise too much. If you have little extra skin, you can always use CO2 laser to tighten it later. I have seen few patients where lagophthalmos is seen where the skin is removed in excess by their surgeon. So be conservative, be safe, and use radiofrequency methods wherever possible. Try and minimize use of cautery and it should be completely fine, it's a very simple procedure.

PR: Edema, bruises, mild discomfort, minimal bleeding from wound, sometimes subconjunctival hemorrhage and lagophthalmos are the early common complications I encounter. In late complications, delayed wound healing, ectropion, scarring, periocular wrinkles, sunken eyes and milia encountered in some of the cases.

SS: Q9. How important are cultural and ethnic considerations in your blepharoplasty techniques? Do you modify your blepharoplasty techniques based on the patient's ethnic background?

NJ: Upper lid requires rethink of incision, position and volume management.

Lower lid skin quality is better in some therefore usually transconjunctival but as it may raise lid position, re-suture of inferior retractors often included.

HK: Yes, adjust to Japanese.

DS: Cultural and ethnic considerations are very essential. You don't want someone to look like someone else. And paying careful attention to how the patient looked at young age when the patient is old is important. Old photographs may help in such cases. If you are doing Asian eyelid blepharoplasty, you don't want them to look like Caucasians, you don't want to create the lid crease too high. So paying attention to all these considerations are very useful.

PR: My patients are from different culture and ethnic groups. Meticulous assessment and planning of surgery to get the desired final look is important for my patient and I do not have to modify surgical technique yet based on the patients ethnic background.

SS: Q10. What post-operative care protocols do you follow for blepharoplasty patients?

NJ: Immediate post op: Occlusive compressive pads for 1 hour. Thereafter cold compression (ice) 10 minutes off 10 minutes at home. Next day onwards, cleansing daily. Lubrications to eye and topical antibiotic ointment to wound.

If transconjunctival combination steroid /antibiotic drops 2-4 weeks

HK: Use Chinese medicine lessening the swelling.

DS: My postoperative care is very simple. Some of the patients especially Asian-Indians, after the healing is done, we need something for pigmentation. So we use mixture of Kojic acid and Niacinamide cream for 4-6 weeks to reduce pigmentation of scar. Otherwise, antibiotics for 5 days, analgesics and anti-inflammatory drugs if patient requires it and some topical eyedrops. But really not much is needed and blepharoplasty patient end up doing very well.

PR:

a) Prophylactic oral antibiotic, oral analgesic, topical lubricating eye drop and antibiotic ointment

b) Cold compression

c) Patients are counselled to avoid heavy work, gym, lifting heavy things, chewing hard food for a week

d) Daily wound dressing and wound care

e) Follow up day 1, 10, 30 days

Dr SS: I would like to express my heartfelt appreciation to the esteemed panel of experts for their generous contributions and thoughtful insights regarding the management of blepharoplasty. Your expertise and shared knowledge are invaluable, and I believe that our readers will greatly benefit from this. Your contributions will undoubtedly enhance their understanding and approach to effectively addressing blepharoplasty cases.

Thank you once again for your time and dedication.

Article

"Lower Lid Blepharoplasty: Choosing the Optimal Approach and Understanding Anatomical Considerations for Superior Surgical Outcomes"

Author: Dr. Sushant Adiga, Oculoplastic Surgeon
Affiliation: Tilganga Institute of Ophthalmology, Gaushala, Kathmandu

Abstract

Blepharoplasty has become one of the most common aesthetic surgical procedures performed today. Lower lid blepharoplasty is a critical cosmetic procedure aimed at rejuvenating the periocular region by addressing issues such as eyelid bags, excess skin, and fat herniation. This review article explores various surgical approaches, including transconjunctival and transcutaneous techniques, to determine the optimal method for achieving superior aesthetic outcomes while minimizing complications. Emphasis is placed on the importance of understanding detailed anatomical consideration to tailor the surgical plan to each patient's unique anatomy. By comprehensively examining the advantages and limitations of each approach, the review provides valuable insights for surgeons to refine their techniques and achieve more consistent, natural-looking results in lower lid blepharoplasty.

Keywords: *Blepharoplasty, Cosmetic, Eyelid bags, Transconjunctival, Transcutaneous*

Blepharoplasty (Gr. *Blepharon*: eyelid, *Plassein*: to form) is a surgical technique for correcting defects, deformities, and disfigurations of the eyelids and aesthetically modifying the eye region of the face. It has become one of the most common aesthetic surgical procedures performed today.

Lower lid blepharoplasty is mainly thought to include only the **correction of lower lid bags** but for superior outcomes, all these components need to be addressed:

1. Lower lid bags (represent laxity of septum)
2. Multiple skin creases (represent ligamentous attachments)
3. Tear trough Deformity
4. Skin pigmentation
5. Lower lid laxity

The presence or absence of each of these components will dictate the ancillary procedures that may accompany lower lid blepharoplasty techniques.

Figure 1: Image showing the position of the fat pads in the left eye, 1: medial fat pad 2: central fat pad 3: lateral fat pad. Blue arrow: tear trough deformity.

Blepharoplasty: Earlier Vs Now

- Earlier, lower lid blepharoplasty focused only on excision of skin, muscle, and fat
- Although aesthetically effective in many patients, potential long-term problems with this approach include lower lid malposition, scleral show, rounded palpebral fissures, and hollow lower lid area
- Modern lower blepharoplasty highlights less aggressive fat resection, fat repositioning, minimal skin resection, and lower lid support through canthopexy and canthoplasty techniques.

Approach

Lower blepharoplasty can be accomplished with

1. Transconjunctival approach or
2. Anterior transcutaneous approach

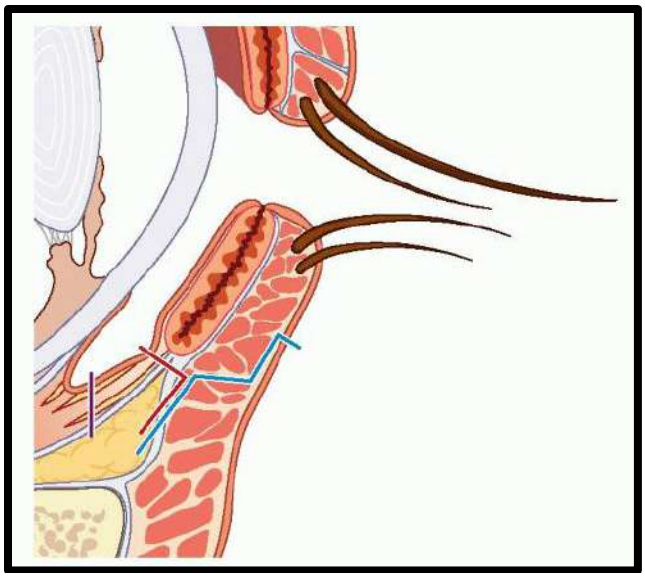

Figure 2: Arrows showing the different approaches of lower lid blepharoplasty: transcutaneous (blue), preseptal transconjunctival (red), and postseptal transconjunctival (purple). (Image courtesy: https://entokey.com/lower-eyelid-blepharoplasty-3/)

Transconjunctival approach

Indications:

- Preferred method of treatment in patients who have only herniated orbital fat with minimal or no evidence of dermatochalasis
- Younger patients with large amounts of herniated orbital fat.
- Patients who have had previous blepharoplasties in whom an external approach might lead to eyelid retraction or ectropion.

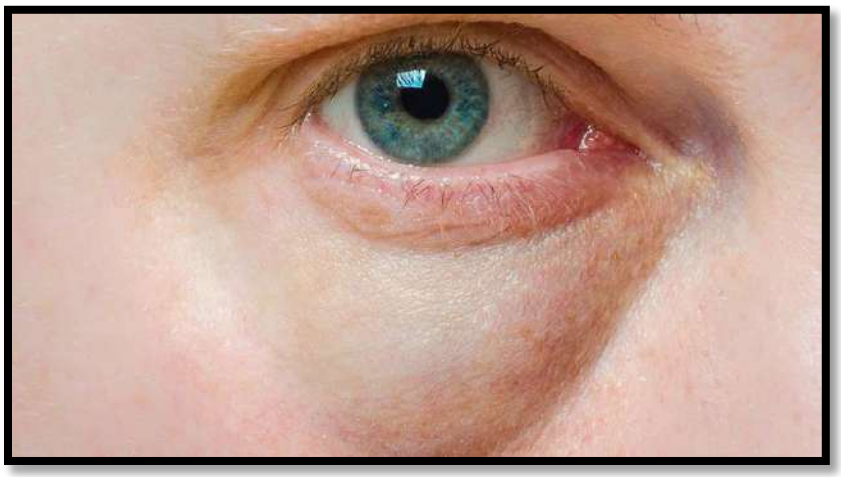

***Figure 3**: The patient profile that benefits most from transconjunctival resection of lower eyelid fat only is: A young individual with excellent skin, muscle, and tendon tone (**Image courtesy:** https://www.myplasticsurgeon.ca/cosmetic-procedures/surgery/blepharoplasty/transconjunctival-blepharoplasty.html)*

Advantages	Eliminates external scarring and produces less ecchymosis
	Causes less eyelid retraction and ectropion because the external lamellae is not manipulated
Disadvantage	Patients develop conjunctival chemosis
	Slight redundancy and wrinkling of skin compared with those who were treated with the external approach.

Anterior Transcutaneous approach

- The skin-muscle flap approach to selected patients who have excessive lower eyelid skin and orbicularis
- Whenever the orbicularis oculi muscle can be preserved, there are advantages in eliminating postoperative eyelid retraction and ectropion as well as possibly decreasing postoperative edema from lymphatic drainage interruption.

Figure 4: *The patient profile that benefits most from the transcutaneous approach is: A relatively older individual with excessive lower eyelid skin and poor orbicularis tone.*

Successful Lower lid blepharoplasty:

1. Removal of puffiness of Lower lids
2. Removal of excess skin
3. Proper lower lid contour: The postoperative lower lid margin position in relation to the inferior corneal limbus and the lateral canthal angle are objective means of assessing the successful maintenance of lower lid contour following blepharoplasty.

Choosing your approach

Isolated lower lid bags with little or no skin excess

- A transconjunctival approach is all that is needed
- This allows direct access to lower lid fat without violating the orbicularis oculi muscle and results in no much mid-lamellar scarring.

Lower lid bags+ Mild skin excess

- Transconjunctival approach + trichloroacetic acid peel/ skin pinch and removal/ laser skin ablation

More advanced aging (combine various techniques)

- Anterior transcutaneous approach
- Transconjuntival approach (fat excision/ repositioning) with skin- orbicularis removal
- These combined with lateral canthopexy/ canthoplasty

Fat Repositioning in Lower Blepharoplasty

The newest stage of the evolution of lower blepharoplasty is an understanding of the concept of fat preservation.

