The Müller’s muscle is a unique structure found in the upper eyelid. This small but crucial appendage has clinical implications in every surgery that is performed on the upper eyelid such as ptosis or surgery for eyelid retraction. In this close up photograph, a surgery is being performed in a patient for mild upper eyelid retraction. You can see how the Müller’s muscle appears like a thick strip which is very vascular. It is being peeled off of the levator and the tarsus and excised.
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The past two years have been wonderful experience for me being the editor-in-chief of iPlastics, our beloved newsletter of the Asia-Pacific Society of Ophthalmic Plastic and Reconstructive surgery. In this period, we have been able to bring out multiple high-quality issues that have covered a wide variety of topics from case reports to photo essays; surgical techniques to conference recaps; meeting announcements to insightful interviews with leaders in the field of oculoplastic surgery.

Personally, interacting with our members and the members of the executive committee of the APSOPRS has been an educational and humbling experience. Being able to periodically release our newsletters with meaningful and relevant content - this tenure as editor-in-chief has been very satisfying. While curating each issue is an extremely time and effort intensive process, it is also rewarding and enjoyable. Being able to deliver each time would not have been possible without the active and responsive members of our society. Additionally, I would like to thank editorial board – for having readily contributed with their time, effort and scientific content for iPlastics.

I would like to extend special gratitude to our president, Professor Dongmei Li and our secretary, Dr. Ho-Seok Sa for their constant support throughout this tenure. They have been steadfast with their support and always punctual with their regular columns.

For this issue, I am delighted to have back on board, the inaugural editor-in-chief of iPlastics Dr Audrey Looi – who agreed to contribute a guest editorial, without hesitation! Additionally, we look back the significant scientific meetings that have taken place in the past few months in the field of ophthalmic plastic surgery' and we also have a fantastic interview of Prof. Raymond Douglas conducted by Dr. Farzad Pakdel. It was a joy to be able to witness this interview in person, on the sidelines of the WSOPRAS meeting.

I hope you enjoyed this journey and the direction in which I have taken forward our newsletter. I wish the incoming editor-in-chief all the best for the future.

Signing off,

Dr. Akshay Gopinathan Nair,
Editor-in-Chief, iPlastics
akshay@drakshaynair.com

Consultant, Ophthalmic Plastic Surgery Services,

- Aditya Jyot Eye Hospital, Mumbai, India
- Advanced Eye Hospital and Institute, Navi Mumbai, India
- R J Sankara Eye Hospital, Panvel, India
Dear Colleagues,

The biennial meeting of the Asia-Pacific Society of Ophthalmic Plastic and Reconstructive Surgery (APSOPRS) will be held in Chengdu, China, June 9-10, 2023. This meeting will also be the first offline gathering for our members after three years of Covid pandemic.

2023 is the 23rd year since the establishment of APSOPRS. We will celebrate APSOPRS’s 23rd anniversary together and spend two fruitful days with renowned experts in and out of the Asia-Pacific region. We are honored to invite Prof. Don Kikkawa, Prof. Peter Dolman and Prof. Francesca Quaranta Leoni as keynote speakers.

During my presidency, we established the Young APSOPRS (YAPSOPRS), and launched the YAPSOPRS online training program, which is accessible on the APSOPRS webpage for our members. This time, young ophthalmologists can not only study with the predecessors, but also involve themselves in the special morning session for young doctors. Guidance from masters and peer-to-peer exchanges can largely enhance their abilities.

Chengdu is one of the most important economic centers, transportation and communication hubs in China. It is also the home town of giant pandas. It is a city that successfully blends classic and contemporary style, and will provide you with the best experience for visiting China.

On behalf of APSOPRS, I warmly welcome all of you to the APSOPRS biennial meeting. Thank you.

Warmest regards,

Dongmei Li

President of APSOPRS

Professor, Doctorial Supervisor of Department of Ophthalmology
Chief of Division of Oculoplastic and Reconstructive Surgery
Beijing TongRen Eye Center, Capital Medical University
The story of the iPlastics newsletter

Dr Audrey Looi MBBS, MMed (ophth), FRCSEd, FAMS

When current iPlastics Editor-in-Chief, Dr Akshay Nair, approached me for a guest editorial on the beginnings of our newsletter, the first thing I did was to pull out our very first iPlastics newsletter and reflected on our combined thoughts and ambition in getting it out years ago in 2013. I recall vividly an executive committee meeting chaired by our then President, Dr Ashok Grover, where he designated tasks to all members of the executive committee. My job, as it were, was to get cracking on a newsletter that would allow our Society to extend its reach to more members of our community and to raise our society’s profile on the international stage. As a matter of fact, I recall that he had asked for a journal, not a mere newsletter. We were in a still nascent stage of our Society with a humble sum in our accounts with no permanent secretariat and I admittedly baulked at the assigned task. I negotiated for a newsletter instead and pointed out the fact that perhaps one day,
when a permanent secretariat is established, we could consider scaling up to a journal proper. And so began the iPlastics journey.

Getting the name of the newsletter right was the first step. We needed something catchy and yet reflected our work in ophthalmic plastic and reconstructive work, from an oculoplastic surgeon’s perspective. Playing on the same pronunciation, the ‘i’ in iPlastics reflects our ophthalmology background whereas ‘Plastic’ covers all areas of our oculoplastic work, somewhat prescient considering that a good number of us have now moved to expand work in the oculofacial region. Our dragonfly logo was added to signify a transformation of our society. We were getting serious now. Let us establish links with our esteemed peers in more established societies like ASOPRS and ESOPRS.

