The proposed November issue was pretty light, so instead of sending two emails I have combined the November and December issues this year. I am pleased to include a new section in this issue produced by Katelyn Earls in which she has interviewed a surgeon and provided some great pearls. This month she discussed Eyelid Lacerations with Dr. Matthew Sniegowski who practices in the Kansas City area.

Happy Holidays

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Our schedule for the year:

Jan: Peds / Glaucoma
Feb: Retina / Comprehensive
Mar: Cornea / Neuro
Apr: Path / Plastics
May: Peds / Glaucoma
June: Retina / Comprehensive
July: Cornea / Neuro
Aug: Path / Plastics
Sep: Peds / Glaucoma
Oct: Retina / Comprehensive

Nov: Cornea / Neuro
Dec: Path / Plastics

Dr. Richard Townley performs cataract surgery during New Horizons 2019 at Port Mourant, Guyana. (US Air Force photo by Senior Airman Derek Seifert.)
10-year outcomes of ICL for myopia—John Cason

110 eyes of 60 patients were followed for 10 years after Visian ICL implantation. Visual acuity, refractions, endothelial cell counts and intraocular pressure were measured and analyzed. The mean age of the patients at time of implantation was 30.3 years and the mean refractive error treated was -12.01 diopters. ECD and IOP did not change significantly during follow-up. However, lens opacities occurred in 12.1% and increased in incidence over time. Phacoemulsification surgery was performed in 5.5% of the patients at an average age of 43.7 years.

This study shows that over the long term the most frequent complication is cataract formation. Otherwise, the ICL was very well tolerated.


Minimally invasive corneal neurotization—Brett Davies

The authors used a nerve allograft to re-establish corneal sensation for 7 patients with neurotrophic keratopathy. They describe their surgical technique in which they attach the allograft to the supraorbital, supratrochlear, or infraorbital nerve. The attached allograft is then tunneled subcutaneously to the fornix, then into the subconjunctival space where it is divided and secured to the limbus with 8-0 vicryl. All 7 patients showed improvement in corneal sensation by esthesiometer post operatively. This is a relatively new procedure that shows promise for treating neurotrophic keratopathy. This paper adds nicely to the limited literature on the procedure.


Periorbital rejuvenation in Asian Women—Brett Davies

The Asian eyelid has some important anatomical differences compared to the Caucasian eyelid. Failure to recognize these differences and adjust the surgical approach when performing blepharoplasty in this population can lead to unwanted post-operative results. This article describes a subbrow approach to treat dermatochalasis in this population. This is a retrospective review of the 66 patients who underwent the subbrow blepharoplasty at a single institution. The surgical technique and marking are described, and the results analyzed by way of patient questionnaire. All patients reported an improvement in appearance, with 95.5% describing it as very good, and 4.5% describing the appearance as modest. This is a technique I use from time to time, and have found it to be an effective alternative to the standard blepharoplasty incision in Asian patients- particularly those with significant temporal hooding.


Vismodegib for Basal Cell Carcinoma — Todd Mondzelewski

More advances in treatment options for patients with orbital and advanced periocular basal cell carcinoma. The authors of this paper provide a retrospective case series of 21 patients with periocular (6) or orbital (15) basal cell carcinoma in two centers in Israel. Clinical response was complete in 10 patients, partial in 10 patients and stable in one. Five patients died during the study-period with only one being related to vismodegib therapy (possible treatment-related sepsis).


Making a Great Surgeon — Todd Mondzelewski

“Consistent, long-term surgeon success relies on a mix of skill, foresight, humility, and adaptability. Although surgical volume may positively affect some of these attributes, many other factors also carry significant influence. Nevertheless, when it comes to the impact of surgical volume, it would seem from the body of literature that recent volume makes a surgeon sharp, deliberate practice over years makes a surgeon skilled, and total volume over a career makes a surgeon wise. Cox et al have done an admirable job of adding to our understanding of the role of these factors in cataract surgery.”


Cox et al, have authored a paper in which their objective “was to assess associations between annual surgeon case volume and visual outcomes after cataract surgery.” The authors looked at a database of all patients undergoing small-incision cataract surgery or phacoemulsification at Aravind Eye Hospital in India during 2015. Reviewing 35,880 eyes (out of 91,084 surgeries) with surgeries performed by 69 surgeons they found that increased surgeon case volume was statistically significant but clinically modest improvement in uncorrected visual acuity. The break point was most pronounced at 350 phacoemulsifications per year. They also report a decrease in complications with the higher volume surgeons.

In our current climate of skills sustainment and developing requirements papers such as Cox are important, but one must remember Dr. Campbell’s notes that “many other factors [beyond case volume] also carry significant influence.”

Campbell RJ. The making of a great surgeon. Ophthalmology 2019 Nov;126(11), 1490-1491.

https://pubmed.ncbi.nlm.nih.gov/31635698


As an oculoplastic surgeon in a major metropolitan area, I take care of a significant number of eyelid lacerations every year. Here are some of the most important points that I consider when I am called for an eyelid laceration.