- In the periorbital area, focal loss of volume along the orbital rim can unveil the contours of the orbital fat bound by the arcus marginalis and of the suborbicularis oculi fat (SOOF)
- This results in the formation of a tear trough groove at the level of the inferior orbital rim. (Figure 1)
- When adequate orbital fat is available for transposition, fat is transferred over the orbital rim onto the superior face of the maxilla
- In a tear trough depression, removing orbital fat alone may accentuate the tear trough deformity

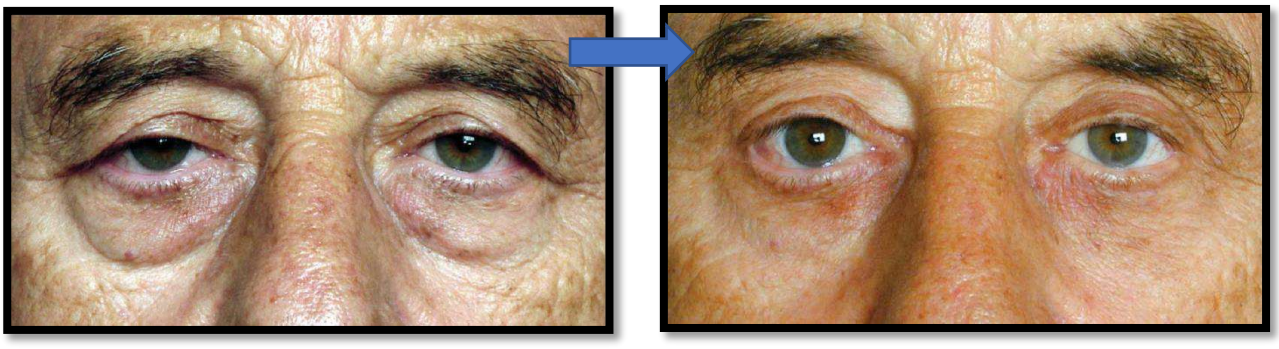

Figure 5: *Before and after images of fat repositioning in lower lid blepharoplasty (**Image courtesy:** Fagien S. Putterman's Cosmetic Oculoplastic Surgery E-Book. Elsevier Health Sciences; 2007 Oct.)*

Pre-operative assessment of lower eyelid laxity

Based on clinical assessment [Lid distraction, Margin reflex distance (MRD)-2]

1. **Canthopexy** is indicated in mild laxity (lid distraction <6 mm)
2. **Canthoplasty** is considered in more severe cases (lid distraction >6 mm): Lateral tarsal strip procedure

MRD-2 measurements should be 5-6 mm in lids with adequate tone.

Figure 6: *A patient with prominent lower lid pad bags (a) with undiagnosed lower eyelid laxity who underwent lower lid blepharoplasty without canthopexy/canthoplasty resulting in sagging of lower eyelids, inferior scleral show with rounding of lateral canthal angles (b,c).*
*(**Image courtesy:** Dr Joe Niamtu, https://www.youtube.com/watch?v=z_Zrjt1Zolk)*

Post-operative care

- No dressings are used after surgery
- The patient is instructed to apply ice-cold compresses on the eyelids.
- Almost constant for the few postoperative hours. After that, the compresses are applied for about 15 minutes with a 15-minute rest period in between until bedtime, resumed on awakening.
- The patient lies in bed with the head higher than the rest of the body
- If the patient cannot count fingers or has marked proptosis or pain, it may be due to retrobulbar hemorrhage- emergency measures are taken

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Article

"Periocular Hyperpigmentation and periocular peeling – An overview"

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Abstract

Periocular hyperpigmentation (POH), also known by several other terms such as periorbital hyperpigmentation, periorbital melanosis, dark circles, and idiopathic cutaneous hyperchromia of the orbital region, is a prevalent condition in Ophthalmic and Dermatologic practice. Understanding the impact and management of POH is crucial for improving patient outcomes and overall quality of life. The author provides a comprehensive review of the common etiologies and various treatment options available for the condition.

Keywords: *Dark circles, Periocular hyperpigmentation, Periorbital melanosis, Periocular peeling*

Introduction

Periocular hyperpigmentation (POH), also known as periorbital hyperpigmentation, periorbital melanosis, dark circles, infraorbital darkening, infraorbital discoloration, or idiopathic cutaneous hyperchromia of the orbital region, is a common condition encountered in Ophthalmic and Dermatologic practice [1-4]. It is an ill-defined entity that presents as bilateral round or semicircular homogenous brown or dark brown pigmented macules in the periocular region. It can affect an individual's emotional well-being and influence quality of life. Dark circles give the patient a tired, sad or hangover look [5]. It is a common condition that occurs in both sexes with an increasing frequency in females [6].

Etiology

The etiology of periocular pigmentation may be multifactorial. Various exogenous and endogenous factors are possibly implicated in its pathogenesis. There are very little scientific data available on the clinical profile and pathogenesis of POH. The causative factors include genetic or heredity, excessive pigmentation, post-inflammatory

hyperpigmentation secondary to atopic and allergic contact dermatitis, periorbital edema, excessive vascularity, thin-translucent lower eyelid skin overlying the orbicularis oculi muscle and shadowing due to skin laxity and tear trough associated with aging. Before initiating any treatment for POH, the patient should be medically evaluated not to miss underlying systemic disease or lifestyle incompetence that can be corrected.

1) **Genetics**
   POH is considered to have a genetic influence. Goodman and Belcher reported POH is more pronounced in certain ethnic groups and also frequently seen in multiple members of the same family so observed the pigmentation early in childhood and stated that pigmentation increased with age [7,8].
2) **Periorbital pigmentation** – occurs due to dermal melanocytosis. Dermal melanocytosis is characterized by the presence of melanocytes in the dermis which could be due to congenital and environmental causes. These pigmented lesions that are histologically characterized by the presence of melanocytes in the dermis. Of the dermal melanocytic lesions that can appear on the face, nevus Ota usually present at birth. Clinically, dermal melanocytoses are gray or blue-gray in color as a consequence of the color transmission of black pigment through the dermis. If they are located infraorbitally, they can be cause of dark circles under the eyes [9].
3) **Post-inflammatory hyperpigmentation.** Excessive pigmentation can also be due to postinflammatory hyperpigmentation secondary to atopic and allergic contact dermatitis and other dermatological conditions (e.g., lichen planus pigmentosus (1). Periorbital hyperpigmentation can be caused by rubbing and scratching of skin around the eyes and by accumulation of fluid due to allergy as in atopic dermatitis and allergic contact dermatitis.

4) **Superficial location of vasculature -** this condition usually involves the entire lower eyelids with a violaceous appearance due to prominent blood vessels covered by a thin layer of skin. The orbicularis oculi muscle lies right beneath the skin, with little or no subcutaneous fat, and the darkness may be due to the visible prominence of the subcutaneous vascular plexus or vasculature contained within the muscle. This occurs more in the inner aspect of the eyelid, and is usually accentuated during menstruation. When the lower eyelid is manually stretched, the area of darkness spreads out without blanching or significant lightening and results in deepening of violaceous color, which could be used as a diagnostic test to confirm the vascularity (2).

5) **Tear trough depression -** Tear troughs represent an anatomical location that becomes depressed with

age, centered over the infero-medial orbital rim. It is an age-related change. It occurs mainly because of loss of subcutaneous fat and thinning of overlying skin of the orbital rim ligaments, combined with cheek descent, conferring hollowness to the orbital rim area. A combination of the hollowness and the overlying pseudoherniation of the infraorbital fat accentuate the shadowing in the tear trough causing dark circles, depending on the lighting condition.

6) **Periorbital edema.** The eyelid has a spongy property, which lead to fluid accumulation due to systemic and local causes. Diagnostic features that suggest edema includes worsening in morning or after eating salty meals. The history of variability in intensity and extension is important to determine the influence of edema on periorbital hyperpigmentation [10]. When compared with normal orbital fat, edema is still present in downward gaze and does not change much in upward gaze.

7) **Extension of pigmentary demarcation lines of face.** Pigmentary demarcation lines (PDL) are borders of abrupt transition between hyperpigmented skin and lighter areas. The study by Malakar et al showed that periorbital melanosis was an extension of the pigmentary demarcation line over the face [11].

8) **Other causes**

Ocular hypotensive drugs - Prostaglandin analogues, such as latanoprost and bimatoprost, can also cause periorbital hyperpigmentation. Patients develop periocular hyperpigmentation most frequently between 3 to 6 months of initiating bimatoprost therapy. Complete reversal of pigmentation occurs after discontinuation of bimatoprost. It was reported that the increased melanogenesis in dermal melanocytes and increased transfer of melanin granules to basal epidermis is the likely mechanism of bimatoprost-induced hyperpigmentation. [12, 13,14]

Environmental causes - Ultraviolet radiation aggravates POH, and some lifestyle factors like - lack of sleep, stress, alcohol overuse, and smoking also contributes to develop POH.

Treatment

There are numerous treatment options available for POH. The treatment of periocular pigmentation should include identification and therapeutic targeting of each contributing etiologic factor for an individual patient. Periocular pigmentation is often refractory to treatment. Treatment modalities, both monotherapy and in combination, have been used for periocular hyperpigmentation. They include bleaching creams, topical retinoic acid, chemical peels, laser therapies, injectable fillers, fat transfer and surgery. Here we discuss on chemical peels which is effective in treatment of POH. A chemical peel is a safe dermo-cosmetic procedure designed to cause accelerated, controlled skin regeneration. Chemical peels

are formulated to treat hyperpigmentation, signs of each aging stage, and aesthetic concerns. The Periocular Peel is specifically formulated for safe and effective use around the eye area, including the eyelids. The peeling agents remove melanin from the stratum corneum and epidermis. Deep peels may remove melanin from dermis but may lead to dyspigmentation and scarring. In this area the skin is thin, so deep peels are not recommended [6].

There are numerous agents that has been used as chemical peels are Azelaic acid, Salicyclic acid, Lactic acid, Resorcinol, Citric acid, Phytic acid.

10% Azelaic acid – it stimulates melanogenetic inhibition, acting on hyperactive melanocytes. Causes progressive fading of the colour of hyperpigmentation spots, reducing them in size.

7% Salicyclic acid – Beta hydroxy acid (BHA) that stimulates the reconstruction of superficial tissue.

7% Lactic acid – Keratolytic alpha hydroxy acid (AHA) that stimulates thickening of the epidermis and dermis. It increases the concentration of hyaluronic acid in the extracellular matrix, firming and moisturizing the skin.

5% Resorcinol – Phenolic derivative with keratolytic and regenerating properties. It addresses melanic hyperpigmentation and unifies the skin tone.

4% Citric acid – Alpha hydroxy acid (AHA) with exfoliating, antioxidant and antiaging properties.

3% Phytic acid – Powerful chelator of copper that encourages tyrosinase enzyme inhibition. It has a depigmenting antioxidant effect.

Under proper hygiene and sterility these periocular chemical peeling is done 4 to 6 sessions with minimum intervals of 2 weeks which is recommended as 1 session 4 times a year as maintenance therapy.

Figure 1: Photographs showing the result of chemical peel after six sessions.

Figure 2: Photographs showing the outcome before and after six sessions of chemical peel.

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Article

"Topical Cosmeceuticals for Periocular Skin: Ophthalmologists' Perspective"

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Introduction

The term cosmeceutical was first coined by Albert Kligman in 1984 to describe a set of chemicals and product formulations intended to be applied onto the skin to improve the appearance but also exerting biological effects like collagen remodeling, pigment reduction, neuromuscular relaxation etc.1 The term essentially bridges the gap between a cosmetic product and a pharmaceutical drug. According to the United States Food and Drug Administration, cosmetics are "articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body...for cleansing, beautifying, promoting attractiveness, or altering the appearance." Compared to this, drugs are defined as articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease" and "articles (other than food) intended to affect the structure or any function of the body of man or other animals."2

If a chemical is applied onto the skin and has shown safety, does not cause any harm, results in a beautification or enhanced appearance and has not been shown to lead to any alteration of body structure or function, it may be marketed as a cosmetic with a shorter "laboratory to shelf" time and less regulatory restrictions. Compared to this, if a similar product has been evaluated in depth via randomized control trials to show its effect on altering the bodily structure or function- it will have to undergo more rigorous licensing as it is now classified as a drug. It will add to the cost and time from formulation to marketing, it will undergo multiple phase trials, and it will require a prescription.