The next step was to work out a format for the newsletter. Personally, I had envisioned a newsletter that would not only allow us to share useful experiences and techniques but also highlight our networks, our social visits and collegiality, and of course, record our meetings and conferences where these important connections and friendships were forged. The resulting interactions and fellowships could only bode well for future generations of oculoplastic surgeons.

Those early steps laid the foundation for a successful newsletter that has now reached its tenth year of e-print. During the Covid pandemic, it was particularly uplifting to still receive updates through the e-newsletter even as in-person meetings came to a standstill. I am proud and, at the same time, humbled to see the good work continue and flourish under the helm of successive Chief Editors, Dr Ben Limbu and Dr Akshay Nair. Well done, gentlemen! I wish the current Editorial team many more excellent issues in the coming years.

Sincerely,

Dr Audrey Looi
Medical Director
Ava Eye Clinic
Singapore
Complications of Asian Double Eyelid Surgery- Identification, Prevention and Management

Stephanie Ming Young, FAMS, FRCOphth¹; Yoon-Duck Kim, MD, PhD²
¹Eagle Eye Centre, Singapore; ²Nune Eye Hospital, Seoul, Korea

Double eyelid surgery is one of the most popular aesthetic surgeries among people of East Asian descent. The premise of the double eyelid operation is to surgically create a supratarsal crease to achieve a more aesthetically pleasing eyelid.¹ This is performed by anchoring the dermis to the tarsus or levator, and can be broadly divided into the external incision and the internal suture technique. Subdivisions and variations exist within each method with pros and cons for each.

Complications related to double eyelid surgery can be divided into various categories: 1) Patient dissatisfaction, 2) problems with the eyelid crease, 3) problems with the eyelid height, 4) suture-related complications, and 5) complications related to eyelid surgery in general. It is important to recognize the various complications and their underlying causes so the surgeon can confidently revise the surgery to achieve optimal outcomes.

1) Patient dissatisfaction

Since double eyelid surgery was introduced at the end of the 19th century, there has been significant developments in the idealized periorbital appearance of the Asian patient.² In the 1980s, the term “Westernization” was highly popular. Today, the watchword is cultural and ethnic preservation, which can subtly but dramatically enhance the appearance of an individual.³ Careful preoperative counselling is a two-way process. The surgeon needs to precisely understand all the patient’s wishes. Patients need to understand what is realistically achievable from sur-
gery and that the healing process varies between individuals, and the surgeon should try his/her best to convey this message to the patient. A careful ophthalmic examination and thorough understanding of the oriental eyelid anatomy are paramount to reducing complications related to the surgery.

2) Eyelid crease abnormalities

Eyelid crease asymmetry

Differences between the right and left sides of the head and face are always present, but these differences are regarded as asymmetries when certain thresholds are exceeded. The eyes are often the most noticed feature, hence asymmetry in where or how the upper eyelid crease falls is often less tolerable than other asymmetries of face.

We can categorize asymmetrical upper eyelid creases based on the 1) Depth of fold, 2) Crease height, 3) Pretarsal fullness and 4) Crease number.

Depth of fold

The depth of the crease may be too shallow or deep. The pretarsal fold may be too shallow when there is thick skin and abundant soft tissue, inaccurate approximation of connective tissue, insufficient fixation to the tarsal plate, low-set fixation or loosening of fixation.

The disappearance or shallowing of a fold is one of the main disadvantages of the buried-suture method. Loss of the superior palpebral fold with an internal buried suture technique has been reported in 2.9 to 7.1% of patients after 1 to 5 years. Explanations for the disappearance of the supratarsal folds in these patients include: knot loosening at the supratarsal fixation and dislodgment of sutures on the levator aponeurosis or orbicularis oculi muscle. Sutures can sometimes cut through these tissues or just be avulsed. To overcome this major complication, a variety of surgical approaches have been described. These include using increased numbers of buried-sutures, twisting of sutures, use of continuous suture methods, debulking of pretarsal tissue, and other complex procedures.

Figure 1: Patient with history of double eye surgery twice with shallowing of her supratarsal folds (A), 5 months after revision double eyelid surgery and medial canthoplasty (B); A patient with previous double eyelid surgery and shallowing of lid creases (C), 1 month after revision double eyelid surgery (D); A patient with three previous double eyelid surgeries unhappy with fading of her lid creases and prominent eyelid scars (E), 2 weeks after revision surgery (F); A patient with two previous double eyelid surgeries with fading of the crease and mild ptosis on the right eye (G), 1 year after right double eyelid surgery and ptosis repair (H).

The aim of revision surgery for of a shallow fold would be to create adhesion between the anterior and posterior lamellae. Elements that lead to fold resistance such as blepharoptosis or epicanthal fold should be dealt with as well (Figure 1). In patients with previous blepharoplasty surgery, there may be adhesion in the lower flap with softening of the fold which may interfere with the formation of the new crease. As such, the lower flap must be released and redraped pri-
or to tarsal fixation. In addition, the newly created fold should be deeper than usual to prevent a repetitive loss of fold. Multiple secure anchoring sutures of the dermis to the tarsus or levator aponeurosis should be made. A deeper crease can be created by trimming loose tissue, excess pretarsal fat and orbicularis oculi muscle above the tarsus, clearly exposing the tarsus sufficiently to ensure tarsal fixation particularly in Asians with abundant pretarsal fat.11

Figure 2: Female in her 20s with left upper lid marginal ectropion and high lid crease after two previous eyelid surgeries (A), 6 months after left revision upper blepharoplasty with lid crease lowering (B); A lady who underwent upper lid blepharoplasty three times elsewhere with bilateral upper lid marginal ectropion (C), 1 month after revision surgery (D).