**Where is the best location for the patient to be cared for?**

This can be a tough question as many times the patient, family member or outside provider who are not used to seeing facial trauma, are calling for the evaluation. The main questions that I usually ask to determine location are: What is the likelihood of a ruptured globe? An intraocular or intra-orbital foreign body? A canalicular laceration? Low velocity, non-penetrating type injuries (e.g. eyelid was cut with a branch, finger nail, etc) can often be safely cared for in the office. If I have any concerns that there could be a ruptured globe, a foreign body or a distal canalicular laceration, I have these patients evaluated in the emergency room where access to CT scans and ORs are readily available.

**If the patient is coming through the ER, should antibiotics or tetanus be given?**

For eyelid lacerations, I always have the ER verify that tetanus is up to date and if not ask that they give a tetanus vaccine. If a wound is contaminated, I will make sure to irrigate the wound with saline prior to closure, although care needs to be taken not to devitalize more tissue. The face and eyelids are very well vascularized and for this reason, if the laceration is not a penetrating injury into the orbit, I do not use oral or intravenous antibiotics but will have the patient used a topical antibiotic ointment twice daily for a week. If there is a penetrating injury that has violated the orbital septum, I will use oral or intravenous antibiotics. I will also use oral antibiotics for a contaminated laceration, e.g lacerate from a gardening tool.

**What is the best approach to close non-margin involving eyelid lacerations?**

For a non-margin involving laceration, there are two main principles that I try to adhere to. First, is to go from known to unknown and second is to minimize tension on the wound edge. Some eyelid lacerations can be quite complex and there is a challenge to identify where to start. In this situation, I look for structures (brow cilia for instance) that I know how I need to re-approximate and then close the remainder of the “unknown” after that. Secondarily, I try to minimize tension at the wound edge. In order to do this, I will typically try to place several deep sutures through the orbicularis with either vicryl or monocryl. For the eyelid, we want to direct all tension horizontally as to minimize the risk of retraction later. I typically try to use absorbable sutures in trauma situations as follow up in 5-7 days for suture removal can be challenging for some patients.

**What is the best approach to close an eyelid margin laceration?**

There are a variety of techniques out there and at the end of the day, whichever one is used doesn’t really matter so long as you get good approximation of the eyelid margin and re-align the tarsal plate. The technique I use is as follows: I place a single either 6-0 silk or 6-0 Vicryl suture through the grey line in a simple square knot. I then place gentle traction on the eyelid margin and reapproximate the tarsal plate with 2-3 partial thickness 6-0 vicryl sutures (A spatulated needle either the S-14 or S-24 works perfectly for this). Once I have reapproximated my tarsus, I will put additional marginal sutures through the lash line and/or the Meibomian gland orifices. I like to leave the tails of my marginal sutures long and then will secure them to the skin with either the silk or vicryl suture (using the same material I closed the margin with).

**What is the best approach for a canalicular involving laceration?**

One of the big keys to canalicular laceration is making sure to identify them. I teach my residents that any laceration that
is medial to the puncta deserves to be probed. It can be very easy to miss a canalicular laceration at times if you are not looking closely for one. Regarding the repair of a canalicular laceration, the two big things that I assess in determining how and where to repair a canalicular laceration are how proximal or distal is the canalculus lacerated and is the medial canthal tendon avulsed? For a proximal canalicular laceration, these can often be repaired in the office with a monocanalicular stent. For these I pass a stent through both ends of the canalculus and then reapproximate the cut ends of the canalculus with 7-0 or 8-0 vicryl. For a more distal laceration and for avulsed medial canthal tendons, I repair these in the OR. I have found that bicanalicular stents are often the best for these repairs. Once I have found the distal end I will pass the bicanalicular stent through the proximal and distant cut canalculus and retrieve the stent in the nose. I will pass and retrieve the other end as well. I again reapproximate the canalculus with 7-0 or 8-0 vicryl. If the medial canthal tendon was avulsed I will reapproximate that using either 5-0 prolene or 5-0 vicryl. A double armed suture works best, if available, and the key for the medial canthal tendon is to get posterior enough. Ideally you will be able to engage the periotestum of the posterior lacrimal crest and then advance the suture forward.

**What do you recommend for a follow up plan?**

I usually ask that all laceration patients follow up with me in 5-7 days following repair so that non-absorbable sutures that are not margin involving can be removed and that I can check that their eyelids are healing appropriately.

**Dr. Sniegowski** is a board certified Ophthalmologist and ASOPRS fellowship trained Oculofacial Plastic and Reconstructive Surgeon. He completed his residency at the University of Colorado Rocky Mountain Lions Eye Institute in Aurora, CO and his fellowship at Anderson Cancer Center at the University of Texas. He is currently working with Sabates Eye Centers and the University of Missouri Kansas City in Kansas City, MO.

**Recent publications by military authors:**


If I missed your article please let me know so I can include it in the next issue!

**The Editorial Team**

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Interviews: Katelyn Earls
Please don’t hesitate to reach out with suggestions or comments to help improve this review. If you have articles you think others would be interested in reading then please don’t hesitate to send those along as well.

-Kyle
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Maj. Okezie C. Igboeli, Evans Army Community Hospital ophthalmologist, folds back the cornea, the protective layer above the eye’s lens, of Sgt. Samuel Leon Rodriguez, 52nd Brigade Engineer Battalion, 2nd Infantry Brigade Combat Team, 4th Infantry Division, during his Lasik eye surgery on Jan. 24, 2019. (Photo by Alexandra Shea)

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