The classic example for this is Vitamin A derivatives. Amongst the 3 primary

derivatives, retinol is an alcohol, retinal -an aldehyde, and tretinoin is retinoic acid. Retinol is available over the counter (cosmeceutical) for treatment of photodamaged and aging skin. Retinal is a less irritating form topically. Within the body, it is the primary molecule involved in the visual cycle in the human eye's retina photoreceptors layer. Tretinoin is the prescription form (drug) for dermatologic use to improve aging skin, lessen the effects of solar damage. Tretinoin has shown to reverse the effects of photodamage and aging in half the time as retinol, with extensive trials on its clinical efficacy as an anti-aging molecule.3

Classification of Cosmeceuticals for periocular use based on the "active" ingredient is detailed below.

A. Anti-wrinkle Cosmeceuticals

These include products intended at reducing the periocular fine lines and wrinkles which appear due to sun damage as well as repetitive expression lines. These products contain two main types of molecules- retinols and topical neuromuscular relaxants.

Retinols, or its analogues like bakuchiol work by increasing production of glycosaminoglycans and additionally slowing down the breakdown of collagen resulting in increased dermal matrix. This reverses photoaging and improvement in wrinkles and skin hydration. The changes appear as early as four weeks but typically two to three months of topical retinol therapy is required for significant improvement in wrinkles.4-6

Topical neuromuscular relaxing agents work via inhibiting acetylcholine (Ach) induced muscular contraction. They may act pre-synaptically (argiriline, leuphasyl) by decreasing Ach release from the neuron terminal or post-synaptically (vialox, DABBA- Dipeptide diaminobutyroyl benzylamide diacetate) by inhibiting the binding of the Ach molecule to the nicotinic receptor on the muscle fibres.7-8 Collectively, these may be known as peptides. Figure 1 demonstrates the reduction in periocular fine lines and wrinkles after regular use of DABBA over a three-month period.

B. Anti-pigmentation

This includes arbutin, kojic acid and ascorbic acid. Arbutin is a compound of hydroquinone and D-glucose. It has shown to dose-dependently reduced tyrosinase activity at post-translational level in human melanocytes without significantly decreasing melanocyte cell viability.9

Kojic acid (5-hydroxy-2 hydroxymethyl-4-pyrone) is derived from species of Acetobacter, Aspergillus, and Penicillium fungi. It is a potent antioxidant, and also inhibits the production of free tyrosinase enzyme involved in melanin production.10

C. **Scar remodulation**

Topical scar management products include silicone gel, Allium cepa onion extract, aloe vera, vitamin E, trolamine. Onion extract and quercetin reduce fibroblast proliferation, induce matrix metalloproteinase-1 expression, and lead to extracellular matrix remodeling. Aloe vera extracts when used in burns scars have shown to reduce the average healing time and the re-epithelialisation rates. Vitamin E has anti-oxidant properties which prevent photoaging especially in the

immature scars.11 Trolamine topical emulsions promote and expedite wound healing by recruiting macrophages, and increasing Interleukin (IL) IL-1:IL-6 ratio, which enhances formation of granulation tissue and collagen synthesis.12 Figure 2 demonstrates wound modulation in a periocular scar with a formulation containing Vitamin E, aloe vera, tretinoin and hydroxyquinone.

D. Photoprotection

Sunscreens and sunglasses form an important barrier against the ultraviolet (UV) radiation (solar, and other light sources). Chemical sunscreens absorb the UV radiation and convert to lower energy longer wavelengths which do not cause photoaging or photocarcinogenesis. The active compounds include UV-A blockers like benzophenones, anthranilates, avobenzones and ecamsule; UV-B blockers like aminobenzoates, cinnamates, salicylates, octocrylene, ensulizole and camphor derivatives. Physical sunscreens include zinc oxide and titanium dioxide which protect against UV-A. However, they may be cosmetically less appealing as they leave a white-cast. Of note, during pregnancy, physical sunscreens are considered safer.13

Sunglasses are paramount for periocular skin protection along with broad rimmed hats. The most sun protective sunglasses in all exposure conditions were close-fitting goggles, blocking UVR from all directions.

E. Antioxidants

These include vitamin C, vitamin E, silymarin, and green tea polyphenols. Vitamin C acts to protect against UV-damage induced sunburn and erythema. Vitamin E decreases immunosuppression, erythema, photoaging, as well as photocarcinogenesis. Silymarin (milk thistle plants) prevents lipid and lipoprotein oxidation and acts as a scavenger of ROS (reactive oxygen species). Green tea polyphenols contain antioxidants that scavenge singlet oxygen, superoxide radicals, hydroxyl radicals, peroxyl radicals, and hydrogen peroxide.14

F. Barrier function

Ceramides, along with cholesterol and fatty acids, are lipids essential for a normal stratum corneum water barrier. Topical ceramide has been shown to improve barrier function of damaged skin both acutely and chronically, as assessed by reduced trans-epithelial water loss. Externally applied ceramides incorporate into intercellular lipid of stratum corneum and replenish aging related depletion.15

Side effects

All chemical formulations including cosmeceuticals may have adverse effects. Non-specific adverse events with periocular use include chemical injury in the eye due to accidental spillage during application. Immediate burning sensation is reported and saline wash is recommended.

Retinol containing formulations can induce meibomian gland dysfunction leading to dry eye and poor tear film stability.

Allergic dermatitis may develop to the constituent chemical or the vehicle or added preservatives and fragrances. It may be immediate contact dermatitis or delayed hypersensitivity. Treatment requires

cessation of offending product and systemic anti-histaminics.

Severe allergy can also induce post inflammatory hyperpigmentation. While prescribing these, it is important to warn the patient of the possible side effects and ask them to return to clinic if there is any redness/ burning/ tearing after the use of these. It is also advisable to encourage sun protection as when we start these products, due to the increases cell turn over time in the epidermis, the barrier function may be interrupted in the initial few weeks. A step-up regimen, starting with night-time only application and slowly increasing the concentration in order to develop a tolerance to side effects is recommended.

Images

Figure 1: The reduction in periocular fine lines and wrinkles after regular use of DABBA (Dipeptide diaminobutyroyl benzylamide diacetate) over a three-month period

Figure 2: Wound modulation after surgical repair of a traumatic laceration in the periocular region. The scar was treated with a formulation containing Vitamin E, aloe vera, tretinoin and hydroxyquinone.

Summary

1. Cosmeceuticals is not a legally regulated term- bridge between cosmetics and drugs

2. With regular and consistent application, they have shown clinical benefit

3. They form a stepping stone for building the skin health and improving the skin appearance

4. When used in combination of energy-based devices, injectables and surgery, they enhance the outcome exponentially

5. As ophthalmologists we must also be aware of their side effects on the eyes like dry eye and meibomitis

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Clinical case story:

"From droopy to Dazzling: Samjhana's Journey to Rejuvenation"

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I had always believed in the transformative power of surgery, but nothing could have prepared me for the profound impact I would witness after performing eyelid surgery on Samjhana Rai, a socially deprived patient, currently working in the Middle East for a few years.

Samjhana struggled with droopy eyelids that affected both her vision and self-confidence, feeling frustrated, anxious, or depressed due to the condition. After much contemplation and research, she decided to undergo eyelid surgery to not only enhance their appearance but also improve her quality of life.

Samjhana had lived most of her life struggling with severe ptosis at least for five years—where her both upper eyelids drooped significantly, impairing her vision and causing constant discomfort. Beyond the physical challenges, it had also affected her self-esteem and social interactions. Being unable to find the right surgeon for the surgery, she visited several other doctors' derma and plastic surgeons who assured her to wait for a while to get spontaneous recovery with the time. Samjhana had resigned herself to living with the condition until she met an eyelid surgeon and the team offered to perform the procedure pro bono. She came to me with a referral and discussed the matters of treatment and its possible complications.

The day of the surgery arrived, and I meticulously corrected Samjhana's eyelids and performed bilateral ptosis surgery with levator advancement with blepharoplasty. The procedure went smoothly, and after a few weeks of recovery, Samjhana returned for her follow-up appointment. As my nurse removed the bandages, she witnessed a moment she would never forget—the sparkle in Samjhana's eyes, no longer hidden behind drooping lids but shining brightly with newfound confidence and hope.

Post-surgery, she experienced a transformation like never before. The functional benefits were immediate - their field of vision widened, making everyday tasks significantly easier. No longer was their vision obstructed by sagging skin, allowing them to see the world more clearly and vividly.

Beyond the functional aspect, the aesthetic success of the surgery was truly remarkable. She felt a newfound sense of confidence and pride in their appearance. The once-tired eyes now appeared rejuvenated and bright, reflecting a sense of vitality and youthfulness. Friends and family noticed the positive change and praised the person's radiant new look.

With their vision improved and self-esteem boosted, the individual felt like a weight had been lifted off their shoulders. She no longer hesitated to make eye contact or engage in social situations, feeling empowered by their newfound confidence. In the months that followed, Samjhanas' life transformed in unexpected ways. With her vision restored and her confidence boosted, she started attending community events, volunteering at local charities, and even pursuing her dream of starting a small catering business. Her smile, once hesitant, became radiant, and her interactions with others blossomed into genuine connections.

I often reflected on Samjhanas' case as a reminder of why she chose medicine—to make a tangible difference in people's lives. The success of the surgery not only improved her physical health but also unlocked her potential, proving that sometimes, a simple procedure can be the key to unlocking a brighter future.

As news of Samjhanas' transformation with her eyelid surgery spread, I received calls and inquiries from other patients in similar situations, all inspired by Samjhanas' courage and the skill of the medical team. It reinforced my commitment to providing compassionate care to all, regardless of their background or financial status.

The success story of Samjhanas' eyelid surgery became a testament to the power of medicine, empathy, and generosity. For me, it was a reminder that every patient, regardless of their circumstances, deserves the opportunity to live their life to the fullest.

Oculoplastic surgery for ptosis is not just about cosmetic improvement; it can truly change a patient's life by improving their vision, enhancing their appearance, and enabling them to live more comfortably and confidently. Each patient's experience is unique, but for many, this type of surgery represents a significant and positive turning point in their lives.

The experience of finding a proper ptosis surgeon in town can be daunting. It highlights the importance of access to specialized healthcare services, the need for healthcare infrastructure in underserved areas, and the challenges patients face in seeking timely and effective treatment for their medical needs. Finding a proper oculoplastic surgeon in town can indeed be a challenging and frustrating experience for many patients due to limited availability and lack of proper referral by other specialties or longer waiting times for consultation and surgeries.

In the end, the functional and aesthetic success of the eyelid surgery not only transformed the person's physical appearance but also had a profound impact on their overall well-being, as with Samjhanas' life. This is a story of empowerment, self-love, and the liberating feeling of overcoming obstacles through a simple yet life-changing procedure. So as with me, I share this story of satisfaction and one of the happiest moments in my career, with all my oculoplastic colleagues who love and commit their time to this wonderful profession.

Preoperative (BE Ptosis with frontalis overaction)

Intraoperative (BE Levator advancement + Blepharoplasty)

Before (Hiding the face behind mask and goggles)

After Surgery (Bright rejuvenated eyes and cute smile unveiled

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Survey Result

"Survey of current Botulinum toxin treatment patterns among Oculoplastic Surgeons in Nepal"

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Overview

This survey aims to understand the current practice patterns of botulinum toxin treatments among oculoplastic surgeons in Nepal. By conducting an online survey through Google Forms, we seek to gather data on various aspects of botulinum toxin use, including indications, techniques, dosages, and outcomes. The insights gained will help to benchmark practices, identify areas for improvement, and promote the sharing of best practices within the oculoplastic community.