Too deep a fold is caused by creases fixated too high on the eyelid, placing undue upward tension on the lower flap, everting the eyelid margin and causing a visibly depressed scar when the eye is closed.4 The patient may complain of a tugging sensation in the eyelid. In more severe cases of marginal ectropion (Figure 2), the mucous membrane is exposed and mucocutaneous junction may become keratinized and cause a dry eye syndrome. The management of this would involve the release of adhesions and reapproximation of the layers at a lower point along the eyelid. If the ectropion is not resolved, the lower flap should be undermined and redraped over the tarsal plate to decrease the everting force of adhesion in the lower flap. This is similar to correction for a high crease/fold, which is discussed in detail below.

Crease height

A crease that is too low will show very little skin between the eyelid margin and crease. It may occur after double eyelid surgery if the actual crease design was too low. A crease may also appear lower than it really is due to redundancy of skin. To manage a low crease, a new line is made above the previous incision line either by the buried suture method, stab incision technique (Figure 3), small incision blepharoplasty or open blepharoplasty. The latter will allow excision of the redundant skin and scar, release of adhesions and creation of adhesion to a higher part of the tarsal plate (Figure 4).

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Figure 3: Stab-incision technique. Marking at desired crease height (A); Three stab incisions are marked (B); Skin incision (C); Orbicularis resection (D); Skin crease re-formation suture (E); Intraoperative checking of supratarsal fold.

On the other hand, a crease may be too high, resulting in a greater than desirable tarsal platform show. Cultural and aesthetic norms dictate that lid creases deemed appropriate in Western eyelids may be too high in the Asian population. The aesthetically desirable supratarsal fold height in
Asians is generally between 6 and 8 mm above the midpoint of the upper eyelid margin. Placing it higher than 8 mm can result in an unnatural appearance in an Asian patient. Placing the crease too high can also hinder the excursion of upper eyelids and cause mechanical ptosis. Successful correction of a high crease is challenging and depends on understanding and addressing the underlying causes, which include high skin crease design in initial operation, high fixation of the lower flap to a high point, excessive skin excision with insufficient skin to cover the crease, unintended adhesion, blepharoptosis, or a sunken eyelid (Figure 5).

Figure 4: To correct a low fold, an incision is made higher up at the desired crease height (A), redundant skin and scar is excised (B & C), adhesion is released and moved to a higher part of the tarsal plate (D & E), and wound is closed (F).

Figure 5: A 24-year-old female who had three previous bilateral eyelid surgeries presented with asymmetrical and too-high faint eyelid creases (A). She underwent revision eyelid surgery with lowering of the lid crease with good postoperative symmetry that was maintained at 2 years follow-up (B). A 40-year-old lady with previous right upper lid surgery with resultant high crease, hollow sulcus and mild ptosis (C). She underwent revision eyelid surgery with lid crease lowering and ptosis repair with good result at 1 month postop (D).

The first and one of the most important steps in correcting the high lid crease (Figure 6) is proper marking of the new desired lid crease. High crease design from the initial operation is the most common cause of a high crease. In our technique, the upper skin marking corresponds to the original high fold that is to be rectified while the lower skin marking corresponds to the desired lower crease height. Careful dissection to release the previous adhesion and scar tissue from the levator aponeurosis is another crucial step. The preaponeurotic fat advancement flap offers an anatomical barrier to prevent unexpected adhesions between the anterior skin–orbicularis muscle lamella and the levator complex. It also serves as a volume enhancer between the levator aponeurosis and the anterior lamella, contributing to a more natural contour of the upper eyelids. In cases with inadequate preaponeurotic fat due to previous overzealous excision, a medial transposition fat pad or free pearl fat grafts may be used to attain the same effect.

Figure 6: To lower a high lid crease, the upper border of the skin marking is made at the original high crease, while the lower skin marking is made at the desired new crease position (A). Following local anaesthesia injection (B), the skin is incised (C) a small strip of skin and orbicularis muscle is excised (D). The inferior skin and pretarsal orbicularis muscle flap is dissected from the tarsal plate, orbital septum opened, adherent scar tissue removed and preaponeurotic fat separated from the levator aponeurosis (E). The preaponeurotic fat flap is then lowered to the desired eyelid crease position, and a
buried 7–0 nylon suture is passed through the upper tarsus (F) and subcutaneous tissue under the skin incision for lid crease formation (G). Three to four such sutures were placed, followed by three to four skin-orbicularis-tarsus-fat- orbicularis-skin-interrupted sutures (H) and skin closure with a continuous 7–0 Nylon (I). Adapted from Young SM, Kim YD, Kim JH, Lang SS, Woo KI. Lowering of the High Eyelid Crease in Revision Upper Eyelid Surgery. Aesthetic Plast Surg. 2019;43:139-146.

Pretarsal fullness

The pretarsal region may be too full, referring to unwanted soft tissue projection in the area over the tarsal plate in post blepharoplasty eyelids. Preoperative factors that predict pretarsal fullness include thick eyelid skin and orbicularis muscle. Pretarsal fullness increases in proportion to the square of the height of the pretarsal soft tissue compartment. Hence while debulking the pretarsal orbicularis may help, the correct management would be to perform a revision open blepharoplasty to lower the crease and effectively reduce the height and volume of the pretarsal soft tissue compartment.

**Figure 7:** A 35-year-old female with previous upper eyelid surgery who had fat pearl graft (A) on the left upper lid to treat her sunken superior sulcus with multiple lid creases (B) with good result and desirable fullness postoperatively (C).