Objectives

1. To identify common indications for botulinum toxin use among oculoplastic surgeons in Nepal.
2. To analyze the techniques and dosages used in different clinical scenarios.
3. To evaluate the outcomes and complications associated with botulinum toxin treatments.
4. To assess the training and continuing education needs of oculoplastic surgeons regarding botulinum toxin use.

Methodology

- **Study Design:** Cross-sectional survey was conducted between June – August, 2024
- **Participants:** Oculoplastic surgeons practicing in Nepal
- **Data Collection Tool:** Online questionnaire via Google Forms (https://docs.google.com/forms). The closed survey was conducted by sending a contact email to all NESOS members and sharing it in an official group of NESOS in Viber mobile app. The survey was voluntary and the participants implied their consent by submitting the form. The survey was open for approximately 3 months. Two further reminders were sent to non-respondents.
- **Survey Content:** The survey included questions on demographics, clinical experience, indications for botulinum toxin use, injection techniques, dosage regimens, observed

outcomes, and complications. Additional questions explored the surgeons' training background and their continuing education preferences.

- **Data Analysis**

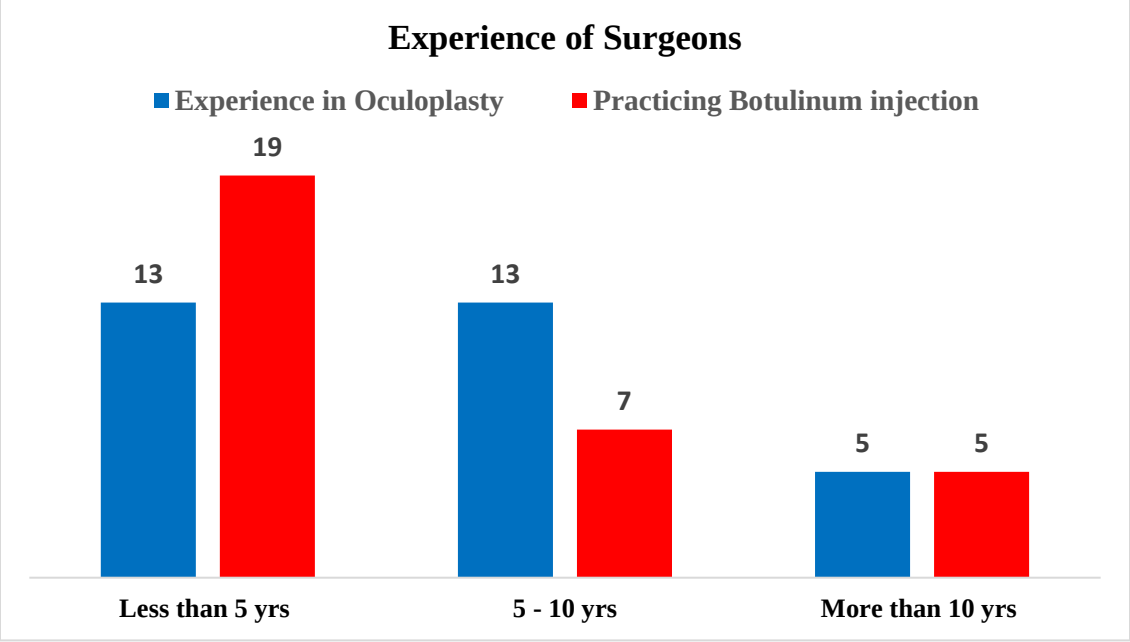
  Data was collected anonymously to ensure the privacy of the respondents. Descriptive statistics was used to summarize the responses, and patterns in practice was analyzed to identify common trends and variations.

Survey Results

At the time of survey, total of 48 oculoplastic surgeons were officially associated with NESOS group, to whom the survey form was sent. A total of 33 oculoplastic surgeons (68.75%) responded to the questionnaire and participated in the survey. Of these, two surgeons reported that they have stopped practicing Botulinum injections.

A) Experience in Oculoplasty and Botulinum injections

A total of 13 surgeons had less than 5 years of experience in oculoplasty, 13 surgeons had between 5 and 10 years of experience, and 5 surgeons had more than 10 years of experience. Out of the 33 surgeons, 19 had been practicing Botulinum injections for less than 5 years, 7 had been practicing for 5 to 10 years, and 5 had been practicing Botulinum injections for more than 10 years.

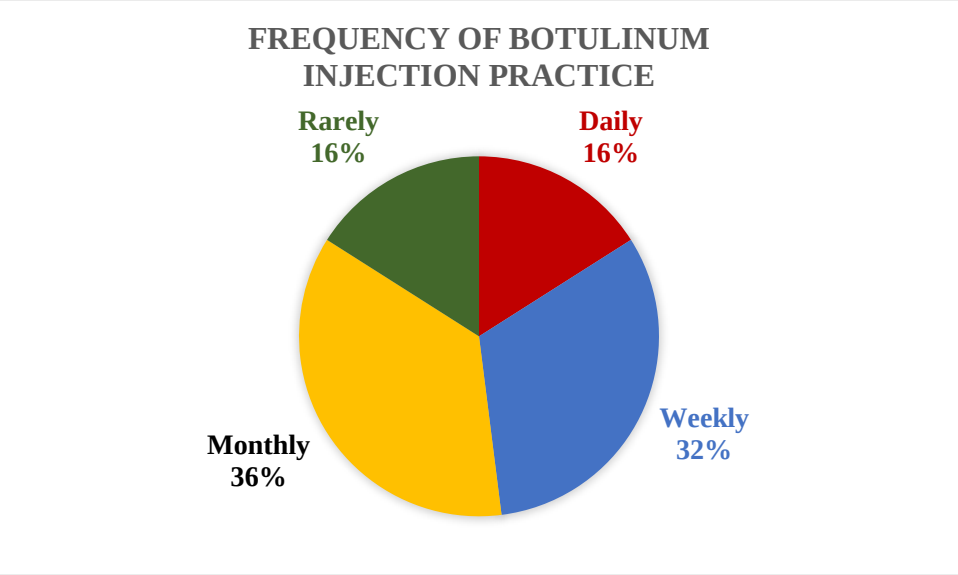


B) Practice settings

Majority of surgeons (74%, n = 23) were practicing in Hospital based setting, 16% (n = 5) were practicing in Private clinics and 10% (n = 3) were practicing in both Hospital based setting as well as Private clinics.

C) Frequency of Botulinum practice

Only 16% (n = 5) of surgeons practiced Botulinum injections on a daily basis, 32% (n = 10) on a weekly basis, 36% (n = 11) on a monthly basis, and 16% (n = 5) practiced rarely.



D) Brand of Botulinum use

Majority of surgeons (64.5%) used Botox brand of botulinum (n = 20), 16.2% (n = 5) used both Botox and Zarbot, 9.7% (n = 3) used Botox and Botulax, 6.4% (n=2) used only Zarbot and 3.2% (n = 1) used Botox and a Korean brand of botulinum toxin as well.

E) Clinical indications

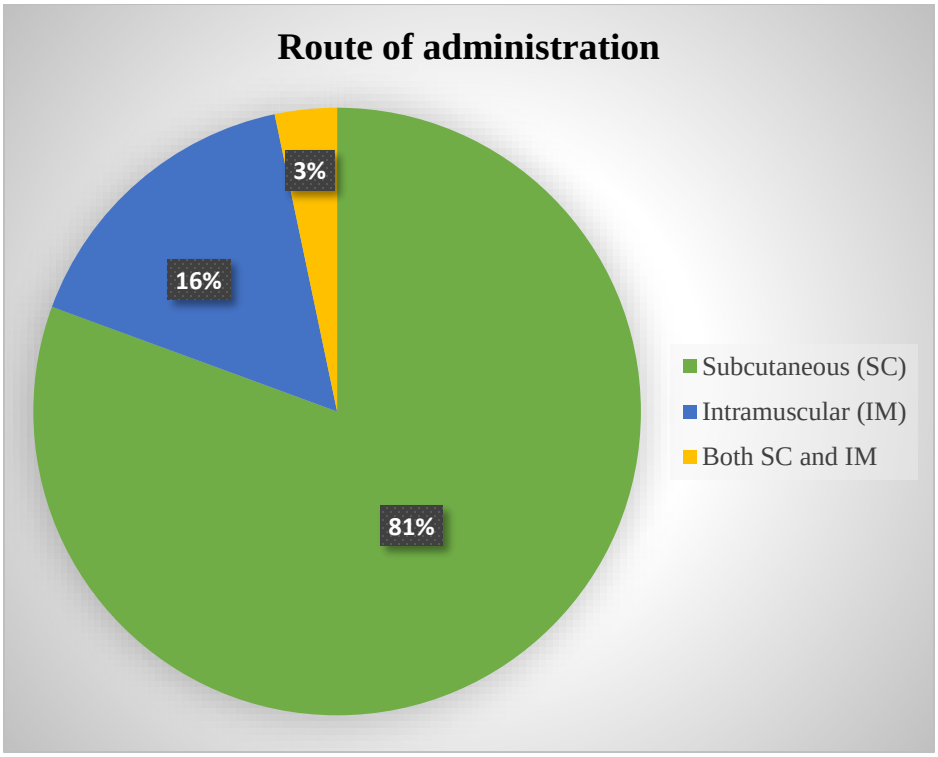
Majority of surgeons (90.3%) used botulinum toxin for blepharospasm and hemifacial spasm (n = 28). Other indications included blepharospasm only, crow feet, glabellar lines, forehead lines, hyperlacrimation, thyroid eye disease, spastic entropion not fit for surgery etc.

F) Dosage and Route of administration of Botulinum injections

Regarding dosage of botulinum injection, majority (54.8%) used standardized dose, 25.8% customized dose according to patient and 19.4% used according to clinical guidelines.

Subcutaneous injection was the preferred injection technique for majority of surgeons (80.6%), 16.1% used intramuscular injection while 3.3% used both subcutaneous and intramuscular injection depending on site of injection.

None of the surgeons used any imaging guidance for botulinum toxin injection.



G) First follow up visit

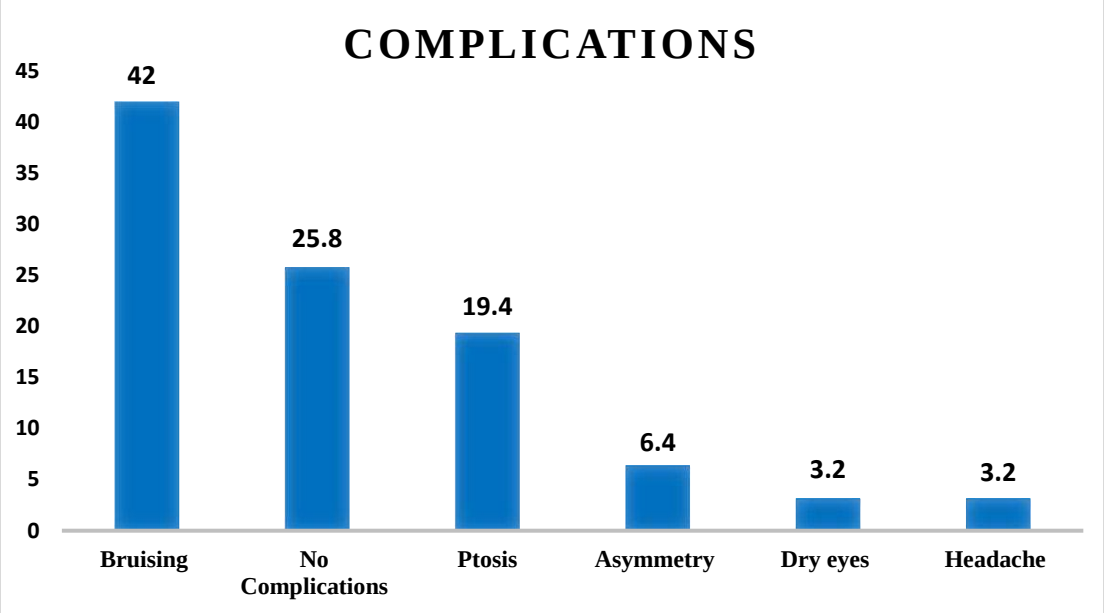
The typical first follow-up visit after administering botulinum toxin was 2 weeks (42%). Some patients were reviewed at 1 week (19.2%) or 1 month (19.2%), while others had a follow up visit only if symptomatic (13%).

H) Assessment of treatment success

Majority of surgeons (54.8%) assessed the effectiveness of Botulinum toxin treatment by Follow up consultations only. 32.2% used clinical improvement scales and 13% used patient satisfaction surveys.

I) Complications and management

The most common complications encountered after botulinum toxin treatment was bruising (42%), followed by ptosis (19.4%), asymmetry (6.4%), dry eye (3.2%) and headache (3.2%). However, 25.8% of the surgeons reported no complications.



J) Training and Continuing education

Majority of surgeons (51.6%) received training in botulinum toxin administration by fellowship training (n = 16). Other training methods included workshops (25.8%) and peer training (12.9%). Additionally, 9.7% of the surgeons were self-taught.

K) Future trends

When asked about the anticipated increase in botulinum toxin use over the next 5 years, 87% of the surgeons responded positively, while the remaining 13% were unsure.

Conclusion

Based on the survey of current Botulinum toxin treatment patterns among Oculoplastic Surgeons in Nepal, it is evident that the application of this therapy is widespread and varied across the country. The results highlight that while most surgeons are familiar with and regularly utilize Botulinum toxin for a range of oculoplastic conditions, there are differences in dosage, techniques, and patient management strategies. These variations underscore the need for standardized guidelines and further training to ensure optimal and consistent patient outcomes. Additionally, the survey suggests that despite the challenges related to access and cost, Botulinum toxin remains a crucial tool in the therapeutic arsenal of Nepali oculoplastic surgeons. This study provides valuable insights into the practices in Nepal and paves the way for future improvements in the field.

"Questionnaire"

General Information

1) **Years of Experience in Oculoplastic Surgery:**
   a. Less than 5 years
   b. 5-10 years
   c. 11-20 years
   d. More than 20 years
2) **Practice Setting:**
   a. Private Practice
   b. Hospital-based
   c. Other (Please specify)
3) **How long have you been practicing Botulinum toxin treatment?**
   a. Less than 1 year
   b. 1-5 years
   c. 5-10 years
   d. More than 10 years
   e. Never

Botulinum Toxin Use

4) **How frequently do you use Botulinum toxin in your practice?**
   a. Daily
   b. Weekly
   c. Monthly
   d. Rarely
5) **Which brand(s) of Botulinum toxin do you primarily use? (Select all that apply)**
   a. Botox
   b. Dysport
   c. Zarbot
   d. Boto Genie
   e. Other (Please specify)
6) **For which conditions do you most commonly use Botulinum toxin? (Select all that apply)**
   a. Blepharospasm
   b. Hemifacial spasm
   c. Glabellar lines
   d. Crow's feet
   e. Forehead lines
   f. Other (Please specify)

Injection Techniques

7) **What is your preferred injection technique for Botulinum toxin?**
   a. Intramuscular
   b. Subcutaneous
   c. Other (Please specify)
8) **Do you use any imaging guidance (e.g., ultrasound) for Botulinum toxin injections?**
   a. Yes
   b. No

Dosage and Administration

9) **How do you determine the dosage of Botulinum toxin for each patient?**
   a. Standardized dosage
   b. Customized per patient
   c. Based on clinical guidelines
   d. Other (Please specify)
10) **What is your typical follow-up period after administering Botulinum toxin?**
   a. 1 week
   b. 2 weeks
   c. 1 month
   d. Other (Please specify)

Outcomes and Satisfaction

11) **How do you assess the effectiveness of Botulinum toxin treatment in your patients? (Select all that apply)**
   a. Patient satisfaction surveys
   b. Clinical improvement scales
   c. Follow-up consultations
   d. Other (Please specify)

Complications and Management

12) **What are the most common complications you encounter with Botulinum toxin treatments? (Select all that apply)**
   a. Ptosis
   b. Bruising
   c. Asymmetry
   d. Headache
   e. Dry eye
   f. No complications yet
   g. Other (Please specify)

13) **How do you manage complications arising from Botulinum toxin injections?**
   a. Observation and reassurance
   b. Medication
   c. Additional procedures
   d. Referral to specialist
   e. Other (Please specify)

Training and Continuing Education

14) **How did you receive your training in Botulinum toxin administration? (Select all that apply)**
   a. Residency training
   b. Fellowship training
   c. Workshops/Courses
   d. Peer training
   e. Self-taught

15) **Would you like to participate in continuing education programs or workshops related to Botulinum toxin treatments?**
   a. Yes
   b. No
   c. May be

Future Trends

16) **Do you anticipate increasing your use of Botulinum toxin in the next 5 years?**
   a. Yes
   b. No
   c. Unsure

17) **What new trends or techniques in Botulinum toxin treatments are you most interested in?**
   a. (Open-ended response)

Interview

Heart to heart with Dr Ben Limbu. Interview by Dr Sabin Sahu

This is based on interview with Dr. Ben Limbu (Dr BL), Past President of Nepalese Society for Oculoplastic Surgeons (NESOS) by Dr Sabin Sahu (Dr SS).

Through this dynamic exchange readers can have a unique glimpse into Dr BL's life, thoughts, experiences and contributions. Happy reading!

Dr SS: Thank you so much sir for agreeing to be interviewed for our upcoming NESOS e-magazine. We really appreciate you taking the time to share your insights and expertise, especially given your busy schedule and family commitments. Your contribution will greatly enhance our magazine, and we are honored to have this opportunity to speak with you. Thank you again for your generosity and dedication.

Q1. Dr SS: Let's start by getting to know you better. Could you give us a brief introduction about yourself?

Dr BL: Certainly! I'm Dr. Ben Limbu, immediate past president for NESOS and CEO, Global Eye Hospital. I was born in a small village of Morang district and grew up in the closed knit community with appreciation for the simplicity and beauty of life. From those early years, I harbored a passion for learning and a desire to make a positive impact on the world around me. I am immensely grateful for the upbringing and values imparted by my parents. Their guidance, love, and unwavering support have been the cornerstone of my journey and it continues to guide me in both personal and professional endeavors. That's a brief glimpse into who I am and where I come from.

Q2. Dr SS: Could you please share with us details about your academic career and achievements? We'd love to hear about your educational background, any notable accomplishments, key milestones, and how these experiences have shaped your professional journey?

Dr BL: I have completed my preliminary education from Secondary Boarding School in Itahari. After completing my high school from Andhra Pradesh, India, I decided to compete for medical entrance examination. After initial setback, I decided to give up and started a business of my own. After a year or two I again wanted to pursue my dream in the medical field and this time I got admission in Kathmandu Medical College 1998. During my first year of medical school, I was offered sponsorship for my MBBS from Tilganga Eye Hospital. This was the pivotal moment in my career as my journey diverted towards field of Ophthalmology here. I was a dedicated and hardworking student during my medical school I got several accolades on the way. After completion of my internship, I joined Tilganga Eye Hospital where I have dedicated 19 years of my life in serving patients and advancing the field of ophthalmology. My journey continues to evolve, with a commitment to excellence, compassion, and lifelong learning.

Q3. Dr SS: Can you tell us about your journey into the field of oculoplastic surgery? What inspired you to specialize in this area?

Dr BL: While working at the Tilganga Institute of Ophthalmology, I encountered numerous oculoplastic cases with significant waiting lists for surgical intervention. Witnessing this backlog, I recognized the opportunity to make a meaningful impact in the lives of these patients. Then I decided to pursue my fellowship in Oculoplastics. And yes after my fellowship within 2 years together with oculoplastic team at Tilganga, the waiting time for surgery in the department had significantly reduced.

Q4. Dr SS: How do you stay updated with the latest advancements and techniques in oculoplastic surgery?

Dr BL: There are several ways that I have access to updated information on Oculoplastic surgery. One is by regularly going through the peer-reviewed journals specializing in oculoplastic surgery. I also attend and present my talks in conferences, workshops, and seminars related to oculoplastic surgery which provide ample opportunity to learn about cutting-edge research, innovative techniques, and emerging trends in the field. Another strategy is by utilizing various online

resources like webinars and case studies shared by experts in the field. I also believe that that collaborating and networking with colleagues and experts helps in exchanging knowledge, experiences and best practices which further helps to keep well versed with the latest techniques in the fields.

Q5. Dr SS: What advice would you give to young medical professionals who aspire to specialize in oculoplastic surgery?

Dr BL: Always prioritize the well-being and safety of your patients. Approach each case with empathy, compassion, and a commitment to delivering high-quality care. Develop surgical skills through deliberate practice and mentorship. Seek opportunities to perform oculoplastic procedures under supervision and gradually increase your proficiency over time. Stay Curious and keep abreast of the latest advancements, research, and techniques in oculoplastic surgery by attending conferences, reading journals, and engaging with online resources. I would also suggest to build relationships with colleagues, mentors, and experts in oculoplastic surgery. These connections can provide guidance, support, and opportunities for collaboration and learning. Recognize that the journey to becoming an oculoplastic surgeon may involve challenges and setbacks. One has to stay resilient and remain committed to goal to achieve success. Last but not the least, maintain a healthy work-life balance to prevent burnout and sustain your passion for oculoplastic surgery over the long term.

Q6. Dr SS: What would describe your life beyond the realm of Oculoplasty?

Dr BL: Well, apart from oculoplasty, I am actively involved in various community service efforts, like organizing charity eye camps and several awareness classes on ocular diseases and conditions. I am also successfully running my dream project in my home town which is integrating pediatric eye examination of children under five years of age with national immunization program. I am committed to giving back to the community and making a difference in the lives of others. Apart from my professional responsibilities, I cherish spending quality time with my kids and family members. I do have passion for music and painting. I also prioritize my health and physical well-being and engage in physical activities daily.

Q7. Dr SS: Having dedicated a substantial number of years to your service at TIO (Tilganga), a significant institutional hospital, you have transitioned to establishing your own private practice, Global eye hospital in Kathmandu and Itahari. Could you elaborate on the key distinctions you have observed between working within an institutional setting and running your own private practice?

Dr BL: Definitely, both institutional and private practice settings offer unique opportunities and challenges. While institutional employment may offer stability and benefits, establishing a private practice involves financial investments, risks, and rewards. In institutional setting decision-making processes are often governed by organizational policies, protocols, and hierarchies. However, in running my own private practice, I have greater autonomy and independence in making clinical, administrative, and operational decisions. This allows me to tailor patient care, services, and strategies according to my vision and priorities. Private practice definitely affords greater flexibility but demands significant entrepreneurship skills. Apart from clinical expertise, I

am responsible for managing day-to-day operations, financial planning, marketing, and staff recruitment. This multidimensional role requires a holistic understanding of healthcare delivery.

Dr SS: Thank you very much, Dr. Limbu, for your prompt responses during this interview. Your clear and concise answers have greatly contributed to the efficiency and effectiveness of our discussion.