Conversely, a too hollow pretarsal region may be caused by ageing changes (e.g. ptosis and orbital fat atrophy) or previous surgery (overly aggressive removal of tissue). Depending on the cause and severity, pretarsal hollowness may be managed by ptosis surgery for levator dehiscence (see section on ptosis below) or revision blepharoplasty. In cases where the hollow sulcus is caused by overzealous removal of the preaponeurotic fat or orbicularis oculi muscle, replacement of the lost tissue can be done by free fat (Figure 7) or dermofat graft, alloderm graft, fat injection, or filler injection.\(^{17,18}\)

Crease number

The aim of double eyelid surgery is to create an additional pretarsal fold in a patient with monolids or without a distinct fold. However the crease may become faint or lost completely if the patient has pre-existing thick skin and abundant soft tissue, there is inaccurate approximation of connective tissue, insufficient fixation to the tarsal plate or loosening of fixation due to hematoma or edema. Similar to a shallow fold described above, management would be to create adhesion between the anterior and posterior lamellae by various forms of blepharoplasty: buried suture, stab incision (Figure 8), small incision or full-length upper blepharoplasty.

**Figure 8:** Patient with shallow lid crease folds after two previous suture blepharoplasty surgeries by a Plastic Surgeon (A) underwent stab incision technique with postoperative deepening of lid crease (B).

On the other hand, multiple eyelid creases may be due to levator dehiscence or surgically induced. If due to levator dehiscence, the patient should be treated with the appropriate ptosis surgery, such as conjunctivomullerectomy or levator advancement or resection. This will be covered further in the section on ptosis below. If the multiple creases are caused by overzealous soft tissue removal in the upper flap which may create adhesion and subsequently result in extra eyelid creases above the surgically created fold, treatment depends on the individual patient and surgeon. If
the extraneous crease is shallow, filler or fat injection alone might be enough to bolster skin and prevent further progression of crease. In most cases, open access is required for meticulous release of adhesions between the levator aponeurosis and orbital septum as well as between the postorbicularis fascia and orbital septum to prevent re-adhesion.20,25

3) Eyelid height problems

Ptosis

Blepharoptosis of the upper lid following double eyelid surgery may be due to several reasons (Figure 9). Firstly, there may be pre-existing unrecognized ptosis, or “latent” ptosis.26 In East Asians where the supratarsal fold is low or absent, a mild ptosis may be hidden underneath the overhanging lid skin. This makes it hard for the surgeon or even patient to notice preoperatively unless the surgeon conscientiously checks for true margin reflex distance 1 (MRD1) under redundant eyelid skin. Unfortunately for both patient and surgeon, the ptotic eyelid position will become visible and appear more prominent after upper eyelid surgery if the ptosis is not addressed.

Figure 9: After double eyelid operation, mild ptosis of left eye is unmasked (A) with a shallow eyelid crease on the right and high lid crease on the left. Bilateral symmetrical lid height and crease are obtained 1 week after left levator resection and bilateral double eyelid operation (B). Another patient developed right ptosis after double eyelid surgery likely due to levator aponeurosis injury (C). She underwent right levator repair with good result at postoperative one month; A lady who underwent two previous upper blepharoplasty surgery was unhappy with her right sided ptosis and high crease (E), which improved after right ptosis repair with lid crease lowering (F).

Secondly, ptosis may occur following injury to or dehiscence of the levator aponeurosis during blepharoplasty.26,27 This often occurs during opening of the septum especially in those patients who have little retroseptal fat, causing the orbital septum to lie in very close proximity to the aponeurosis. This problem can be prevented by having a thorough appreciation of upper eyelid anatomy. If uncertain, the surgeon can ask the patient to open his or her eyes to identify the levator when adjusting the height of the supratarsal fold.

Figure 10: Levator aponeurosis surgery for ptosis. After marking, local infiltration is performed (A). The underlying cornea may also be visible as greyish structure beneath the dehisced levator aponeurosis (white arrows represent disinserted white line of levator aponeurosis) (B). After the septum is opened, dissection is performed between the levator and preaponeurotic fat (C). After a partial thickness bite through the tarsus, both ends of the 6/0 silk suture are passed through the edge of the levator aponeurosis such that it is advanced and plicated to the tarsus in a horizontal mattress fashion (D). A temporary knot is placed over a free silk tie (E).

For the cases that do not improve, levator aponeurosis surgery involving a levator aponeurotic
tuck, advancement or resection is usually curative (Figure 10). If the patient has mild ptosis that responds to 2.5% phenylephrine eyedrop, a conjunctivomullerectomy can be considered.

**Eyelid retraction**

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**Figure 11:** Female patient with right ptosis and left upper lid retraction after blepharoplasty (A), underwent right levator repair and left levator recession (B) to correct her eyelid abnormalities; 27-year-old female who underwent double eyelid surgery and unhappy with her right > left upper lid retraction (C), underwent bilateral revision surgery with levator recession with good result at postoperative month 1 (D).

Lid retraction after upper eyelid surgery is fortunately not common. It may occur from excessive skin excision or overaggressive cautery of the septum and/or levator during surgery which induces scarring and retraction (Figure 11).\(^{28}\) Risk factors for overcorrection include previous eyelid trauma, dermatological conditions leading to tight skin, and Graves’ disease. Ways to avoid these problems include careful measurements of the skin that is to be removed. Gently pinch up the excess skin until the lashes start to evert. Leave at least 10-15 mm between the lower brow hairs and the upper incision to prevent worsening brow ptosis and potential retraction or lagophthalmos. The surgeon should also be respectful of the upper eyelid anatomy to avoid unnecessary manipulation or injury to the orbital septum and levator aponeurosis. Repair of this eyelid malposition may require a release of the retractors via levator recession and even a skin graft in severe cases of lagophthalmos.