Before we wrap up, I have a few more questions for you in a rapid-fire round. Please answer them in just a few words. Ready?

Dr BL: Yeah sure. I will try my best.

1. Favourite actor / actress?
- Dayahang Rai/ Priyanka Karki.

2. Favourite singer you love listening to?
- Atif Aslam, Arijit Singh

3. Favourite novel you loved reading?
- Sadly, reading novel is not my forte

4. Best food you can cook at home?
- Rice and Pork curry

5. Stress buster?
- Patient consultation and performing surgeries

6. Health, wealth or happiness?
- Health. Good health is the foundation for happiness.

7. Best quote you live by?
- **Don't give up. The beginning is always the hardest**.

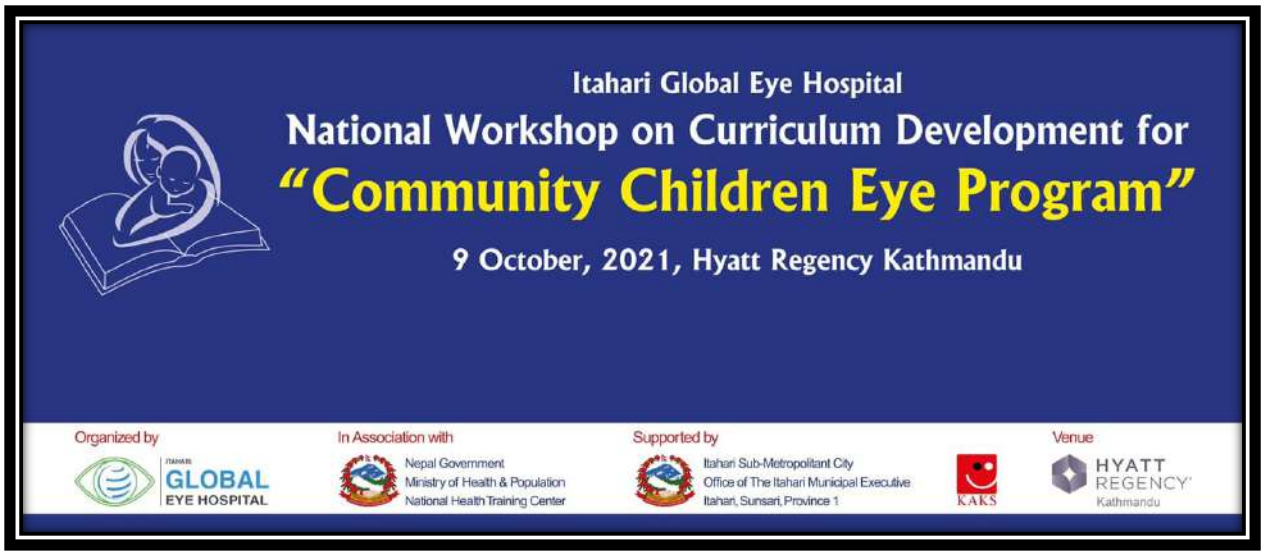
8. Any hidden talent or something people don't know about you?
- Ah, well, I like to keep some mysteries up my sleeve

Dr. SS: We sincerely appreciate you for sharing your profound insights during this interview. Your journey is nothing short of inspiring, and it has provided us with a wealth of knowledge, particularly for those aspiring to become ophthalmologists. Your openness and willingness to share your experiences and wisdom mean a great deal to us. Thank you for your time, your guidance, and your invaluable contributions.

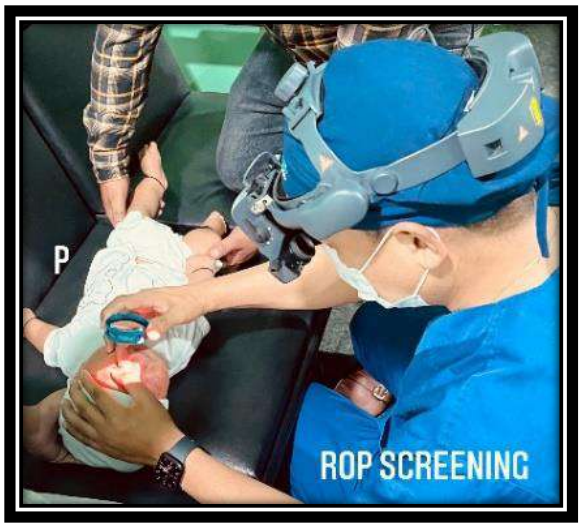

APSOPRS-
ASMHK 2018
15th - 16th December 2018
Hong Kong
APSOPRS-ASMHK 2018


"ACOIN 2022"


Celebrating World Sight Day
MUSIC FOR VISION
LIVE CONCERT "TO LOVE YOUR EYES"
LIVE CONCERT | FUNDRAISING | OPEN MIC | KEY NOTES
YOUR EYES
WORLD SIGHT DAY 2021
A CO-CREATION INITIATIVE BY:
GLOBAL EYE HOSPITAL
SUPPORTED BY:
METROPOLITAN CITY


Itahari Global Eye Hospital
National Workshop on Curriculum Development for
"Community Children Eye Program"
9 October, 2021, Hyatt Regency Kathmandu
Organized by
GLOBAL EYE HOSPITAL
In Association with
Nepal Government
Ministry of Health & Population
National Health Training Center
Supported by
Itahari Sub-Metropolitant City
Office of The Itahari Municipal Executive
Itahari, Sunsari, Province 1
KAKS
Venue
HYATT REGENCY
Kathmandu


NESOS
HIMALAYA EYE HOSPITAL
NON ENDOSCOPIC ENDONASAL DACRYOCYSTORHINOSTOMY WORKSHOP
Interactive Lectures
Hands on training workshop
Observational Learning
Date : 31st Aug to 2nd Sep, 2023
Venue : Himalaya Eye Hospital, Gharipatan Pokhara, Nepal
Organizer : Nepalese Society for Oculoplastic Surgeons (NESOS)


ROP SCREENING


National Oculoplasty Conference 2022
The Soalt

Photo story

"Improving Facial Aesthetics: The Impact of Ptosis Correction"

Courtesy: Dr. Diwa Lamichhane, MD
Nepal Eye Hospital, Kathmandu, Nepal

Before and after ptosis surgery (LPS resection) in a 18 year old female with right eye congenital ptosis

Photo story

Before and after ptosis surgery (LPS resection) in a 35 year old male with both eyes aponeurotic ptosis

Photo story

"Enhancing Facial Aesthetics Through Blepharoplasty and Brow Lift Techniques"

Courtesy: Dr. Prerna Arjyal Kafle, MD
Birat Medical College and Teaching Hospital, Biratnagar, Nepal

Before and after photographs demonstrating functional and cosmetic outcomes of blepharoplasty in a 55 yr old female

Photo story

Before and after photographs demonstrating functional and cosmetic outcomes of blepharoplasty in a 65 yr old female

Photo story

Before and after photographs illustrating functional and cosmetic outcomes of left eye brow ptosis correction by direct brow lift

Photo story

"Full thickness laceration of lower lip and cheek following dog bite underwent reconstruction under Local Anesthesia"

Courtesy: Dr. Suresh Rasaily, MD
Rapti Eye Hospital, Nepal

Before and after photographs showing cosmetic outcomes of full thickness lower lip and cheek laceration reconstruction

Photo story

"Cosmetic Outcome of Right Eye Blepharoplasty for Dermatochalasis: A Comparison with the Traumatic Scarred Left Eye"

Courtesy: Dr. Sabin Sahu, MD
Jyoti Eye Hospital, Janakpurdham, Nepal

Before and after photographs showing cosmetic outcomes of Right upper lid blepharoplasty in a patient who had left eye traumatic upper lid scarring. Intraop pictures showing skin marking, skin excision and immediately after skin suturing.

Photo story

"Successful management of longstanding right upper lid cyst presenting with mechanical ptosis"

Courtesy: Dr. Samata Sharma, MD
Hospital for Children, Eye, ENT and Rehabilitation Services, Bhaktapur, Nepal

A 74 year old male presented with huge right upper lid cyst since early childhood which was gradually increasing in size leading to mechanical ptosis of right eye. Complete surgical excision of the cyst was done along with intact capsule. Histopathological examination confirmed it to be keratinous cyst. Patient was very happy to have a good cosmetic outcome.

Pre-op

2 weeks post-op

Cyst excised in toto

NESOS News Desk

NESOS Members in action

a) **OPSSA – NESOS webinar, "Unveiling Oculoplastic trauma: A Christmas eve symposium with experts from South Asia" was conducted on 24th Dec 2023.**

Prof. Dr Rohit Saiju was one of the panelists. Dr Ben Limbu, Dr Sabin Sahu were among the speakers, Dr Sushant Adiga and Dr Pranita Dhakal moderated the webinar.

b) Non-endoscopic endonasal Dacryocystorhinostomy Workshop was organised successfully by NESOS in association with Himalaya eye Hospital, Pokhara

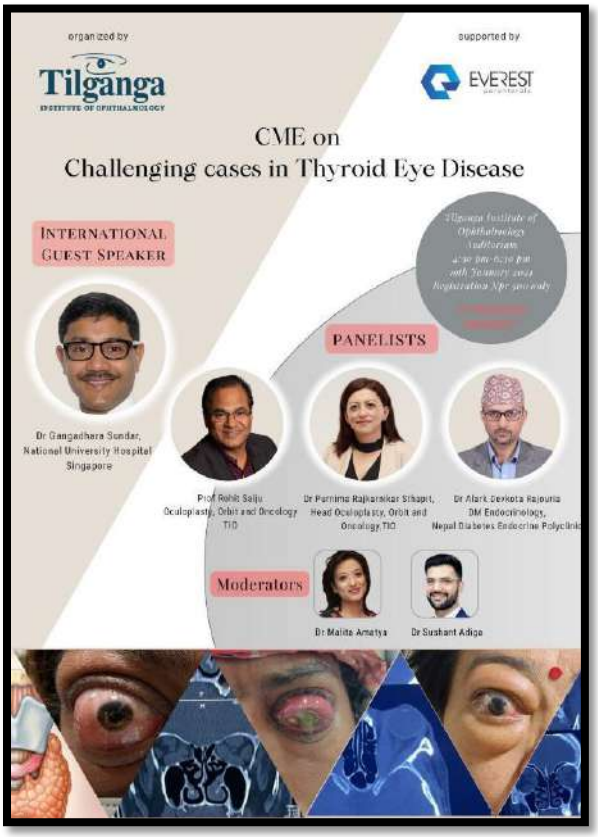
Dr Basant Raj Sharma and Dr Binita Bhattarai were chief mentors in the program.


NESOS
HIMALAYA EYE HOSPITAL
NON ENDOSCOPIC ENDONASAL
DACRYOCYSTORHINOSTOMY WORKSHOP
Interactive Lectures
Hands on training workshop
Observational Learning
Date : 31st Aug to 2nd Sep, 2023
Venue : Himalaya Eye Hospital,
Gharipatan Pokhara, Nepal
Organizer : Nepalese Society for Oculoplastic
Surgeons (NESOS)

c) CME organised by Tilganga Institute of Ophthalmology on 18th and 19th January 2024.

1. CME on challenging cases in Orbital trauma was organised on 18th January, 2024 Prof. Dr Rohit Saiju and Dr Purnima Rajkarnikar Sthapit were panelists. Dr Hom Bahadur Gurung and Dr Dikshya Bista moderated the program.

2. CME on challenging cases in Thyroid Eye Disease was organised on 19th January, 2024. Prof. Dr Rohit Saiju and Dr Purnima Rajkarnikar Sthapit were panelists. Dr Malita Amatya and Dr Sushant Adiga moderated the program.




Tilganga
CME on
Challenging Cases
in Thyroid Eye


Tilganga
CME on
Challenging Cases
in Thyroid Eye
Disease

d) Workshop on NepTED Registry successfully completed on 27th July 2024, Kathmandu.

About NepTED Registry

The Nepal Thyroid Eye Disease Registry is an initiative of NESOS aimed at developing a comprehensive database of TED patients in Nepal. The registry will provide a centralized platform for collecting and analyzing data related to the prevalence, incidence, clinical characteristics, and management of the disease, enabling healthcare providers to develop evidence-based treatment strategies and improve patient outcomes. The registry will also facilitate a better understanding of predisposing factors for TED, enabling physicians to prevent and manage the disorder, leading to more favorable outcomes for patients through multispecialty teamwork. Establishing a disease-based hospital registry for thyroid eye disease in Nepal has the potential to bring significant benefits to the country's healthcare system.

Introduction: Thyroid Eye Disease (TED) is a potentially sight-threatening autoimmune disease which primarily damages the tissues surrounding the eyes, especially the extraocular muscles, and connective and fatty tissues. Nepal, a mountainous and landlocked country, has a high prevalence of TED due to iodine deficiency disorders and thyroid dysfunction. However, the exact database for the TED in Nepal and its natural course is unknown and hence the necessity of a nationwide registry for TED. The registry will also facilitate a better understanding of predisposing factors for TED, enabling physicians to prevent and manage the disorder, leading to more favorable outcomes for patients through multispecialty teamwork.

Objectives: The primary objective of the registry is to establish a database for TED patients in Nepal to provide accurate information on the disease burden and improve the quality of care for TED patients. The registry will secondarily collect the demographic, clinical, and treatment data of TED patients, enabling healthcare providers to identify trends and patterns in the disease presentation and outcomes.

Methodology: The registry will be a collaborative effort between the Nepalese Society for Oculoplasty Surgeons and the Nepal Health Research Council (NHRC) supported by the Diabetes and Endocrinology Society of Nepal (DEAN) and Nepal Ophthalmological Society (NOS). The registry will be hospital-based and will collect data from all patients diagnosed with TED from various hospitals across Nepal. The registry will collect demographic and clinical data, including age, sex, and duration of thyroid disease, smoking history, and family history of thyroid disease. Additionally, the registry will collect clinical data, including thyroid function tests, imaging studies, and eye examinations. The registry will use a web-based platform to collect and store data securely, ensuring patient confidentiality.

Expected Outcomes: The registry will provide valuable information on the burden of TED in Nepal, enabling healthcare providers to improve the quality of care for TED patients. The registry will provide information on the disease presentation, treatment, and outcomes, enabling healthcare providers to identify trends and patterns in the disease presentation and outcomes. The registry will also facilitate a better understanding of predisposing factors for TED, enabling physicians to prevent and manage the disorder, leading to more favorable outcomes for patients through multispecialty teamwork. Moreover, the registry will support the development of evidence-based guidelines for the management of TED in Nepal, enabling healthcare providers to deliver optimal care to TED patients.

Conclusion: The Nepal Thyroid Eye Disease Registry is an initiative aimed at developing a comprehensive database of TED patients in Nepal. The registry will provide a centralized platform for collecting and analyzing data related to the prevalence, incidence, clinical characteristics, and management of the disease, enabling healthcare providers to develop evidence-based treatment strategies and improve patient outcomes. With proper planning, implementation, and monitoring, the registry has the potential to significantly improve the diagnosis and management of thyroid eye disease in Nepal, and ultimately lead to better health outcomes for patients.

The proposed registry will require significant investment in infrastructure, human resources, and technology. However, the potential benefits of the registry justify the costs, and it is essential for the government, healthcare organizations, and other stakeholders to collaborate and invest in this initiative. With proper planning, implementation, and monitoring, the registry has the potential to significantly improve the diagnosis and management of thyroid eye disease in Nepal, and ultimately lead to better health outcomes for patients.

Activities till date:

a) Nepal Thyroid Eye Disease Registry workshop conducted on 3rd August 2023 at Kathmandu

b) Province wise NepTED workshop conducted online via Zoom

c) Research orientation class by NHRC conducted online via Zoom

d) Dynamic EMR by Paila Technologies, led by a team under Som Shah, have been appointed as the official IT support team for data entry software management

e) Workshop on NepTED Registry successfully completed on 27th July 2024, Kathmandu.

Prof. Dr. Kelvin Chong was the chief guest and mentor of the program.

Oculoplasty Updates

"Latest Developments in Cosmetic Oculoplasty: Key Findings from Recent International Journal Articles"

1. Title: Five decades of the use of botulinum toxin in ophthalmology

- **Authors:** Leszczynska, Anna; Nowicka, Danuta1; Pillunat, Lutz E; Szepietowski, Jacek C
- **Source:** Indian Journal of Ophthalmology 72(6):p 789-795, June 2024. | DOI: 10.4103/IJO.IJO_1030_23
- **Highlights:**
- Botulinum toxin (BoNT) has been known for over 50 years. It has conquered many areas of medicine and has become indispensable in contemporary medicine. Now, BoNT is used to treat at least 26 conditions in six medical specialties. Although the use of BoNT began in strabology, it became the gold standard for many ophthalmologic pathologies.
- The present review of the literature focuses on the use of BoNT in ophthalmology and treatment of the following conditions: blepharospasm, facial hemispasm, facial palsy, spastic entropion, strabismus, endocrine orbitopathy, convergence spasm, and facial trauma.
- We conclude that nearly half a century of experience in utilizing BoNT in ophthalmology ensured a satisfactory level of effectiveness and safety for patients with many pathologies. Areas of future research include the application of BoNT in new selected indications, the development of the route of application without injections, and the development of long-acting BoNT forms for patients who require repeated long-term treatment.

2. Title: The Incidence of Strabismus After Upper and Lower Blepharoplasty in the United States

- **Authors:** Oke, Isdin; Elze, Tobias; Miller, Joan W.; Lorch, Alice C.; Hunter, David G.; Freitag, Suzanne K.; Dagi, Linda R.; on behalf of the IRIS® Registry Analytic Center Consortium
- **Source:** Ophthalmic Plastic and Reconstructive Surgery. 40(4):449-452, July/August 2024.
- **Highlights:**
- Retrospective cohort study of adults (age ≥18 years) in the IRIS Registry (Intelligent Research in Sight) who underwent blepharoplasty between January 1, 2013 and December 31, 2020 were done. Blepharoplasty was performed in 368,623 patients.
- This registry-based analysis found that individuals undergoing lower eyelid blepharoplasty were at higher risk of strabismus compared with those undergoing

upper eyelid blepharoplasty. Using large databases to understand the incidence of complications of frequently performed procedures may improve ophthalmologists' ability to provide data-driven counseling on surgical risks prior to intervention.

3. **Title: A Simple Procedure of Fascia-Fat Grafting and Blepharoplasty as a Single-Stage Procedure for the Correction of Sunken Eyelids in Vietnamese Population**
   - **Authors:** Hoang Thanh, Tuan; Nguyen Kim, Thanh
   - **Source:** Ophthalmic Plastic and Reconstructive Surgery. 40(4):453-459, July/August 2024
   - **Highlights:**
   - 30 patients with sunken eyelids visiting our clinic for hollow eyelid treatment underwent a fascia-fat grafting derived from the inguinal crease combined with simultaneous eyelid reconstruction. A modified classification of sunken eyelids that was more suitable for the Asian population was proposed.
   - Fascia-fat grafting combined with blepharoplasty as a single-stage procedure was a simplified method that did not require varied types of surgical tools but brought satisfactory results. This method facilitated the routine procedure and eased surgeons in the clinical practices.

4. **Title: Efficacy and Safety of AbobotulinumtoxinA for Treatment of Moderate-to-Severe Glabellar Lines: A Meta-Analysis**
   - **Authors:** Han, Xiaopan; Bai, Jixian; Kuang, Jing
   - **Source:** Ophthalmic Plastic and Reconstructive Surgery. 40(2):126-133, March/April 2024.
   - **Highlights:**
   - The EMBASE, PubMed, and web of science databases were systematically searched. Nine randomized controlled trials were included in the meta-analysis. This meta-analysis aimed to evaluate the safety and efficacy of abobotulinumtoxinA (ABO) and ABO solution for injection (ASI) for treating moderate-to-severe glabellar lines. ABO and ASI are effective and safe options for the treatment of moderate-to-severe glabellar lines. More high-quality studies are needed to verify these conclusions.

5. **Title: Evaluating the Effectiveness of Lacrimal Gland Botulinum Toxin Using the TEARS Score**
   - **Authors:** Hunt, Samantha Vicki; Schulz, Christopher Brian; Malhotra, Raman
   - **Source:** Ophthalmic Plastic and Reconstructive Surgery. 40(2):192-197, March/April 2024.
   - **Highlights:**
   - Total of 28 patients we included in a prospective study evaluating the TEARS score and quality of life in patients receiving incobotulinum toxin (Xeomin) lacrimal gland injections for epiphora.

- Clinical and quality of life improvements are seen in most patients. Patients with gustatory epiphora (GE) achieve an additional improvement in dry eye-related reflex tearing alongside crocodile tears which both improve with BoNTA. TEARS data supports using BoNTA in these patients and is a useful validated grading instrument for epiphora.

6. Title: Transient Postinflammatory Hyperpigmentation Following Eyelid Surgery

- **Authors:** Gutovitz, Joel M.; Ben-Simon, Guy; Egozi, Ella; Bar, Ariel; Landau Prat, Daphna
- **Source:** Ophthalmic Plastic and Reconstructive Surgery. 40(3):286-290, May/June 2024.
- **Highlights:**
- A retrospective case series of 6 female patients experiencing transient hyperpigmentation following eyelid surgery. Each patient underwent either blepharoplasty alone or blepharoplasty with ptosis repair utilizing Müller muscle conjunctival resection. Management was conservative in all cases. Five patients experienced complete resolution, and 1 patient experienced near-complete resolution on a 3-month follow-up.
- Transient hyperpigmentation is a rare posteyelid surgery complication, generally with an excellent outcome not requiring additional intervention.

7. Title: Factors Affecting Patient Satisfaction with Double-Eyelid Blepharoplasty

- **Authors:** Xin Liu, Yudi Han, Qianli Shen, Yujian Xu, Sihan Yang, Junya Zhang, Lei Cu, Yan Han
- **Source:** Aesthetic Plast Surg. 2024 Jul 2. doi: 10.1007/s00266-024-04127-6.
- **Highlights:**
- This retrospective study analyzed 149 patients who underwent full-incision upper blepharoplasty at an outpatient clinic in China. The questionnaire responses were collected by telephone, text messaging, or email at 6 and 12 months postoperatively. After a mean follow-up of 23.23 months, the patients' overall satisfaction rate was 89.43%. Postoperative bilateral asymmetry, apparent postoperative cicatrices, and a low education level of the patient are independent factors that negatively affect patient satisfaction with the outcome of double-eyelid blepharoplasty.

8. Title: Orbital myositis induced by botulinum toxin injection: A case report

- **Authors:** Joe Khodeir, Paul Ohanian
- **Source:** Skin Res Technol. 2024 Aug; 30(8): e70021.
- **Highlights:**
- This report describes a case of orbital myositis occurring 3 weeks after botulinum toxin treatment for periorbital wrinkles in a healthy male. The pathophysiology linking botulinum toxin to orbital myositis might be related to an inflammatory response induced by the toxin. This inflammatory response could lead to the

development of orbital myositis in susceptible individuals following botulinum toxin injections, as observed in our patient. Clinicians should be aware of this rare but serious adverse effect and consider it in differential diagnoses of postinjection ocular symptoms.