4) Suture-related complications of buried-suture double-eyelid blepharoplasty

Non-incision suture blepharoplasty has a few advantages compared to incisional double eyelid blepharoplasty: shorter operation time, faster recovery, less visible skin scar, and more easily revised.\(^{13}\) However, the main disadvantage of the buried-suture method is the high possibility of disappearance of the newly created double eyelid. This has been discussed in the section of “Shallow lid fold” complication above.

Another issue with buried-suture double-eyelid blepharoplasty involves implantation of a suture thread which acts as a foreign material with its associated potential complications.\(^ {13,29}\) The conjunctival fixation sites used in buried suture double-eyelid blepharoplasty include the tarsal plate and the levator muscle. In the tarsal plate fixation method, the sutures are passed through the tarsal plate. Potential complications include corneal irritation, discomfort, grittiness and production of eye mucus. The conjunctival surface of the tarsal plate can show various degree of chronic inflammation.\(^ {29}\) Several years after surgery, sudden severe corneal irritation may also occur due to late-onset suture extrusion.\(^ {29}\) In the levator muscle fixation method, the levator aponeurosis and Müller’s muscle are sutured to the skin of the upper eyelid. As it is difficult to adjust the ligature, due to the lack of supportive tissue such as tarsal plate, postoperative blepharoptosis may occur.

Another potential complication that may occur from buried suture double eyelid surgery is the appearance of nodules on the eyelid skin. The nodules may be caused by a superficially located suture knot where the buried threads are visible through the skin as papules or a chalazion-like suture granuloma. The latter usually associated with chronic inflammation of the tarsal plate.\(^ {29}\)
Suture removal is necessary to treat these suture-related complications.

5) Complications related to eyelid surgery in general

Complications of any eyelid surgery include, not are not limited to: hemorrhage, wound dehiscence, infection, scarring, diplopia, dry eyes and keratopathy. Adequate cessation of anticoagulant preoperatively, meticulous surgical technique, appropriate suture choice and suture placement and adequate lubrication postoperatively are general steps that should be taken to reduce the risks of such complications.

Conclusion

Double eyelid surgery is a widely and commonly performed operation. While it is a generally safe and successful operation in professional hands, the potential for complications exists because of the complex structure and function of the eyelids. Recognizing potential complications and understanding the basis of why they occur and how to manage them are important tools for any surgeon performing double eyelid surgery on patients.

Acknowledgements: None

References


Farzad Pakdel, MD - Director of ITEDS instruction course

International Thyroid Eye Disease Society (ITEDS) conducted an instruction course in October 8, 2022. This program was supported by ITEDS and IRAVO and was run as a virtual meeting. This comprehensive instruction course was arranged in two sessions for 8 hours. We aimed to enhance ability of acquisition clinical and paraclinical data, patient evaluation, data analysis and clinical decision making.

Along with basic and clinical presentations, other sections including breakthrough news and RCTs and comprehensive review of current medical and surgical management in a practical way, case based discussions and ITEDS grand round gained remarkable attraction. There were 31 expert world famous speakers and chairs in the field that provided instruction material and golden key points to the attendees from the young colleagues to expert ones. More than 980 attendees from 68 countries logged in the meeting. We received remarkable positive feedbacks from attendees and colleagues after the meeting. Now part of ITEDS course is available in ITEDS YouTube for three months.

Interested colleagues can use the below link to subscribe to ITEDS’ YouTube and access the videos. Hopefully, our dear colleagues enjoy watching these videos.

I would like to thank all our moderators, speakers and my co-directors, Dr Peter Dolman, Dr Jonathan Dutton, Dr Michael Kazim and Dr Seah Lay Lang that without them all, we could never conduct such a great meeting.

We look forward to seeing colleagues and scholars in all relevant disciplines in future meetings. Finally, physicians, scientists and scholars can follow ITEDS in linkedin, YouTube, facebook and twitter.

https://www.youtube.com/@iteds6256/featured

https://www.linkedin.com/company/iteds/
The Oculoplastics Association of India, after a hiatus of three long years, successfully organized its highly anticipated annual meeting in the vibrant city of Mumbai. This significant event took place at the prestigious Taj SantaCruz hotel, where esteemed professionals, experts, and enthusiasts from the field of oculoplastics congregated for three enriching days of knowledge sharing and skill enhancement.

The meeting commenced with a captivating start as participants immersed themselves in a range of interactive and hands-on workshops. The first day focused on diverse areas of interest within the field of oculoplastics. Prominent workshops were conducted, covering topics such as facial aesthetics and injectables, fractures and orbital trauma, as well as comprehensive one-on-one courses on the basics of suturing. These sessions provided delegates with invaluable opportunities to enhance their practical skills, exchange ideas, and foster collaboration among peers. The second and the third day saw interesting, interactive panel discussions, Keynote lectures and a variety of debates on different topics. The keynote speakers...

for the meeting included Dr Richard Allen, the President of the ASOPRS, Professor Gangadhara Sundar from Singapore, Dr Farzad Pakdel from Iran and Dr Raghav Sampath from Leicester UK.

In his enlightening, keynote lecture at the inauguration of the conference, Dr Richard Allen spoke about the evolution of ptosis surgery from simple slings to customized levator resections and frontalis flap procedures. Prof Gangadhara Sundar spoke on his experience with pediatric thyroid eye disease and Dr. Farzad Pakdel spoke in detail about his experience in orbital decompression for thyroid eye disease.

The Oculoplastics Association of India Annual Meeting in Mumbai was an exceptional event that reinvigorated the spirit of collaboration and knowledge sharing within the oculoplastic community. The gathering of nearly 400 delegates from around the world in the elegant setting of Taj SantaCruz created an atmosphere of camaraderie and collective growth.