9. Title : Synergistic Therapy for Graves' Ophthalmopathy-Associated Eyelid Retraction: Steroid, 5-FU, and Botulinum Neurotoxin a Combination

- **Authors:** Yuri Kim , Helen Lew
- **Source:** J Clin Med. 2024 May 20;13(10):3012. doi: 10.3390/jcm13103012.
- **Highlights:**
- In 37 eyes from 23 patients, 0.1 cc of triamcinolone (40 mg/mL), dexamethasone (5 mg/mL), 5-FU, and BoNT-A (2.5 units) was injected transconjunctivally. The combination injection of corticosteroids, 5-FU, and BoNT-A would be effective, especially, in patients with hyperthyroidism and an elongated IPF. Additionally, an increase in EOM cross-sectional area on CT, up to 150 mm^2, may serve as an additional positive indicator for the use of multimodal injections in UER with GO.

10. Title: Optimizing Facial Aesthetics: Sequential Application of Botulinum Toxin A and Dermal Fillers for Enhanced Results

- **Authors:** Constance Hall
- **Source:** Plast Aesthet Nurs (Phila). 2024 Jan-Mar;44(1):70-71.
- **Highlights:**
- In recent years, the field of aesthetic medicine has witnessed significant advancements, offering patients a plethora of options to rejuvenate their appearance. Among the most popular techniques are the administration of botulinum toxin A (BoNT-A) and dermal fillers. This article delves into the rationale and benefits of preparing the face with BoNT-A to weaken depressor muscles before proceeding with dermal filler injections. This sequential approach not only enhances patient outcomes but also improves procedural safety and patient satisfaction while reducing the chances of needing filler. With advanced applications of BoNT-A, it is possible to slim round faces, reduce jowling, create hollowing in some patients by obliterating masseters, slim the parotid, extend the chin, and more.

11. Title: Facial Overfilled Syndrome

- **Authors**: Tingsong Lim
- **Source:** Dermatol Clin. 2024 Jan;42(1):121-128. doi: 10.1016/j.det.2023.06.007.
- **Highlights:**
- Facial overfilled syndrome is an underdiagnosed aesthetic complication due to multiple incorrect placements of fillers. Facial distortion due to the overfilled syndrome can be exaggerated by facial expressions and movements and worsens with tissue ptosis due to aging. Commonly "produced" by practitioners depending solely on fillers as a single modality for treatment, the overfilled syndrome can be seen

among those who had volume overload in the midface, forehead, chin, and nose. Incorrectly placed dermal fillers, poor selection of filler products, overzealous attempts by the injectors, and overly enthusiastic clients who "chase the lines" are the common causes of this phenomenon.

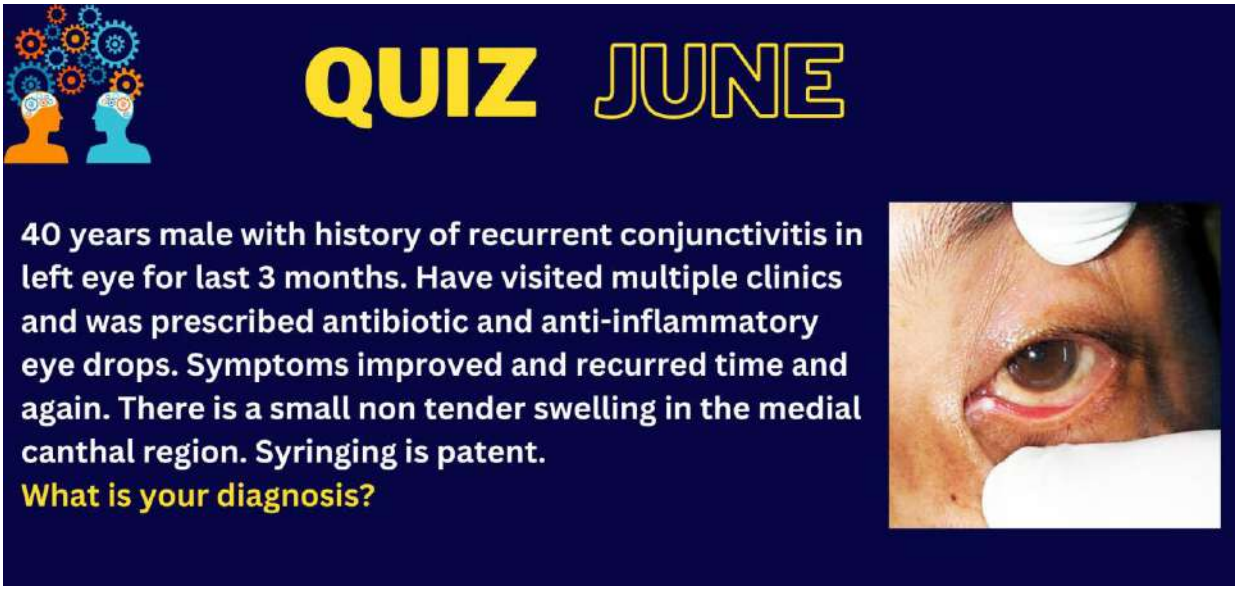
12. Title: Dermal Fillers in the Oculoplastics Office: Applications and Strategies for Complication Prevention and Treatment

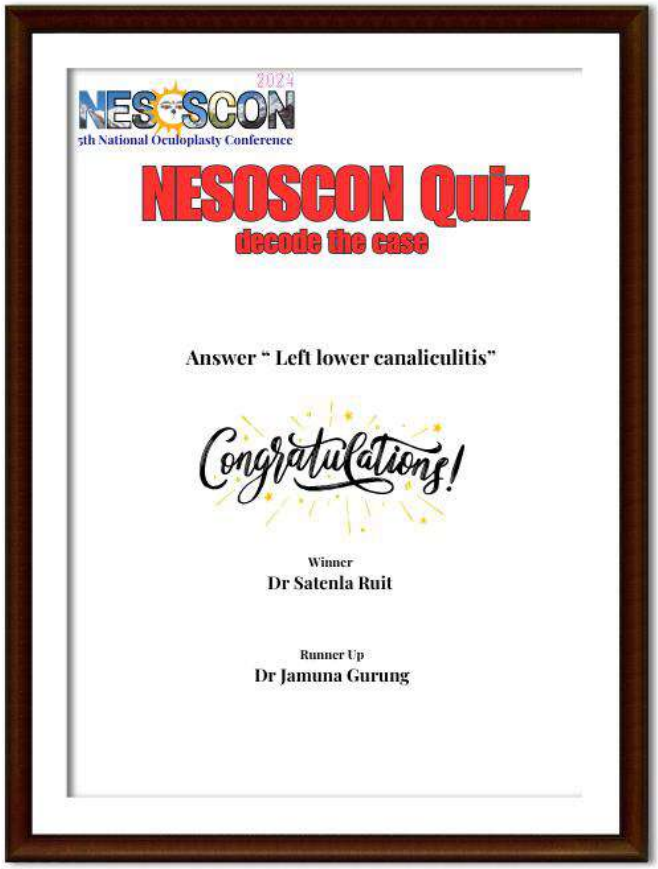
- **Authors:** Ricky Paramo, Anne Barmettler
- **Source:** Int Ophthalmol Clin. 2024 Jul 1;64(3):23-28. doi: 10.1097/IIO.0000000000000521
- **Highlights:** This review article provides an overview of dermal fillers, covering anatomic targets, properties, indications, as well as notable side effects and complications. Acknowledging the potential for severe complications, this review article offers strategies for the prevention and treatment of complications related to dermal fillers.

13. Title: Anatomy of the Facial Glideplanes, Deep Plane Spaces, and Ligaments: Implications for Surgical and Nonsurgical Lifting Procedures

a. **Authors:** Lennert Minelli, Cameron P Brown, Berend van der Lei, Bryan Mendelson
b. **Source:** Plast Reconstr Surg. 2024 Jul 1;154(1):95-110. doi: 10.1097/PRS.0000000000011078.
c. **Highlights:** No-release lifting techniques, such as thread lifts and minimal-invasive face lifts, tighten tissue laxity with a change of the gravity-opposing tissue architecture, placing the weight of the flap solely on the fixation, which limits longevity of the lift. The alternative-full release with redraping-enables reattachment of the flap to a higher position, with preservation of the original deep fascial architecture with its antigravity orientation and natural mobility, conceivably improving the longevity of the lift.

NESOS quiz and result





QUIZ JULY

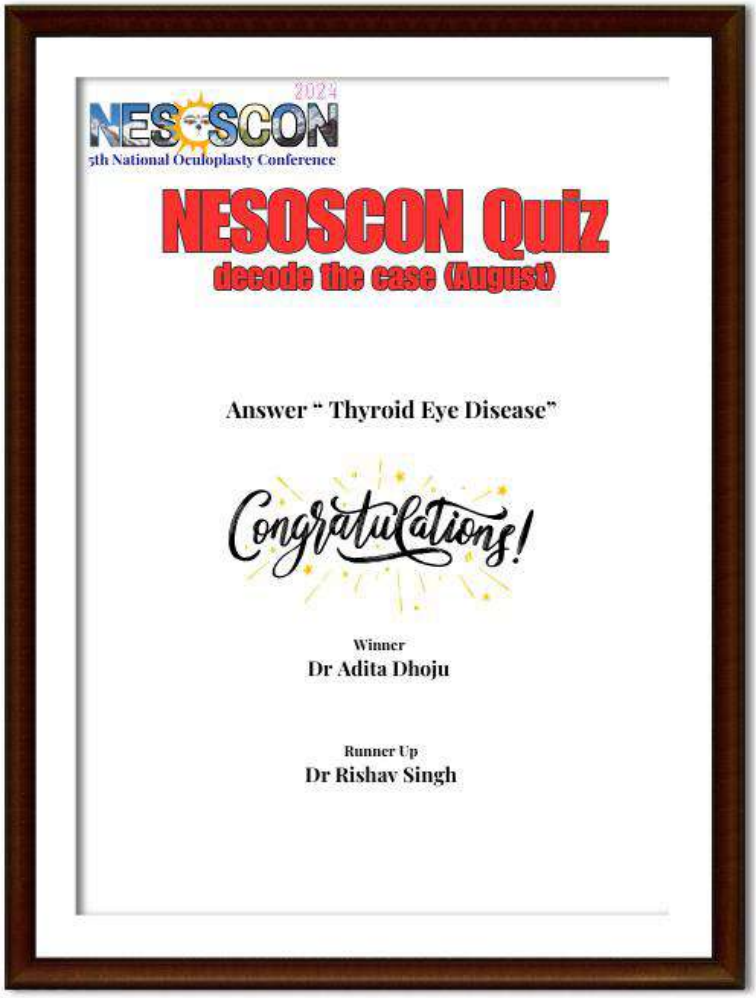
50 years male visited the OPD with complaint of drooping of right eyelid for last 3 months. He says his eye opens more in the morning and droops more in the evening. On examination Fatigue test was positive and we did an Ice Pack test. The pictures below are before and after the ice pack test.

What is your diagnosis?

QUIZ AUGUST

A 60-year-old female presented with gradually progressive proptosis and upper lid retraction in both eyes since 2 years. She is a past smoker, who left smoking 1 year back. She brings with her non-contract CT scan reports which was done 6 months back.

What is the most probable diagnosis?



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