The next edition of the Annual meeting of the Oculoplastics Association of India is to be held in October 2023 in Hyderabad India with Dr Santosh Honavar as the organising secretary, and the upcoming meet promises to be a delightful, scientific extravaganza.

For more details visit www.opai.in
The 4th International Orbital Society Symposium (IOSS 2022) was held in Conrad Seoul, Korea during December 2-3, 2022. The IOSS was originally scheduled in 2020, however, it had been postponed three times because of Covid-19 pandemic. Even though there were lots of obstacles, the IOSS 2022 was a great success as “in-person meeting”. A total of 310 participants from 36 countries attended the in-person meeting. There were 58 invited lectures, 29 narrated e-poster presentations and 46 e-poster exhibitions. The attendees shared interesting and innovative research with each other and actively discussed their academic opinion after each session. This IOSS 2022 meeting was held in conjunction with the 17th Samsung Oculoplastic Symposium, which has been held by Prof. Yoon-Duck Kim from 1995 at the Samsung Medical Center.

At the opening ceremony the audience was overwhelmed by the unique Korean instrument playing. The Korean traditional harp “gayageum” collaborated with the western guitar was beautiful and showed marvelous harmony of western and eastern sounds.

The IOSS 2022 program consisted of “On the Basis of Orbit”, “Orbital Tumors”, “Orbital Infection and Inflammation”, “Pearls in Orbital Surgery”, Orbital Trauma” and “Recent Advances in Orbital Surgery” on Day 1. From basic anatomy to recent advancements in orbital surgery such as 3D printing technology for orbital surgery were handled. The Congress President, Prof. Kim, gave her lecture entitled as “Management of cavernous hemangioma” at the orbital tumor session.
Not only the exchange of academic knowledge, but social interaction was also active. On the first night, Gala Dinner was held with spectacular and fantastic performances. Big drum performance was magnificent. A world-famous Korean B-boy team gave an impressive show with large digital screen music video. During raffle prize time, many of our friends and colleagues could get their own Korean souvenirs. Many recognizable faces enjoyed the last part by dancing to the exciting music such as “Gangnam Style”. The participants had an unforgettable night.

On Day 2, the program was as follows: “Lessons learned from Challenging Cases”, “Thyroid Eye Disease”, “Lacrimal Gland Malignancy” and “Challenges and Futures in the Management of Orbital Disease”. Prof. Rose from England gave a presentation about lacrimal gland carcinoma: why exenteration does not appear to improve the outcome. The audience enthusiastically debated about this interesting topic. Not only ophthalmologists but neurosurgeons, radiologists and radiation oncologists also attended the meeting and gave interesting lectures.

The symposium was finished after Prof. Yoon-Duck Kim’s closing remark at the end of all the sessions. At that time, all the attendees stood up and gave a sincere standing ovation to acknowledge the great endeavors by the preparation teams. This successful meeting was only possible with all the attendee’s support and devotion from all around the world despite COVID-19 situation. We look forward to seeing everyone in next meeting.
WSOPRAS – A new beginning for global collaboration and partnerships in Oculoplastics!

Prof. Ashok Grover, MD
Vision Eye Care Centre, New Delhi
Sir Gangaram Hospital, New Delhi
Past President - APSOPRS

The first World Society of Ophthalmic Plastic Reconstructive and Aesthetic Surgery Conference was held in Dubai Healthcare city from May 5 to May 7, 2023. The idea for this meeting has been evolving for the past few years; however, the COVID-19 pandemic had been a setback. Dr Naresh Joshi from the United Kingdom, Dr Don Kikkawa from UCSD, San Diego, USA; Dr Vinod Gauba from Dubai and Professor Ashok Grover from Delhi India were the key members in the executive committee.

This meeting was supported by over 32 oculoplastic organizations, including all supranational societies. This reflects a truly mammoth effort to get everybody on board. The meeting saw 423 attendees from 67 different countries. The total number of invited faculty members was 161. On the scientific front, the meeting had a great impact with over 250 abstract submissions. The meeting focused primarily on case-based scenarios with adequate time for discussions and Q&A.
Global leaders in oculoplastic surgery, namely Dr Angelo Tsirbas, Dr Cat Burkat, Prof Dongmei Li, Dr Eva Kopp, Dr Jane Olver, Dr Jose Tovilla, Dr Khaled Abuhaleeqa, Dr. Mehdi Fendri and Prof Reynaldo Javate were the scientific committee chairs that curated this three-day event.

This meeting truly marks the beginning of a new chapter. As the final gavel struck, an overwhelming sense of accomplishment prevailed, for this historic gathering had surpassed all expectations. By enabling exchange of ideas, thoughts and sharing from each other’s experiences – the success of WSOPRAS’s maiden meeting heralds a new era of unparalleled breakthroughs and transformative advancements, empowering these exceptional surgeons to enhance the lives and vision of countless individuals around the world.
Atypical Adnexal Cysticercosis

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Cysticercosis is a parasitic tissue infestation caused by larval cysts (cysticercus cellulosae) of the pork tapeworm, *Taenia solium*. The sites for predilection for development of cysticerci are the central nervous system, subcutaneous tissue, skeletal muscle, cardiac muscle, and the eye. Ocular and periocular cysticercosis is less frequent, accounting for about 20% of cases. The extraocular muscle involvement is the commonest type of orbital and adnexal cysticercosis. This review aims to highlight unusual presentations of extraocular cysticercosis.

Materials and methods

A thorough literature search using keywords atypical, orbital and cysticercosis was done on PubMed and Google Scholar. A total of 30 case reports and series were found. Of these 16 articles reporting unusual extraocular cysticercosis were included. Case reports with disseminated cysticercosis were excluded.

Results

Ten case reports and six case series reporting 25 cases had atypical presentations. Optic nerve involvement was reported in 12 published articles. One case with bilateral optic nerve involvement along with asymptomatic neurocysticercosis was lost to follow up. The usual presentations of optic nerve cysticercosis were with diminution of vision and painful ocular movements. The vision at presentation was usually poor and varied from no perception of light to finger counting at a few meters. On examination, signs suggestive of atypical optic neuritis or neuroretinitis, which may be associated with proptosis were present. Eight cases received medical treatment with albendazole and steroids. One
Figure 1. Clinical photos of cysticercosis presenting as a nodule below the head of left eyebrow in a 12 year old boy (a) per operative picture revealing a well defined cystic mass in the orbicularis fibres (b) and histopathology confirming the diagnosis as cysticercosis (c).
Conclusion

This review emphasises the importance of keeping a high index of suspicion of cysticercosis of the orbit in cases with recent onset clinical signs which may range from an innocuous long standing eyelid mass to sight threatening orbital apex syndrome. Since Cysticercus cellulosae is endemic to certain regions it must be in the differentials of all orbital diseases presenting from these regions and imaging should be advised early to diagnose and offer prompt treatment in order to prevent long term sequelae.

References


Insights into Thyroid Eye Disease: An interview with Dr. Raymond Douglas

In this special issue of iPlastics, our guest contributor, Dr. Farzad Pakdel caught up with Dr. Raymond Douglas for a brief tete-a-tete to get insights into the newer developments in thyroid eye disease.

Dr. Farzad Pakdel, MD is affiliated with Farabi Hospital, Tehran University of Medical Sciences in Iran. He is also the Vice Chair of Iranian Research Association for Vision and Ophthalmology (IRAVO), Board member of International Thyroid Eye Disease Society (ITEDS).

Dr Raymond Douglas MD, PhD is a Professor at Cedars Sinai Hospital in Los Angeles where he is head of the orbital and TED programs. He is also in private practice in Beverly Hills, California, USA. He is the lead author on the paper ‘Teprotumumab for the Treatment of Active Thyroid Eye Disease’ published in the New England Journal of Medicine which showed that among patients with active thyroid eye disease, teprotumumab resulted in better outcomes with respect to proptosis, Clinical Activity Score, diplopia, and quality of life than placebo.
Dr. Farzad Pakdel: It was great to hear your presentations on thyroid eye disease in the first meeting of the World Society of Ophthalmic Plastic Reconstructive and Aesthetic surgery (WSO-PRAS). Can you give us an idea about the new updates in thyroid eye disease - its management as well as understanding the pathophysiology?

Dr. Raymond Douglas: First, this has been great meeting and it is wonderful to be here. And thank you, Farzad for participating, speaking, and moderating in so many wonderful sessions. We did speak about thyroid eye disease at this meeting – there are a couple of new breakthroughs that I would like to talk about. One is the data on the placebo controlled ‘chronic’ trial, which means patients who have had thyroid eye disease for between 2 to 10 years and a clinical activity score of one or less or were identified as non-progressive TED. These patients were treated with teprotumumab in a randomized controlled fashion. And what we found after standard treatment of 8 doses and subsequent follow-up was a reduction in both proptosis and diplopia. This was consistent with the outcomes that we see after treatment with teprotumubab for active thyroid eye disease. So we are now starting to understand the pathophysiology of TED, the long-term changes occurring in the immune system and in addition, we are able to understand about the reactivation rate which appears to be around 19% based on multicentric analysis. So this data is helping us to understand how we can implement some of these findings into our clinical practice.

Dr. Farzad Pakdel: It was interesting to also hear about the molecular studies showing that CD34+ fibroblasts are distributed in the population - a key factor in TED. Can you explain the importance of this finding?

Dr. Raymond Douglas: I love the science and this is part of what I enjoy researching about TED. What is very unique is that the fibroblasts in TED are truly unique and different when they are in the normal population. What we are seeing is probably an injury response or a response to inflammation where these cells migrate from the bone marrow. They are these CD 34+ and overexpress the IGF-I receptor very prominently. And after migration, they pretty much stay there for the rest of our lives undisturbed. But in the orbit, the cells of particularly good at immune modulation. They produce IL6 and other things but they can also produce a lot of extra cellular matrix. So in a way, it is a metastatic nature of these fibroblasts migrating to the orbit that contributes to thyroid eye disease. It is a different way of thinking about this - it’s not just the immune system attacking cells that are already there but also cells that are migrating and setting up shop elsewhere.

Dr. Farzad Pakdel: So this is really changing the paradigm of treatment of TED with IGF-1R inhibitors. Do you think these drugs would be the first line of treatment regardless of the stage of thyroid eye disease?

Dr. Raymond Douglas: In my practice and a lot of other centres in the United States we have already shifted away from steroids. The ETA (European Thyroid Association) and ATA (American Thyroid Association) have already made statements that at least in a subset of patients with moderate to severe TED, we can use these drugs (IGF-1R inhibitors/blockers) as the first line of treatment. Looking ahead, we will be seeing newer agents emerging that will have a lot of improvements, not just in terms of safety and treatment outcomes but also in price and distribution, which currently are a major issues in the rest of the world.

Dr. Farzad Pakdel: So do you think it is a little premature to say that this would be the absolute first line of treatment in all forms of thyroid eye disease? I ask this because in other places, our colleagues around the world would still consider corticosteroids as the first line of treatment for active thyroid eye disease.
Dr. Raymond Douglas: Yes, I would agree. Certainly, when Teprotumumab is not available.

Dr. Farzad Pakdel: On the last day of the conference, we had some interesting discussions about medical or pharmacological orbital decompression in thyroid eye disease. Is that your prediction for the next few years - that orbital decompression or any other orbital surgery for thyroid disease would give way and teprotumumab other drugs would be the first line of treatment even in cases where surgery would otherwise have been indicated?

Dr. Raymond Douglas: Well, if you see - many years ago, we would have never thought that we would come to this point where we would treat even chronic thyroid eye disease patients with teprotumumbad. And I think if you fast forward to three to five years from now, we are going to be at a point similar to where we have come in terms of the treatment for rheumatoid arthritis. It used to be an orthopaedic disease but it no longer is a disease that is treated by orthopedic surgeons. It’s a biologically managed disease – treated by rheumatologists. I don’t know if medications can completely replace surgery but certainly it is going to make a huge impact. I am sure, there will be some cases were surgery makes a lot of sense but we are going to get easier and easier implementation of these medical therapies.

Dr. Farzad Pakdel: Looking forward what is your prediction about the new classes of drugs in the near future – say five to ten years from today?

Dr. Raymond Douglas: So we have to break it down to the pathophysiology. The IGF pathophysiology molecules and those are going to advance. They going to be a little more stronger - the antibodies themselves - and they may even be administered subcutaneously. But I am really excited about the oral agents. They are small molecules that you can take as a pill with a very fast and ‘on and off’ effect. And all the basic science and biology thus far, ex-vivo; appears to be exactly the same and targets the exact same receptors. As far as distribution in a worldwide situation – this opens up a lot of possibilities as a medicine that can be truly transported worldwide and distributed. Additionally, also the immune blockers IL-17A and IL-6; which we will continue to investigate in several trials. I think those medications likely be relegated to early disease when the pathophysiological mechanisms are most pertinent.

Dr. Farzad Pakdel: Thank you so much, Ray, for your time and your insights.

Dr. Raymond Douglas: Thank you, Farzad. It has been a pleasure.

Disclosures: Dr. Douglas reports receiving consulting fees from Horizon Therapeutics, the manufacturers of Tepezza (teprotumumab).
Historically Speaking: Heinrich Müller

The superior tarsal muscle – known as the Müller’s muscle was first described as a smooth muscle with many features of a striated muscle by Müller in 1858.[1] This Müller’s muscle, is a smooth muscle seen under the levator palpebrae superioris muscle. The primary function of the muscle is to help raise the upper eyelid. The Müller’s muscle originates on the underside of the levator muscle and inserts onto the superior tarsal plate of the eyelid.[2]

Heinrich Müller attended the University of Munich, and then moved to Baden-Baden in 1840 due to illness. He then attended the universities in Freiburg and Würzburg, before graduating in 1843. He subsequently attended medical school in Heidelberg and Vienna. In 1847, he became an assistant professor in Würzburg, but he left for Italy from 1850 to 1851 for health reasons.

There, he devoted himself to comparative marine biology, mostly concerning the eye. He became an associate professor of anatomy at the University of Würzburg in 1852 and was promoted to full professor in 1858. He remained in Würzburg until his death in 1864.[3]
While the oculoplastic fraternity knows him for his description of the superior tarsal muscle, which bears his name, he was the first scientist to notice the red colour in rod cells, which we now know as rhodopsin or visual purple. This is a pigment that is present in the rods of the retina. However, historically, Franz Christian Boll (1849–1879) is credited as the discoverer of rhodopsin because he was able to describe its “visual pigment cycle”. Additionally, Heinrich Müller also described the fibres of neuroglia cells that make up the supporting framework of the retina. This structure was to become known as “Müller’s fibres”.

Structures that bear his name include:

1. “Müller’s muscle”: Circular portion of the ciliary muscle of the eye. Also called “Rouget’s muscle” after French physiologist Charles Marie Benjamin Rouget (1824–1904), and sometimes “Müller-Rouget muscle” in honour of both men.

2. “Müller’s muscle”: superior tarsal muscle which is a smooth muscle that adjoins the levator palpebrae superioris muscle and helps to raise the upper eyelid.

3. “Müller’s muscle”: orbitalis muscle which is a smooth muscle that crosses from the infraorbital groove and inferior orbital fissure.

4. “Müller’s trigone”: Part of tuber cinereum folding over the optic chiasm of the brain.

5. “Müller glia”: Cells in the retina which scaffold and nurture retinal neurons.

In our cover image, provided by Dr. Milind Naik, MD; LV Prasad Eye Institute, India; we can see the Müller’s muscle being stripped off of the levator muscle and the conjunctiva. In another image from the same series (above), we can see the attachment of the Müller’s muscle as it is being excised – in a Müllerectomy procedure for a patient with mild eyelid retraction.

For correction of ptosis, the well-known posterior eyelid ptosis repair via the Müller’s muscle-conjunctival resection procedure is an effective, reliable, and simple technique. An open sky isolated Müller’s muscle resection has also been described as an effective technique for the correction of ptosis in patients with moderate to good levator function. This is irrespective of the lid’s response to phenylephrine. In this technique, the preservation of conjunctival tissue eliminates concerns about dry eye, and also preserves the full height of the fornix.

Given the location, the anatomical structure and the function of the muscle, it is...
often a part of the eyelid that the oculoplastic surgeon has to deal with – be it in a case of ptosis or eyelid retraction due to thyroid eye disease.[7] Through his small but significant observations, Heinrich Müller revolutionized our knowledge of ocular physiology and eyelid surgery paving the way for significant advancements in ophthalmology and eye care.

References:


