Complete Abstract Listing 2015

Oral presentations on Thursday

Abstract Number: 101

The paramedian forehead flap in periocular reconstruction

Author: **Taras Papchenko** (*rapid fire presentation*)

Purpose:

The paramedian forehead flap is an axial pattern flap based on the supratrochlear artery. It is commonly used for nasal reconstruction, but is not widely utilised for periocular reconstruction. We describe it's use in a series of patients with periocular malignancy.

Methods:

There were five cases of large or complex periocular defects in which a paramedian forehead flap was used to reconstruct the defect. One patient had received previous radiotherapy limiting the options of other local flaps. There were five pedicled axial pattern flaps used to reconstruct defects involving the medial canthus, nose, lower lid, cheek and brow. The paramedian forehead flaps were used alone or in conjunction with other local flaps.

Results:

The flaps were not difficult to fashion and allowed closure of defects which otherwise may have required either a free flap or a large skin graft, both of which were less preferable to the paramedian forhead flap. All flaps were viable prior to and post pedicle division. The only complications were related to closure of the donor site, but no patient needed additional intervention. All patients were satisfied or pleased with their reconstructions.

Conclusion:

The paramedian forehead flap is a very useful addition to the oculoplastic surgeon's toolkit. It has a wide range of possible uses, and can be particularly helpful for larger periocular defects when other options are limited.

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Abstract Number: 102

Sutured Sorbsan for Medial Canthal Defects Allowed to Heal by Laissez Faire

Author: **Fariha Shafi** (*rapid fire presentation*)

Purpose:

Laissez-faire is an alternative to surgical reconstruction of defects where wound healing occurs by secondary intention. The role of this technique in managing peri-ocular tumours has been described, but is not universally well established. We report our outcomes using laissez-faire with sutured Sorbsan for defects in the medial canthal region.

Methods:

Retrospective analysis of 31 consecutive cases of medial canthal defects allowed to heal by laissez-faire following excision of tumour. Sorbsan dressing, a highly absorbent biodegradable alginate dressing derived from seaweed, was sutured into the defect. Sutures were strategically placed to dictate the direction of healing. Tumour diagnosis, size of defect, time taken to epithelialise, functional and cosmetic outcome, complications, follow-up duration and any secondary interventions required were recorded. A video demonstrating the surgical technique will be shown.

Results:

Size of initial defect ranged from 8 x 5 mm to 25 x 10 mm. Mean time taken for wound epithelialisation was 33 days. Mean duration of follow-up was 26.3 months (range 4 - 110 months). Good functional and cosmetic outcomes were achieved in all 31 patients. All patients were satisfied with their aesthetic outcomes. Further detailed review of clinical photographs showed epicanthic fold in 2 patients and 1 patient had a hypopigmented visible scar. No cases required secondary intervention and there were no cases of postoperative infection.

Conclusion:

Laissez-faire with sutured alginate dressing in the medial canthal region alleviates the need for reconstruction, thus reducing patient morbidity and provides immediate coverage of the defect whilst providing good aesthetic outcomes even for relatively large defects.

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Abstract Number: 103

Risk factors and histological subtypes of multiple primary basal cell carcinomas

Author: **Jessica Lee** (*rapid fire presentation*)

Purpose:

To describe histological and anatomical trends in 394 patients with multiple primary BCCs. In particular, to determine the likelihood of the same histological subtype in subsequent primary BCCs as that found in the first tumor and to investigate the risk factors for more aggressive BCC subtypes. We also describe the periocular distribution of BCCs based on their histology.

Methods:

All patients who had histological diagnosis of at least two separate primary BCCs from 2009 to 2014 at the Hereford County Hospital were included in the study. Their histopathology results for all confirmed primary BCC tumors and other skin malignancies over the last 25 years were recorded.

Results:

A total of 1,356 primary BCCs, including 109 periocular tumors, were recorded in 394 patients. Age at first diagnosis was predictive of more aggressive histological subtypes and greater number of primary tumors. Most tumors (40%) were nodular, followed by mixed (25%), superficial and infiltrative (14% each) subtypes. Infiltrative, morphoeic and micronodular tumors were more common in later lesions. Incomplete margins were most common

in mixed and morphoeic tumors (16% and 18.2%, respectively) less common in infiltrative, micronodular and superficial (12.7%, 10.4% and 8.7%, respectively) and rare in nodular (4%) tumors. The probability of a subsequent BCC being of the same histological subtype as the previous BCC was highest for nodular (53%) and mixed tumors (46%). Tumors on the head and neck (46%) and torso (41%) had higher chance of same histology compared to BCCs found on the limbs.

Conclusion:

Most common site for periocular tumors was the lower lid, followed by medial canthus. Although nodular tumors predominated, a significant percentage of BCCs displayed histologically aggressive behavior. Younger age at the time of diagnosis, greater number of primary BCCs and shorter time between new primary tumors were associated with greater risk of more aggressive BCC subtypes.

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Abstract Number: 104

The evaluation of second specimens following incomplete first stage excision in periocular skin cancer

Author: **Simran Mangat** (*rapid fire presentation*)

Purpose:

To calculate the presence of persisting tumour in second specimens following incomplete primary excision. By definition an incomplete primary excision should lend to tumour being present in a further specimen if sent. In practice this is not always the case and this study aims to establish the risk of having tumour present in second specimens if they are sent.

Methods:

A 9 year retrospective study was conducted of all two stage slow Mohs' procedures for periocular skin cancer conducted at Wolverhampton Eye Infirmary from 2006- 2014. Data collected included age, sex, site of tumour, type of tumour, onset be it de-novo or recurrence, size of margin taken, orientation of involved margin(s), any margin less than 1mm, location of second specimen if taken, presence of tumour in the second specimen, reconstruction details, recurrence of tumour, length of follow up and any post-operative complications.

Results:

66 patients were included, 24 males and 42 females. Mean age was 74. 54 cases were BCCs. 48 cases were de-novo and 18 were recurrences. 35% (n=23) of patents had an involved margin after the first stage. Further excision was undertaken in all patients with involved margins. In these second specimens, tumour was only present in 22% (n=5) and absent in 78% (n=18). There were no recurrences during the study period. Mean follow up was 14.9 months.

Conclusion:

In our experience, in two stage procedures, the majority of second specimens taken due to an involved margin do not contain any residual tumour tissue. Our results would support a conservative degree of further excision by oculoplastic surgeons when a second specimen is required in two stage procedures.

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Abstract Number: 105

Updated interim analyses and UK case studies from the global, open-label STEVIE study of the hedgehog (Hh) pathway inhibitor vismodegib in adults with advanced basal cell carcinoma (aBCC)

Author: **Amer Durrani** (*rapid fire presentation*)

Purpose:

Aberrant Hh signalling is the key driver in BCC pathogenesis. Vismodegib is a first-in-class Hh pathway inhibitor licensed in the UK for the treatment of aBCC that is inappropriate for surgery or radiotherapy. STEVIE is an ongoing study of vismodegib in adults with aBCC. We present details from selected UK patient cases and key global interim data from STEVIE (data cutoff: 6 November 2013).

Methods:

Adults with locally advanced (la) or metastatic (m) BCC received vismodegib 150 mg once daily until progressive disease, unacceptable toxicity, or withdrawal. The primary objective is safety; efficacy is a secondary endpoint.

Results:

STEVIE recruitment is complete (n=1,227, of which n=41 are from UK centres); patient treatment and follow-up are ongoing. This interim analysis included 501 patients (laBCC = 470; mBCC = 31) with potential ≥12 months' follow-up. The most common treatment-emergent adverse events (TEAEs) were muscle spasms (63%), alopecia (61%), dysgeusia (54%), decreased weight (32%), asthenia (28%), decreased appetite (25%), ageusia (22%), diarrhoea (17%), fatigue (16%), and nausea (16%). Overall response rate in patients with measurable disease (Response Evaluation Criteria In Solid Tumors, version 1.1) was 67% (laBCC; n=302/453) and 38% (mBCC; n=11/29); median durations of response were 23 and 10 months, respectively.

Conclusion:

This interim analysis of STEVIE, the largest study conducted in adults with aBCC, confirms the previously observed safety profile and efficacy of vismodegib. Data from UK patients further support vismodegib treatment for aBCC.

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Abstract Number: 106

Vismodegib for periocular basal cell carcinomas

Author: **James Laybourne** (*rapid fire presentation*)

Purpose:

We describe a retrospective case series detailing the clinical progress of patients receiving the oral hedgehog pathway inhibitor vismodegib, for periocular basal cell carcinomas (BCCs) that are unsuitable for surgery or radiotherapy.

Methods:

Three patients received vismodegib for biopsy-proven periocular BCCs. Patient A had a nasal nodular BCC extending to both medial canthi (growing over 10years). Patient B had a recurrence of a lower lid morphoeic BCC involving the medial canthus (previously excised by general surgeons 20 years earlier). Patient C had a brow nodular BCC (of unknown duration).

Results:

All BCCs reduced in size. Patient A's BCC continues to diminish after 4 months of vismodegib without

complications. Patient B achieved biopsy-proven BCC resolution at 18 months follow-up after 1 year of vismodegib, which was stopped due to fatigue. At 1 year of vismodegib, Patient C's BCC had reduced in size but not resolved and the skin previously involved by tumour was thinner than normal skin. A fall caused a laceration of this thin skin and the adjacent upper lid. Repair by non-ophthalmic surgeons was complicated by a Streptococcus aureus infection. Subsequent upper lateral canthal tendon dehiscence with lid tethering to the superior orbital rim led to exposure keratopathy. Upper and lower lid lamellar division enabled a permanent central tarsorraphy and advancement to the lateral orbital rim.

Conclusion:

All patients' periocular BCCs reduced in size with vismodegib. However Patient C highlights periocular trauma of tissue affected by BCC can cause complicated adnexal injuries. To optimise outcomes including globe protection, such cases should be managed by surgeons experienced in oculoplastics.

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Abstract Number: 107

Intralesional Bleomycin as a Treatment Modality for Eyelid Basal Cell Carcinomas

Author: **David Meyer** (*rapid fire presentation*)

Purpose:

A case series of inoperable eyelid basal cell carcinomas (BCC) successfully treated with intralesional bleomycin injections (IBI) is presented. Bleomycin is a glycopeptide antitumor antibiotic and antiviral drug produced by the bacterium Streptomyces verticillus and readily commercially available.

Methods:

Patients were recruited from the Oculoplastics Clinic at Tygerberg Academic Hospital¸ Cape Town¸ South Africa. In all cases conventional surgical therapy was refused or contraindicated. All patients were offered IBI as alternate therapy. The number of injections per individual was determined by the biomicroscopic tumour response. Pre and post treatment photographs were taken and informed consent was obtained. A solution containing 1 international unit bleomycin per ml saline together with 2 percent lignocaine was injected intralesionally via a multipuncture technique. The injected volume was calculated to be equivalent to the estimated volume of the lesion. Retreatment was performed on a 4-8 weekly basis until satisfactory clinical endpoints were achieved.

Results:

IBI induced significant regression with marked clinical improvement and reduction in tumor size of all eyelid BCC's treated obviating the need for further surgical intervention in most cases.

Conclusion:

Based on our experience with the drug we propose that intra lesional bleomycin could be considered as an effective treatment modality in eyelid basal cell carcinoma cases where conventional surgical intervention is not possible.

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Abstract Number: 108

Adjustable squint surgery in thyroid eye disease:10 year outcome

Author: **oral adil bekir** (*rapid fire presentation*)

Purpose:

To report outcomes of squint correction surgery in thyroid eye disease in a tertiary referral centre

Methods:

retrospective review of case notes for the adjustable squint surgery in thyroid eye disease which were performed at Gartnavel hospital(Tennents institute of ophthalmology) between years 2004 to 2014.The demographic data/type of squint/surgery performed/pre and post operative prism cover tests/and complications were assessed . Outcomes were rated according to the presence of diplopia in primary position and reading positions as excellent(none),good(no diplopia with 10 prism dioptre or less prism correction) and poor(diplopia)

Results:

27 patients were included,Inferior rectus was involved in 17 cases followed by medial rectus(5 cases) and both involved in 5 cases.In all cases the surgery for the involved muscle was done on adjustable sutures and generally all patients were under corrected by 4 to 8 prism dioptres for vertical deviation and by 0 to 6 dioiptres for horizontal deviation.In all but two patients the outcome of surgery was satisfactory to patients(17 patients had no diplopia /8 patients had no diplopia with the help of built in prism correction of 10 or less dioptres).The two patients who failed to gain fusion had more than one muscle involvement and had two or more surgeries to correct the squint.The main complication of surgery which was observed was that in case of inferior rectus recession which caused significant lower lid retraction in 7 patients,5 patient of this group ended having lower lid hard palate graft .

Conclusion:

We presented our results in managing squints in thyroid eye disease patients with satisfactory outcome in the majority of subjects who underwent surgery using adjustable sutures.

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Abstract Number: 109

Results of conjunctival caruncle biopsy

Author: **oral adil bekir** (*rapid fire presentation*)

Purpose:

To assess the results of conjunctival caruncle biopsy

Methods:

A retrospective review of caruncle lesion cases presented to a tertiary referral centre(Tennets institute of ophthalmology/Gartnave hospital/Glasgow) between 2003 to 2014.The demographic data reviewed together with clinical notes and histology reports.

Results:

Total of 77 patients reviewed. The majority of cases were white British (73 out of 77 patients)All but one case were unilateral.The mean age at presentation was 55 year(range:12 to 91 year).41 out of 77 patients were female. Right caruncle was involved in 39 cases while left side was involved in 37 cases and one case was bilateral. The clinical diagnosis (which was later on confirmed by biopsy) was correct in nearly half of cases(37 out of 78 cases).The most common lesion on caruncle excision was naevus(23 cases) followed by papilloma(15 cases),and oncocytoma(13 cases).The remainder were as follows:5 cases sebaceous gland hyperplasia,4 cases carcinoma in situ,3 cases sebaceous adenoma,3 cases of inclusion cyst, and 2 cases each for melanoma,primary acquired melanosis and lymphoma ,one case each for:choristoma/cyst of moll/granuloma/and sebaceous cyst.This makes the total numberof cases with potential malignancy or malignant cases 10 out of 78 cases.The follow up ranged from 1 month to 53 months(mean:6.4 months)

Conclusion:

This is one of the largest case series about caruncle lesions.The majority of lesions in caruncle are benign .It is recommended to excise caruncle lesion as some cases can be malignant and although in considerable number of cases the lesion can be diagnosed clinically but this is not possible in all cases and hence the importance of complete excision and histopathological assessment

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Abstract Number: 110

Secondary intention healing of periocular defects following Mohs micrographic surgery: the Cambridge experience

Author: **Sri Gore** (*rapid fire presentation*)

Purpose:

The purpose of this study is to review our experience of secondary intention healing of periocular defects resulting from tumour excision, to review the current literature and provide recommendations for best use of secondary intention healing in the periocular region.

Methods:

A retrospective study of periocular defects which were left to heal by secondary intention, following Mohs micrographic surgery (MMS) for tumour excision, in a 3 year period. The patients were identified from the MMS database. Review of case notes and pre and post-operative photographs were utilized to assess the functional and cosmetic results. Patient experience and satisfaction were assessed with a questionnaire.

Results:

26 patients (mean age 67 years; 17 females and 9 males) were included. The lower lid was the commonest location (69%) followed by the medial canthus (19%) and the upper lid (11%). 38% of defects were full thickness involving the lid margin. The mean follow-up period was 14.5 months (+/-9 months, range 6 weeks to 30 months).

2 patients developed lower lid ectropion. 1 patient required electrolysis for lanugo hairs and another developed mild canthal dystopia. 2 patients experienced mild ocular irritation during the healing phase. 4 out of 20 patients who replied to questionnaires felt self-conscious about the healing eyelid wound. All but 1 patient were satisfied with the cosmetic result of the healed eyelid.

Conclusion:

‘Laissez faire’ is a very effective alternative to reconstruction for periocular defects resulting from MMS. It is particularly helpful in anxious or debilitated patients who are unsuitable for surgery, or prefer to avoid further surgery.

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Abstract Number: 111

The corneal topography parameters in dermatochalasis and ptosis

Author: **Hatice Deniz ILHAN** (*rapid fire presentation*)

Purpose:

To compare the effects of blepharoplasty and upper eyelid ptosis and postoperative changes on corneal topography.

Methods:

Ninety eyes of fifty-two patients with dermatochalasis or ptosis underwent corneal topography before and 3 months after surgery. Corneal parameters including the central corneal thickness (CCT), keratometry values, change in astigmatism and anterior chamber parameters were studied and compared with normal aged matched control group.

Results:

The mean changes in total astigmatism of 0.53±0.14 diopter (D) after ptosis surgery and 0.23±0.05 D after blepharoplasty ($p<0.002$). However, there was no correlation between two groups in CCT changes ($p=0,9$). In addition, the mean values of anterior chamber depth (ACD) and anterior chamber volume (ACV) were found statistically different than the control group.

Conclusion:

We found a statistically significant change in astigmatism between patients with ptosis and blepharoplasty after surgery. This emphasizes the importance of upper eyelid position, especially those who may undergo any refractive surgeries effecting corneal astigmatism.

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Abstract Number: 112

Can we improve the tolerance of an ocular prosthesis by enhancing its surface finish?

Author: **Andre Litwin** (*rapid fire presentation*)

Purpose:

People who wear an ocular prosthesis often suffer with dry eye symptoms. Up to 90% will also complain of socket discharge, many of whom on a daily basis. By improving the surface finish of the prosthesis from a standard polish to a smoother, optical quality (contact lens) polish, we hope to improve wear tolerance.

Methods:

Single blind prospective randomised controlled trial. The prosthesis of participants was randomised to receive either a standard, or a smoother, optical quality polish when they attended. A questionnaire covering cleaning, lubricant use, inflammation, comfort and discharge was completed by the patient at entry to the trial, at 1 month and at 12 months. Lower scores related to a better-tolerated prosthesis. At each visit, the prosthesis was stained and photographed against a standardised background to assess deposit build up. Photographs were anonymised and used to explore the association of deposit build up to socket discharge and dry eye symptoms.

Results:

41 patients took part in the study. The median age of the prosthesis was 3 years (range 0-16 years). There was no statistically significant difference in questionnaire score between the two groups at baseline (9.05 v 9.80) or at 1 month (10.30 v 10.65). Although 12-month follow-up is not yet complete, patients treated with the new optical quality polish, appear to have benefited (2.52 v 3.74). Subjective scoring of benefit by participants seems to concur with this finding (average 2.19 v 1.50 – higher scores better).

Conclusion:

Optical quality finish to an ocular prosthesis appears to be a relatively simple and readily available means of improving patient tolerance and reducing deposit build up.

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Abstract Number: 113

Long term outcomes in military patients following eye removal for war injuries

Author: **Tahir Farooq** (*rapid fire presentation*)

Purpose:

To report injury patterns, treatment and outcomes in military patients who underwent evisceration or enucleation for war injuries.

Methods:

Retrospective case note review of military patients who underwent evisceration/enucleation for war injuries at University Hospital Birmingham or the Birmingham Midland Eye Centre between 2007 and 2012. Variables recorded include mechanism of injury, facial injuries, time to surgery, procedure, complications, and final outcomes.

Results:

16 operations were identified from 15 patients who were all male. Mean age was 24 (range 19-29). Improvised Explosive Devices were the cause of injury in 13 (86.7%) patients. Ocular evisceration was performed in 12 eyes (75%) and enucleation in 4 (25%) (bilateral in one case). Orbital wall fractures were seen in 7 (58.3%) eviscerated patients and 4 (100%) enucleations. 4 (33.3%) eviscerations were primary at a mean of 1.2 days post injury (range 0-3) compared to 3 (75%) primary enucleations at 0.5 days (range 0-1). Secondary eviscerations occurred at a mean of 22 days (range 5-40) and one secondary enucleation at 39 days. Complications post evisceration included 1 implant extrusion, 2 post traumatic pain syndromes, 1 conjunctival implantation cyst and 1 mucopurulent discharge. No complications were recorded post enucleation, and no cases of sympathetic uveitis were reported.

Conclusion:

War injuries resulting in evisceration/enucleation were primarily caused by explosive trauma and were associated with significant facial injuries. Enucleated patients tended to have suffered orbital wall fractures, but unlike previous publications the majority of procedures carried out were eviscerations. Complications were uncommon but seen more post evisceration.

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Abstract Number: 114

Optical Coherence Tomography imaging of the proximal lacrimal system

Author: **James Wawrzynski** (*rapid fire presentation*)

Purpose:

There are currently no routinely used imaging modalities for the proximal lacrimal system. Optical Coherence Tomography (OCT) is a safe and non-invasive method of high resolution cross-sectional imaging of tissue microstructures using infra-red radiation. In this study we investigate whether OCT may be used to image the punctum and proximal canaliculus.

Methods:

A cohort of healthy asymptomatic subjects with normal ocular anatomy were invited to enrol. Spectral OCT images of the lower punctae were captured with a Topcon 3D Optical Coherence Tomography 2000 machine and the higher resolution Heidelberg Spectralis OCT machine. Measurements were made of the maximal punctal diameter, canalicular diameter and canalicular depth. Our data for depth of the vertical canaliculus was compared to the widely quoted figure of 2mm using a two-tailed t test to check for a statistically significant difference at $p<0.05$.

Results:

Thirty-six punctae of eighteen subjects were scanned using the Topcon machine. The punctum was recognisable on the OCT image in all cases. The mean depth, width and cross sectional area of the visualised canaliculi were 0.753mm (sd 0.216), 0.110mm (sd 0.067) and 9.49 x 10-3 mm2 respectively. The mean width of the punctum was 0.247mm (sd 0.078). Data from the Heidelberg machine are being analysed at the time of submission.

Conclusion:

We have demonstrated the first in-vivo high resolution images of normal punctal and vertical canalicular anatomy using spectral OCT. There is currently no other practical way to accurately image punctal and proximal canalicular morphology in vivo. OCT is a convenient and readily available tool in most eye clinics with resolution ideally suited for imaging of the punctum and proximal canaliculus.

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Abstract Number: 115

Incidence of Anophthalmia, Microphthalmia, Congenital Malformations of Orbit and Ocular Adnexa in England (1990 – 2011)

Author: **Aruna Dharmasena** (*rapid fire presentation*)

Purpose:

To examine the time trends in the incidence in congenital anophthalmia, microphthalmia, congenital malformations of orbit and agenesis of lacrimal apparatus in England over the past two decades.

Methods:

Children born with anophthalmia and microphthalmia from 1990 to 2011 in England were identified using linked hospital episode statistics (HES). Data for congenital malformations of orbit and agenesis of lacrimal apparatus were only available from 1998 onwards. Using the record-linked datasets the number of hospital admissions and the annual incidence of each malformation were calculated. English national population denominators were obtained from the Office for National Statistics for each calendar year. Age-standardisation in the study of trends over time was undertaken using the direct method and the European standard population.

Results:

Episode-based and person-based ‘first-ever’ rates of both anophthalmia and congenital malformations of orbit and agenesis of lacrimal apparatus showed no systematic increase or decrease over time. In contrast, rates of microphthalmia showed a subtle upward trend. In 2011, the English national incidence of anophthalmia, microphthalmia, congenital malformations of orbit and agenesis of lacrimal apparatus were 0.59 (95% CI, 0.01–1.17), 9.42 (7.12–11.73) and 0.74 (0.09–1.38) per 100 000 respectively.

Conclusion:

National incidence of hospital/outpatient admissions related to anophthalmia, congenital malformations of orbit and agenesis of lacrimal apparatus showed no systematic rise or fall during the study period. In contrast, the national incidence of microphthalmia showed only a subtle upward trend from 1990 – 2011.

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Abstract Number: 116

Radiological findings after dermis fat-graft in congenital anophthalmia

Author: **alessandra modugno** (*rapid fire presentation*)

Purpose:

To evaluate, by a prospective multicentre study, radiological findings on the socket rehabilitation strategies in congenital anophthalmia with early fitting with custom-made conformer(CMC) and prosthesis followed by early dermis fat graft.

Methods:

21 patients with congenital anophthalmia (23 orbits) have been treated with custom-made conformer and early dermis fat graft. MRI orbit were performed in all patients before and after surgery.

Results:

All orbit have increased in size after fitting with custom-made conformer. Postoperative MRI demonstrates the difference in size and shape of the prosthesis before and after surgery, and the increasing lining of socket surface and the deepening of the fornix.

Conclusion:

The anophthalmic socket presents volume deficit and shallow fornix. In this presentation the authors will show how to perform a rehabilitation therapy by the combination of early custom-made conformers and surgical treatment with dermis fat graft. This procedure is a safe and useful therapeutic approach that increases fornix and reduces socket volume deficit and permits to fit a thinnest and progressively wider prosthesis.

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Oral presentations on Friday

Abstract Number:201

Skin fibroblasts isolated from the upper eyelid and sternum differ in their matrix contraction potential and their response to inflammatory cytokines.

Author: **Jonathan Roos** (*rapid fire presentation*)

Purpose:

Pre-sternal skin shows a greater hypertrophic scar potential compared with eyelid skin. Such differences have been attributed to regional variations in skin tension, thickness and Langer’s lines. Fibroblasts are the main cell implicated in scarring, and are known to vary in their expression, differentiation and intercellular interactions.by anatomical site. We investigated whether differences in skin fibroblasts might contribute to the observed discrepancies in clinical scarring.

Methods:

Primary in vitro cultures were established using matched eyelid and pre-sternal skin from three healthy donors undergoing blepharoplasty surgery. We used an in vitro collagen gel model of fibroblast-mediated tissue contraction to compare the properties of the dermal fibroblasts from each site. Cell contractile force and matrix stiffness were assessed in three-dimensional tissue constructs using an automated high-throughput device.

Results:

Dermal fibroblasts isolated from eyelid and sternum differ both in their ability to contract a gel matrix, and in their response to cytokine stimulation: despite having lower contractile force ($p<0.01$) and resting stiffness ($p<0.02$), the pre-sternal cells were both more contractile ($p<0.001$) and more responsive to stimulation with the cytokines

TGFb ($p<0.01$) and IL-1b ($p<0.05$).

Conclusion:

The propensity to cutaneous scarring may, at least in part, result from intrinsic differences in the local fibroblasts' ability to contract and their sensitivity to inflammatory cytokines. Improved understanding of the underlying molecular pathways should prove useful in identifying new therapeutic targets for altering surgical and other scarring.

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Abstract Number: 202

Experimental model of eyelid margin lesions and their effect on visual field

Author: **Andre Grixti** (*rapid fire presentation*)

Purpose:

To investigate effect of lid margin lesions on patients' visual field

Methods:

Experimental model of upper eyelid margin lesions have been created by suspending sewing beads of different sizes (4mm, 7mm and 10mm in diameter) from the upper lids of healthy volunteers and performing Humphrey visual fields with 24-2, 30-2 and 60-4 protocols.

Results:

The bead with the smallest diameter (4mm) did not result in a detectable visual field defect on 24-2 and 30-2 protocols. There was a suggestion of the detectable field defect due to the bead on 60-4 protocol, but it was difficult to separate from the defect arising due to the presence of nose. Beads with medium (7mm) and large diameter (10mm) produced mild and moderate superior visual fields defects respectively.

Conclusion:

Only very large and very central upper eyelid margin lesions are likely to result in clinically detectable visual field deficit. Thus decision whether to excise such a lesion should be based on parameters other than visual fields, such as presence of irritation, change in appearance or patient's awareness of the lesion.

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Abstract Number: 203

Transdermal Nano-enabled Anaesthetics for Eyelid Surgery

Author: **Krisztina Emeriewen** (*rapid fire presentation*)

Purpose:

Local anesthetic injections for eyelid surgery have inherent risks, including lid swelling, that may distort the tissues or obscure surgical landmarks. In this work we explore the feasibility of nano-enabled delivery systems loaded with local anaesthetics as a non-invasive alternative for anaesthesia.

Methods:

Self-nanoemulsifying drug delivery systems (SN) [Capryol 90:Transcutol:Labrasol; 1:3:6 w/w], polymeric micelles (PM) prepared from Soluplus and solid lipid nanoparticles (SLN) [Tripalmitin: Soya lecithin: Labrasol : polysorbate 20: water; 3.33:1:40:1:4.67 w/w] were used. These were optimised and characterised for lidocaine loading

(HPLC), particle size and colloidal stability (PCS), and morphology (TEM). In vitro skin permeation of lidocaine was performed using modified individually calibrated Franz diffusion cells across human eyelid skin. The cells displayed an approximate diffusional area of 0.07cm2 and receiver volume of 2mL (acetate buffer, pH 6).

Results:

SN illustrated an extremely high lidocaine loading (750 ± 22 mgmL-1) compared to PM (13.4 ± 0.6 mgmL-1) and SLN (2.8 ±0.5 mg mL-1). All nanoparticulate formulations possessed a particle size below 200nm, zeta potential in excess of -15mV illustrating acceptable colloidal stability and spherical or quasispherical morphology. Only SN illustrated superior steady state flux (381 ± 61 µg/cm2/hr) across eyelid skin compared to EMLA cream (Lidocaine 45 ±16 µg/cm2/hr).

Conclusion:

This is the first study to support non-invasive nano-enabled delivery of local anaesthetics as an alternative to subcutaneous injections. Lidocaine-SNs have shown the highest flux across eyelid skin and as they are prepared from FDA GRAS excipients, that can be translated safely into a non-invasive anaesthetic SN-gel.

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Abstract Number:204

The single-stage frontalis flip-flap; a novel technique for the closure of large upper eyelid defects

Author: **Jonathan Norris** (*rapid fire presentation*)

Purpose:

We describe a novel method of reconstructing total full thickness upper eyelid defects using a one-stage technique with the use of a frontalis muscle flap.

Methods:

A 77 year old male was referred to the Oxford Eye Hospital with a 25x20mm ulcerative lesion of the left upper eyelid. The incision biopsy confirmed an invasive, moderately-to-well differentiated SCC. A wide local excision incorporating the entire eyelid, sub-brow tissue and both medial and lateral canthi was performed. Following confirmation of clear margins a single-stage reconstruction was performed. A 7x4cm frontalis flap (FF) was fashioned via a superior forehead stab incision. The FF was dissected from the subcutaneous tissue and periosteum and reflected inferiorly. The frontal branch of the facial nerve was preserved to allow the flap to contract when raising the brow potentially allowing upper eyelid movement. Free tarsal and buccal mucosal grafts were sutured to the posterior surface of the FF to reconstruct the posterior lamellae. The anterior lamellae was reconstructed using a full thickness skin graft quilted to the FF.

Results:

7 months post-surgery subtle movement of the eyelid was seen on raising the ipsilateral brow, the ocular surface was maintained and VA was 6/9. A left canthotomy was required to release a small lateral canthal web.

Conclusion:

The frontalis flip-flap is a novel method for reconstructing extensive upper eyelid defects conferring several advantages:(i)preserving paramedian forehead tissue for further surgery in the event of tumour recurrence,(ii) minimising significant further facial scars,(iii)maintaining the ocular surface and vision and (iv) allowing subtle movement of the upper eyelid postoperatively.

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Abstract Number:205

Clinical Outcomes of Ruptured Periorbital and Orbital Dermoid Cysts

Author: **We Fong Siah** (*rapid fire presentation*)

Purpose:

To study clinical outcomes of ruptured dermoid cysts.

Methods:

A multi-centre, retrospective review of 76 cases of periorbital and orbital dermoid cysts that showed evidence of rupture histologically. Clinical presentation and outcomes were recorded.

Results:

Median age was 5.5 years (range 1–63). Location of cyst was either periorbital (n=53, 69.7%) or orbital (n=23, 30.3%). Two (2.6%) cysts were ruptured at presentation and 27 (35.5%) ruptured during surgical excision. There was no documentation of a clinically-apparent cyst rupture for the remaining 47 cases (61.8%). Overall, there were only 2 cases (2.6%) with persistent inflammation (>3 months); {Case 1: Ruptured cyst at presentation that developed persistent inflammation postop due to incomplete excision requiring further excision of the cyst remnant from the attached bone. Case 2: Orbital dermoid ruptured during early dissection with resultant persistent inflammation and was managed conservatively.} We found a 3.7% (1/27) incidence of persistent inflammation in surgically-ruptured cysts. All 6 cases (7.9%) of cysts with bony attachment in this series were associated with a clinically-apparent rupture (rupture at presentation, n=1; surgical rupture, n=5). Older age (Kruskal-Wallis, p = 0.032) and bony attachment (Fisher Exact's Test, p = 0.002) were significant factors for cyst rupture while there was no influence from cyst location (p = 0.17).

Conclusion:

This data confirms the low likelihood of ongoing inflammation in cases of cyst rupture during surgical excision. In contrast, ruptured cysts at presentation were associated with persistence of inflammation. Those with a clinically-apparent rupture were more likely to be of older age and had a cyst with bony attachment.

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Abstract Number:206

Use of ETO Sterilized X-ray Film Vs Autologous implants in preventing Adherence syndromes following Titanium mesh implants for Orbital blow out fractures-a prospective study

Author: **senthil nathan** (*rapid fire presentation*)

Purpose:

To study the efficacy of ETO sterilized X-ray film Vs various autologous grafts which were placed as an overlay over titanium mesh implant in preventing the incidence of adherence syndromes following blowout fracture repairs using titanium mesh implants

Methods:

10 patients who had large blowout fractures of the floor of the orbit which required placement of titanium mesh implants with screw fixation were chosen for the study. ETO sterilized X-ray film was placed over the titanium mesh to prevent direct tissue contact of the titanium mesh with the orbital tissues in 5 patients,rib graft was placed as an overlay in 3 patients,iliac crest bone and auricular cartilage graft was placed in 2 patients.

Results:

ETO sterilized X-ray film was found to be well tolerated,inert ,easy to use and highly cost/ time effective and successful in preventing adherence syndromes associated with the use of titanium implants in blowout fracture repairs of the orbit. One patient had implant displacement with the use of rib cartilage which required surgical removal and another developed orbital cellulitis which required Fess drainage.

Conclusion:

ETO sterilized X-ray film can be placed over the titanium implant which prevents the occurrence of Adherence syndromes following the use of titanium mesh in treating blowout fractures of the orbit. X-ray film is inert,easily available,cheap and bio compatible and can be used as an overlay implant.Other autologous grafts offer no significant advantages and are associated with significant donor site morbidity and implant related complications.

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Abstract Number: 207

Orbital emphysema as complication of Vitreo-Retinal Surgery. case series

Author: **Jose-Luis Tovilla** (*rapid fire presentation*)

Purpose:

To describe a series of patients who developed severe orbital emphysema after a vitreo-retinal surgery .

Methods:

This is a multiinstitutional review of 4 patients, that were referred to our institutions with a clinical and tomographic findings of orbital emphysema after a vitreo-retinal surgery. All of these cases had a different clinical course and a different final outcome.

Results:

In the 4 cases presented in this paper, visual acuity was severely affected, with restricted ductions. CT demonstrated the presence of air within the superficial and deep orbital tissues. Treatment options included use of IV antibiotics, and decongestants with a successful outcome in three patients. One patient, required multiple procedures to decompress the orbit and showed a mild improvement after hyperbaric oxygen therapy without visual acuity recovery.

Conclusion:

We believe that the orbital emphysema in our 4 patients after a vitreoretinal procedure associated to air tamponade, probably happened due to a small intraoperative scleral puncture that lead to leakage of the intraocular gas into the orbital cavity, as this is not the normal behavior of C3-F8 gas used in the vitreous cavity. Behavior of gases in the eye, might depend on the concentration, type of gas used and also with the altitude of the city where patients live.
To the best of our knowledge this is the first case series of patients with orbital emphysema secondary to a vitreo-retinal procedure.

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Abstract Number: 208

A Novel CT based Technique for the Calculation of Bony Orbital Volume

Author: **shoaib ugradar** (*rapid fire presentation*)

Purpose:

We propose a novel CT based technique that allows the accurate calculation of bony orbital volume. At present, there is no consensus on the calculation of bony orbital volume using CT scans

Methods:

The authors calculated the orbital volumes of 10 patients using FDA approved software utilising a manual segmentation technique. To date, this technique has not been used for this purpose. Two observers independently calculated the bony orbital volume for all orbits. Both observers calculated the volume of all orbits twice. Data collection allowed the calculation of intra-observer and inter-observer variability.

Results:

The mean normal orbital volume for left and right orbits was 15.8 ± 1.68 ml and 15.7 ± 1.9 ml in male and 14.0 ± 2.01 ml and 14.2 ± 1.5 ml in female subjects. The inter-observer variability was <1.2% whilst the intra-observer variability was <0.8% for measured orbits.

Conclusion:

Using this high end software, our technique for bony orbital volume calculation is a simple and reliable tool. The low intra-observer variability reflects the simplicity of our protocol and makes the technique accessible to non radiologists.

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Abstract Number:209

Noninvasive classification of orbital tissue pathology based on texture analysis parameters from magnetic resonance images

Author: **sreedhar jyothi** (*rapid fire presentation*)

Purpose:

To demonstrate a proof of concept that quantitative texture analysis (TA) of magnetic resonance imaging (MRI) can be used to differentiate a variety of orbital disease processes as a reference standard. This is an innovative use of existing technology in the imaging and analysis of orbital disease

Methods:

We used the MaZda texture analysis software program ver 4.6 to perform quantitative texture analysis of magnetic resonance images of a variety of orbital pathology. The texture parameters of MRI scans analyzed were: Histogram, Co-occurrence matrix, Run length matrix, Gradient, Auto regression and wavelet energy. A number of histologically confirmed disease processes generate not only characteristic histogram specific for each pathology but can be quantified using these parameters

Results:

We retrospectively analyzed MRI scans of 50 cases of histologically proven variety of orbital pathologies. The MaZda quantitative texture analysis software produces characteristic histograms and different texture parameters for orbital pathologies. Intra lesion variability is insignificant (p=0.27). ANOVA with kruskal-Wallis test has shown significant differences in texture parameters (p=0.03), with Co-occurence matrix being most sensitive parameter of texture analysis

Conclusion:

This study shows proof of concept that non-invasive quantitative and qualitative classification of orbital pathology is possible by applying histogram and TA of MRI scans. Further studies are needed to produce a larger reference frame of texture parameters in histologically confirmed disease and to gain meaningful values for the sensitivity and specificity of these techniques in different orbital pathologies

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Abstract Number:210

The Enlarged Extraocular Muscle: To Relax, Reflect or Refer?

Author: **Fariha Shafi** (*rapid fire presentation*)

Purpose:

Extraocular muscle enlargement (EOME) is most commonly associated with thyroid eye disease. We report our outcomes of investigating and managing non-thyroid related EOME (NTR-EOME).

Methods:

Retrospective case series of patients with NTR-EOME identified by clinical features and orbital imaging. Patient demographics, radiological features, adjuvant tests and final diagnosis recorded.

Results:

13 patients diagnosed with NTR-EOME from 2007-2015. Mean age at presentation 65 yrs. Mean follow-up 3.2 yrs All cases were associated with underlying systemic neoplasia (5 lymphoma, 5 metastatic cancer, 3 presumed paraneoplastic syndrome). All patients had orbital imaging followed by full body CT (FBCT). Positive systemic radiological findings found in 77%. Of the 3 patients with negative FBCT, 1 had full body positron emission tomography-CT (FBPET-CT), 1 orbital biopsy and 1 octreotide scan for known carcinoid. Of the 10 patients with positive FBCT, 3 underwent FBPET-CT (2 staging of disease and 1 monitoring). Primary muscle involved was superior rectus (SR) (54%) followed by lateral rectus (LR) (23.1%) and inferior rectus (IR) (15%). All cases of presumed paraneoplastic syndrome had SR enlargement (100%). The remaining cases with systemic malignancy had more diverse muscle involvement although majority still involved SR (50%). 4 patients (31%) died from disseminated systemic malignancy.

Conclusion:

All cases of NTR-EOME should raise suspicion for systemic neoplasia, especially when SR involved. In the majority of cases FBCT helps to identify primary systemic cause. FBPET-CT is best reserved when FBCT is negative or for staging and monitoring disease. NTR-EOME can be associated with significant mortality hence warrants prompt and thorough investigation.

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Abstract Number:211

Surgical Management of Temple-related Problems Following Lateral Wall Rim-sparing Orbital Decompression for Thyroid-associated Orbitopathy

Author: **We Fong Siah** (*rapid fire presentation*)

Purpose:

To report a series of patients requesting treatment for temple-related problems following lateral wall rim-sparing orbital decompression for thyroid-associated orbitopathy and to discuss the surgical management.

Methods:

A case series of 6 patients (5F:1M, n=11 orbits) with persistent, troublesome temple-related problems of at least 3 years duration that required further corrective surgery.

Results:

Median age was 57 years (range 23-65). Temple-related problems consist of bothersome temple hollowness (n=11), masticatory oscillopsia (n=8), temple tenderness (n=4) and a “clicking” sensation (n=4). Preoperative imaging studies showed the absence of deep lateral wall in all 11 orbits and evidence of prolapse of lacrimal gland into the wall defect in 4 orbits accounting for tenderness. Surgical approaches included the repair of lateral wall defect with MEDPOR implant, medial wall and intra-/extra-conal fat decompressions. Autologous fat transfer or dermal filler was used to improve temporal hollowness. Postoperatively, there was full resolution of symptoms of masticatory oscillation, temple tenderness, “clicking” sensation and a marked improvement in temple hollowness. Two patients developed new onset diplopia necessitating strabismus surgery.

Conclusion:

Persistent, troublesome temple-related problems following lateral wall rim-sparing orbital decompression are rare but can be surgically corrected. Reconstructive surgery to repair the lateral wall defect and/or other approaches such as balanced medial wall and intra-/extra-conal fat decompressions may mitigate the issue.

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Abstract Number:212

Anterior approach white line advancement: a hybrid technique for ptosis correction

Author: **Suresh Sagili** (*rapid fire presentation*)

Purpose:

To describe a modified technique of anterior approach white line advancement for correction of ptosis.

Methods:

Retrospective review of a consecutive series of 15 patients (20 eyelids) with primary aponeurotic ptosis that underwent anterior approach white line advancement under local anaesthesia. This surgical procedure involves exposing the posterior surface of the levator muscle aponeurosis (white line) through an incision on the upper eyelid skin crease (anterior approach). The levator muscle aponeurosis(white line) is then advanced, using a suture passed through its posterior surface (partial-thickness), to superior border of tarsal plate.
Data collected included margin reflex distance (MRD), symmetry of eyelid height, contour and complications. Surgery was considered successful if the following three criteria were simultaneously met: A postoperative MRD of ≥2 mm and ≤4.5 mm, inter-eyelid height asymmetry of ≤1 mm, and satisfactory eyelid contour.

Results:

Fifteen patients (20 eyelids) were included in this study. Mean age was 68 years (36 to 80 years). Mean post operative follow up was 2 months (1 to 6 months). Mean levator function was 14 mm (8-15mm). Mean preoperative MRD was 1 mm (0 to 2mm) and the mean postoperative MRD was 3.5 mm (3 to 4mm). Fourteen patients (93%) achieved the desired eyelid height and fulfilled our criteria set for success.

Conclusion:

Anterior approach white line advancement achieves good results with minimal disruption of upper eyelid anatomy. This hybrid technique combines the principles of anterior and posterior approach ptosis correction techniques to achieve better results.

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Abstract Number:213

Upper lid ptosis surgery – what is the optimal interval for the postoperative review?

Author: **Anjana Haridas** (*rapid fire presentation*)

Purpose:

To determine the complication rate of ptosis surgery as a guide for the optimal time for first post-operative review.

Methods:

Retrospective review of cases following ptosis (levator) surgery in adults at Moorfields Eye Hospital, with attention to the timing of ocular surface complications.

Results:

106 operations were performed in 84 patients (mean age, 59 years). An anterior approach was performed in 96%, the remainder undergoing a posterior approach. 50% of procedures were performed by a fellow, 42% by a consultant.

40% of patients were reviewed at 1 week; the remaining at 2, 3 or 4 weeks with decreasing frequency. 10/106 eyes (9%) had a minor complication which resolved with simple medical measures. 6 of these were detected at the 1 week visit. 7 of 10 eyes with minor complications had an underlying risk factor. 1 patient (congenital ptosis) presented to casualty at 5 days with exposure keratopathy and required urgent lid lowering. No patients reviewed at one week re-attended the casualty department with significant complication(s) in the subsequent weeks. Finally, in patients reviewed at 2, 3 or 4 weeks no complications were encountered which would have warranted earlier intervention.

Conclusion:

The frequency of ocular surface complications following ptosis surgery is low at our institution. Those patients without risk factors for ocular surface exposure (previous lid surgery, congenital levator dystrophy etc) can safely be reviewed 2-3 weeks after surgery, with earlier follow-up being reserved for patients with preoperative risk factors.

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Abstract Number:214

Conjunctivalisation of the lid margins as a cause of sore eyes in the elderly patient

Author: **John BEARE** (*rapid fire presentation*)

Purpose:

To look at the incidence of conjunctivalisation of the lid margins in different age groups. This finding is very common in elderly patients.

Methods:

100 patients of various ages were examined for evidence of lid margin conjunctivalisation. Representative photographs were taken to illustrate the changes in selected patients.

Results:

Conjunctivalisation of the lid margins was almost universal in patients over the age of 80.

Conclusion:

We feel that conjunctivalisation of the lid margins is a common contributory factor to the itching, watering, red lid margined "rheumy" eyes of the elderly.

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Abstract Number:215

Patient satisfaction and outcomes following direct brow lift for brow ptosis

Author: **David Curragh** (*rapid fire presentation*)

Purpose:

To establish efficacy of the procedure and patient satisfaction with their outcome following direct brow lift including complications.

Methods:

All patients under the care of a single surgeon were identified and invited to participate with a telephone based questionnaire to establish satisfaction and complications.

Results:

There were 54 operations performed and a response rate to the questionnaire of 80% was achieved. 70% of patients rated their surgery as a success and were completely satisfied with the outcome. There was an improvement in pre-operatively described symptoms and an improvement in quality of life measures. 26% of patients reported significant scarring and 37% reported significant numbness at a mean follow-up time of 24 months.

Conclusion:

Direct brow lif is successful in correcting brow ptosis with a high degree of satisfaction with patients reporting a complete satisfaction rate of 70%. Rates of forehead scarring and numbness are high post-operatively and surgical technique has been modified as a result. The importance of patient selection and counselling regarding these risks has also been highlighted.

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Abstract Number:216

Prospective, randomised, masked, comparison of Dacryocystorhinostomy (DCR) surgery under general anaesthesia versus general anaesthesia plus local anaesthetic.

Author: **Richard Scawn** (*rapid fire presentation*)

Purpose:

External DCR surgery in our tertiary care, teaching institution is commonly performed under general anaesthesia (GA) and additional local anaesthetic (LA) not routinely administered to all patients. Anecdotally we have observed that adding LA may be associated with less intravenous GA medication requirement, faster recovery and less pain. Primary purpose: Quantity of intravenous propofol and remifentanil required to maintain GA with and without additional LA.
Secondary purpose: Post op pain, time to extubation

Methods:

Prospective, randomised, single masked, study in patients undergoing external DCR surgery. Patients randomised to either:
A) GA alone, B) GA with Bupivacaine + adrenaline, infiltration peri-sac prior to skin incision. The anaesthetist was masked to LA status. General anaesthesia maintained via profopol and remifentanil infusion titrated to specific physiological parameters.

Results:

23 patients (11 Group A, 12 Group B).
Patient age, weight and surgical time similar in each group.
In Group B the mean Remifentanil required: 99 mcg/kg versus 259 mcg/kg in group A. p=0.0001.
In Group B the mean Propofol required: 89 mcg/kg versus 125 mcg/kg in group A. p=0.0007.
Time to extubation was almost twice as fast in the patients receiving LA. p= 0.0008.

Conclusion:

In patients undergoing DCR surgery under GA, LA administered prior to skin incision appears to profoundly reduce the amount of GA agents required, patients wake faster and experience less pain. We recommend LA is given at the start of DCR under GA, not omitted or delayed until the end of the procedure. This study likely has implications across oculoplastics and ophthalmology.

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Abstract Number:217

Primary Endoscopic Lester Jones' Lacrimal Canalicular Bypass Tubes: 10 Years' Experience in Leicester.

Author: **Glenn Ace Fenech** (*rapid fire presentation*)

Purpose:

To analyse the long-term outcome of patients having a Lester Jones tube insertion for canalicular obstruction.

Methods:

Retrospective review of available clinical notes in 37 patients (49 eyes) who have undergone a Lester Jones tube insertion for canalicular obstruction between 2005 and 2014. Data collected included aetiology of lacrimal obstruction, encircling fixation procedure, post-operative complications, ongoing symptoms and follow-up.

Results:

Primary endoscopic Lester Jones tube insertion was performed in 96% of eyes using 5-0 vicryl as an encircling fixation technique. The main causes of canalicular obstruction were, previous failed DCR (40.8%), idiopathic canalicular stenosis (22.4%), chemotherapy (12.2%) and medial canthal tumour excision/trauma (12.2%).

55% of eyes developed complications at a mean of 3.2 months. 75% of these were malposition or extrusion of the tube; the other 25% were blocked tubes that couldn't be cleared in clinic.

53.1% of eyes had at least one repositioning/reinsertion of tube. 18.4% of eyes had at least two repositioning/reinsertions, whilst 6.1% of eyes had three repositioning/reinsertions of tube.

50% of eyes with previous failed DCR, 36% of those with idiopathic canalicular stenosis, and 100% of those with previous medial canthal tumour excision/trauma required tube revision.

6 eyes developed a conjunctival granuloma that required excision. 3 patients declined a reinsertion of tube.

Conclusion:

This report shows that 55% of primary endoscopic Lester Jones tube insertions develop tube related complications at a mean time of 3.2 months, 75% of these being malposition or extrusions. 93.5% of patients have complete resolution or significantly improved epiphora.

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Abstract Number:218

Outcome of balloon dacryoplasty in acquired functional ephiphora in adults using OphtaCath lacrimal stent

Author: **marion sikuade** (*rapid fire presentation*)

Purpose:

We present our experience of treating 6 eyes with acquired functional ephiphora with endoscopically assisted balloon dacryoplasty.

Methods:

Patients with functional ephiphora (normal ocular and complete patency of the nasolacrimal system on syringing) were included in this study. The presence of functional epiphora was confirmed by dye hold up on dacryoscintilligraphy. Patients underwent balloon dacryoplasty with the Opthacath lacrimal balloon catheter under endoscopic visualization. When the anatomy was favourable, the nasolacrimal system was temporarily intubated with a silicone stent.

Results:

6 eyes of 5 patients were treated. At one month 83% reported significant symptomatic improvement. At 6 months follow-up 80% continued to report significant symptom reduction and 20% had reoccurrence of symptoms. At 9 months, 40% continued to report significant symptom, 20% had reoccurrence and 40% had full resolution of symptoms.

Conclusion:

Acquired functional ephiphora in adults can be successfully treated with balloon dacryoplasty. 80% of our study group reported significant or complete symptom resolution 9 months post-operatively.

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Abstract Number:219

Transcanalicular Laser-assisted dacryocystorhinostomy with endonasal augmentation in primary nasolacrimal duct obstruction : Our Experience

Author: **Smriti Nagpal** (*rapid fire presentation*)

Purpose:

To evaluate and compare the success rate of Transcanalicular laser-assisted DCR (TLA-DCR) with endonasal augmentation, with and without intubation at 5 months, in patients suffering from primary NLD obstruction

Methods:

A prospective, randomised interventional pilot study was conducted, comprising of 40 adult patients with primary acquired NLD obstruction (PANDO) divided randomly into 2 equal groups (with and without bicanalicular intubation).An osteotomy was first created using 980nm diode laser (set at 8W continuous mode) transcanalicularly and then enlarged intranasally using Blakesley’s nasal forceps, followed by bicanalicular silicon

intubation in group B patients. The patients were followed-up for a total period of 5 months. The tubes were removed at the end of 8 weeks and the ostium size was assessed endoscopically after tube removal and again at the end of follow-up.A successful outcome was defined in terms of both subjective and objective parameters i.e. relief of symptoms and ostium patency on syringing and endoscopic assessment. Results were analyzed at the end of a follow up of 5 months, using the Fisher's Exact test ($p<0.05$)

Results:

The mean age of the patients was 35.3±15.89 years, with 9 male and 31 female patients, the 2 groups having a similar male: female ratio. An overall success rate of 87.5% was achieved at the end of 5months with no statistically significant difference between the two groups. Postoperative complications like tube displacement and punctal injury were more in the intubated group

Conclusion:

TCLA-DCR is an effective, scarless, daycare procedure, for treatment of PANDO with no additional advantage offered by silicone intubation

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Abstract Number:220

Probing with or without endoscopy

Author: **Tina Khanam** (*rapid fire presentation*)

Purpose:

To compare the results of probing with and without endoscopy in cases of congenital nasolacrimal duct obstruction without prior probing.

Methods:

This was a retrospective analysis on 2 non-randomized cohorts, 30 probing in the conventional method (group 1) and 30 with endoscope (group 2), between January 2008 and January 2013. Both groups were similar in age and had no previous surgery. The age of the patients studied ranged between 7 and 28 months in the first group and between 8 and 31 months in the second group.

Results:

The procedure was successful in 70% of the conventional probing group and in 96% in the endoscopy-probing group. In group 1, 20% of patients and in group 2, 18% of patients had tight inferior turbinate. Some anomaly was observed in 40% of patients undergoing endoscopy.

Conclusion:

In our study, 96% of eyes had complete resolution of symptoms with endoscopy compared to 70% without endoscopy. Therefore, avoiding further surgeries with general anaesthesia or use of other equipment or techniques. Nasal endoscopy has the added advantage of direct intraoperative visualisation, understanding and management of congenital nasolacrimal duct obstruction. It is the only method that confirms the correct anatomic position of the catheterisation instantly, thereby reducing the rate of false passage creation.

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Abstract Number:221

Congenital nasolacrimal duct obstruction: exploring a definitive approach to management

Author: **Maria Napier** (*rapid fire presentation*)

Purpose:

Congenital nasolacrimal duct obstruction (CNLDO) is reported to affect up to 20% of infants and as such is the most common paediatric ophthalmic condition. Conflicting reports remain in the literature regarding a definitive approach to the management. We sought to clarify the most appropriate treatment regimen.

Methods:

A retrospective observational analysis was performed of patients undergoing probing +/- intubation to treat CNLDO in a single institution (Royal Victoria Hospital, Belfast) from 2006-2011.

Results:

Based on exclusion criteria, 246 eyes of 177 patients (aged 0-9.8 years with a mean age of 2.1 years) were included in this study: 187 (76%) eyes had successful outcome at first intervention with primary probing while 56 (23%) eyes underwent secondary intervention. There were no significant differences by gender, age or obstruction complexity between the successful and unsuccessful patients with first intervention. For those patients requiring secondary intervention, 16/24 (67%) eyes had successful probing while 22/24 (92%) had successful intubation. Patients with intubation as a secondary procedure were significantly more likely to have a successful outcome (P=0.037). Statistical analysis was performed using the Fisher's exact test and Barnard's exact test.

Conclusion:

Primary probing for CNLDO has a high success rate which is not adversely affected by increasing age. Our study also indicates that if initial probing is unsuccessful then nasolacrimal intubation rather than repeat probing yields a significantly higher success rate.

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Abstract Number:222

External Lacrimal Drainage Surgery in Young Children: Indications, Outcomes & Complications

Author: **vijay wagh** (*rapid fire presentation*)

Purpose:

To review safety and efficacy of external dacryocystorhinostomy (DCR) in children under the age of two years.

Methods:

Case notes of patients who underwent external DCR were reviewed and a prospective telephone survey was undertaken.

Results:

Between 1999 and 2013, 28 patients (19 male; 68%) underwent external DCR at under 2 years of age (median age 18.5 months, range 5-23 months). All children had at least one probing prior to DCR, and 5 (18%) had at least 2 probings before presenting to our Unit. Indications for surgery included recurrent dacryocystitis (8), lacrimal sac mucocoele (14), and uncomplicated persistent epiphora (6). Silicone intubation was placed during DCR in 9 (32%) patients, canaliculo-DCR performed in 2 (7%) and, in one patient with a congenital fistula, DCR was combined with fistulectomy. There were no recorded surgical or anaesthetic complications, and no patient required prolonged admission for persistent epistaxis; this was confirmed by a telephone survey of all guardians. Epiphora resolved in 27 (97%) patients, and one required redo DCR for recurrent epiphora due to contracture of the original soft-tissue anastomosis.

Conclusion:

External DCR for congenital nasolacrimal duct occlusion appears safe and effective in children under the age of 2 years when performed by experienced surgeons and anaesthetists, all surgery and anaesthesia being consultant-led in this series.

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Video presentations

Abstract Number: 301

Are You Missing an Entropion? The Test of Induced Entropion Two

Author: **Alasdair Kennedy** (*video presentation*)

Purpose:

The inward turning of the eyelid margin so that the meibomian gland orifices and lashes are directed towards the globe is called an entropion. The most common type of entropion is involutional, a combination of lid laxity, lower lid retractor weakness and orbicularis oculi override. Unfortunately, the condition can be intermittent and can go unnoticed leading to ocular surface damage. In suspected cases, clinicians can use clinical techniques to elicit the condition for example the forced closure of the eyelids, the Tetracaine Provocation Test (TPT) and the Test of Induced Entropion (TIE). We present an alternative diagnostic test: The Test of Induced Entropion Two (TIE(2)).

Methods:

We selected three patients with intermittent entropion from our oculoplastic clinic in whom forced closure of the eyelids and the TPT did not induce entropion. We performed and video recorded the conventional tests for entropion and the TIE2 test on these patients.
The TIE(2) test is performed by asking the patient to look down and by holding their upper lid high. The patient is then asked to close their eyelids as tightly as possible. An entropion will then be induced.

Results:

In all three cases, conventional methods did not provoke an entropion. Following the TIE(2), in all three cases, an entropion was induced.

Conclusion:

When there is suspicion of intermittent entropion but conventional provocation tests do not provoke one, the TIE(2) is a simple and useful diagnostic tool.

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Abstract Number: 302

Endoscopic Medial Rectus Sling: A Window Into the Intraconal Orbital Apex

Author: **Fariha Shafi** (*video presentation*)

Purpose:

Endonasal surgical approaches to the medial intraconal orbit require great precision and care to avoid damage to important structures like the optic nerve. This is technically challenging due to limited access and structures that limit the endoscopic view of the intraconal space. We present a novel exclusively endoscopic endonasal technique, in which access to the medial intraconal orbital contents was achieved by a medial rectus sling.

Methods:

The medial orbit was accessed through an endoscopic endonasal approach. The medial orbital wall was removed, periorbita divided and medial rectus slung endonasally with a suture and retracted superomedially to gain access to an apical intraconal medial orbital mass. The medial rectus sling suture was received trans-septally from the contralateral nares.

Results:

A 72-year-old Caucasian female presented with loss of vision and reduced extraocular movements in her right eye. Baseline blood tests and inflammatory markers were normal. CT scan revealed bilateral medial intraconal orbital apex masses. Biopsy of the right orbital apex lesion was performed through an exclusively endoscopic approach in which the medial rectus muscle was retracted supero-medially using a suture.

Conclusion:

To the best of our knowledge this is the first demonstration of the use of a medial rectus sling employed via an entirely endoscopic approach in the United Kingdom. This technique allows safe and easy access to the medial intraconal space and intraorbital optic nerve with no associated adverse clinical sequelae. In addition this technique negates the need for an adjuvant transconjunctival approach.

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Abstract Number: 303

Managing the damaged Nasolacrimal duct during Craniofacial surgery-innovative technique in an unusual situation!

Author: **senthil nathan** (*video presentation*)

Purpose:

To demonstrate the technique of managing the cut Nasolacrimal duct(NLD) which accidentally occurred while performing cranio facial surgery for a patient with Crouzon's syndrome.

Methods:

A patient with Crouzon’s syndrome was posted for orbital expansion and translocation with a Kawamoto’s distractor. Following bicoronal flap creation and reflection the NLD”s were cut bilaterally during medial orbital dissection. This was identified and silastic tubes were passed from the puncta and intubated across the cut ends of the NLD which were identified under direct visualization and brought out through the nose under endoscopic guidance and knotted in the inferior meatus.

Results:

The patient did well following surgery and did not have complaints of watering postoperatively. The tubes were removed at the end of 6 months and the ducts were patent on syringing.

Conclusion:

Damage to the Nasolacrimal apparatus is not uncommon during craniofacial surgery. Early identification and appropriate management leads to good results with minimal morbidity to the patients.

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Abstract Number: 304

Appropriate microbiological investigation of canalicular scrapings following canaliculotomy

Author: **Simran Mangat** (*video presentation*)

Purpose:

There are several reports of actinomyces species being less frequently responsible for canaliculitis compared with staphylococci and streptococci. This may be in part to how infected material is sent for microbiological analysis. We highlight how canalicular scrapings are prepared for microbiological and histological analysis at Wolverhampton Eye Infirmary.

Methods:

A patient with chronic canaliculitis underwent a a canaliculotomy. Material was sent for gram stain, culture and histological analysis. Our video specifically highlights the importance of sending two blood agar plates, one to be processed aerobically and another anaerobically. Actinomyces species are anaerobic by nature and unless anaerobic processing is specifically requested by the clinician, an under diagnosis of actinomyces canaliculitis may exist.

Results:

The video illustrates a straightforward process of sending off appropriate investigations to help in the microbiological diagnosis of this condition. Histological analysis of specimens can also demonstrate actinomyces species when microbiological analysis is negative and should be considered as part of the diagnostic work up.

Conclusion:

Blood agar plates are frequently available in eye departments and sending a specified anaerobic blood agar plate may help in isolating actinomyces species.

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Abstract Number: 305

'Diluting the pain' - a technique for anaesthetising the eyelid with minimal discomfort

Author: **Thomas Jackson** (*video presentation*)

Purpose:

To describe a simple and near painless technique for injecting local anaesthetic to anaesthetise the eyelids

Methods:

Video demonstration

Results:

The injection of local anaesthetic for eyelid surgery is often a painful procedure for patients. Previous modifications to minimise discomfort have been reported including the use of buffering agents, fine gauge needles and sedation.

Our video demonstrates a simple technique of initially anaesthetising the conjunctiva with topical anaesthetic followed by a transconjunctival injection of dilute lignocaine 0.1%. This causes very little discomfort and then allows a further pain-free injection of more concentrated lignocaine 1% with adrenaline 1:200000 and levobupivacaine 7.5mg/ml.

This technique has been successfully used in children as young as 9 years old as well as patients who are very anxious and has reduced the need for sedation or general anaesthetic.

Conclusion:

Oculoplastic surgery commonly requires the use of subcutaneous local anaesthetic. Patients frequently report this to be the most uncomfortable part of the operation. This video demonstrates a simple method of administering a virtually painless anaesthetic, improving the patient experience and reducing the need for sedation or general anaesthetic.

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Abstract Number: 306

Virtual 3d planning and navigation for orbit fractures: Technique and simulation training model.

Author: **richard taylor** (*video presentation*)

Purpose:

Surgical correction of fractures of the orbit complex can pose a challenge to the reconstructive surgeon. With limited access and the complex three dimensional anatomy, it can be difficult to ensure accurate reconstruction.

The use of 3d virtual surgical planning and intra-operative navigation can assist the surgeon in trying to achieve predictable and optimal outcomes. However the use of these technologies can be daunting to the inexperienced surgeon.

We demonstrate the stages of 3d virtual planning and navigation for orbit fracture reconstruction and how these techniques can be simply adapted to provide an effective surgical simulation training model which can be used to help familiarise the reconstructive surgeon with these technologies prior to use with patients.

Methods:

The use of a 3d virtual planning and navigation package adapted for use as a simulated surgery training model is demonstrated.

Results:

The key steps in the process of virtual planning and intra-operative navigation of orbit trauma can be adapted to create a useful surgical training simulator.

Conclusion:

Surgical simulation training models are becoming an accepted core component of surgical training. The use of a surgical simulation training model for virtual 3d planning and intra-operative navigation of orbit trauma can help familiarise the reconstructive surgeon with these technologies prior to utilising them on patients with the aim to achieve predictable optimal outcomes.

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Abstract Number: 307

Ten minute tarsal strip with disposable high temp cutting cautery.

Author: **Kate Shirley** (*video presentation*)

Purpose:

To demonstrate a quick and effective technique for lateral tarsal strip. Enabling improved haemostasis and a clear field through the use of high temp cautery for incisions and isolating the tarsal strip.

Methods:

Video presentation of surgical technique.

Results:

This video demonstrates the techniques of using the disposable cautery in an effective way to clear the tarsal plate and secure it to the orbital rim. This technique allows the common procedure of lateral tarsal strip to be carried out in a time efficient manner. The use of disposable cautery is convenient and allows the surgical field to remain relatively clear throughout.

Conclusion:

The use of disposable high temp cautery to perform lateral tarsal strip procedures is a quick and effective technique.

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ePoster presentations

Abstract Number: 501

Clinical diagnosis, management and outcomes of patients referred to the specialist lacrimal clinic with epiphora over a 6 month period.

Author: **Aoife Naughton** (*eposter presentation*)

Purpose:

To establish the proportion of new patients assessed in the oculoplastic clinic with a primary concern of epiphora.
To identify the proportion of patients requiring surgical management.
To review the current clinical patient pathway from point of referral to discharge.
To determine the overall success rate in patients requiring surgical management.

Methods:

We included all new patients seen at the oculoplastic/lacrimal clinics over a 6 month period from 1st January to 30th June 2013 inclusive, who were referred with epiphora. A total of 141 patients were identified, of which the health records of 127 patients were available for analysis.

Results:

Mean patient age was 60.3 years. The primary clinical diagnosis was lacrimal obstruction (35.5%), lid malposition (35.5%), ocular surface disease (21%), eyelash abnormality (2%) and other (6%). The proposed treatment modality was surgical for 70% and non-surgical for 30%. Of those offered surgery, 76% proceeded. Intervention was categorised as lacrimal 45%, lid surgery 40%, or combined 15%. Success, defined as resolution of symptoms following one surgical intervention with no major complications, was achieved in 92%. The clinical patient pathway was deemed efficient, with a high percentage of patients requiring only one pre-operative clinic visit(81%), one operation(96%) and one post-operative clinic visit(80%) prior to discharge.

Conclusion:

53% of new patients seen in the specialist oculoplastic/lacrimal clinic over the 6 month period were assessed for epiphora.
A large proportion of patients had a surgical cause suggesting a satisfactory referral refinement pathway.
Surgery is associated with a high rate of functional success.

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Abstract Number: 502

Eyelid Cancer: A Clinico-pathological Study

Author: **SYEED KADIR** (*eposter presentation*)

Purpose:

To assess the rate , characterstics, associated risk factors and management strategies of different types of eyelid malignancies in Bangladesh

Methods:

Observational multicentre case series study was done from 2008 to 2013 (six years). We included all clinically evaluated eyelid malignancies. We preferred frozen section biopsy than excision biopsy with 2 mm normal tissue. Experienced pathologist reported all cases. Management strategy was setup on location, types of lesion, orbital involvement, metastasis to lymph node and distant organ. Statistical analysis was used to assess the differential distribution of variables observed in this study.

Results:

We evaluated 212 patients those who were presenting eyelid malignancies. Analysis revealed Sebaceous gland carcinoma (SGC) was 86 cases (40.56%), Basal cell carcinoma (BCC) was 83 cases (39.15%), Squamous cell carcinoma (SCC) was 39 cases (18.39%) and Malignant melanoma (MM) was 04 cases (1.88%). Among them, 4 patients presented bilateral eyelid malignancies. Male patients were 116 (54.72%) and female patients were 96 (45.28%). The mean age was 57.39, 61.52, 64.47 and 52.50 in SGC, BCC, SCC and MM respectively. Right eye was involved in 126 cases (59.4%), left eye was 82 cases (38.67%) and 4 cases (1.88%) showed involvement of both eye. Lower eyelid was more involved in BCC (79%) and upper eyelid was more involved in SGC (81%). Orbit was involved in 21 cases (10.1%) and Metastasis was found in 11 cases (5.18%). Associated riskfactors was betel leaf with /without nut chewing (76%), smoking (43%) and prolong sun exposure (31%). Frozen section was done in 104 cases (49.06%). Eyelid reconstruction was done by direct closure in 58 cases (27.35%), Semicircular flap in 37 cases (17.45%), Triangular flap in 25 cases (11.79%), Cutler beared procedure in 30 (14.15%), Hughes procedure in 34 cases (16.03%), Mustard check rotational flap in 05 cases (2.35%), Skin graft in 21 cases (10%) and Z plasty in 03 cases (1.14%). Exenteration were done in 13 cases (6.13%). Recurence were rarely observed in fraozensection biopsy (0.94%).

Conclusion:

Sebaceous gland carcinoma of the eyelid is highest in occurrence in Bangladesh. Betel leaf and nut chewing is commonest risk factor. Early management provides minimum invasive procedure, completely cure the lesion, salvage the globe and prevents metastasis. Frozen Section is the preferred method to reduce the recurrence

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Abstract Number: 503

Lamina cribrosa displacement after optic nerve sheath fenestration in idiopathic intracranial hypertension: new tool for monitoring changes in intracranial pressure?

Author: **Marta Perez-Lopez** (*eposter presentation*)

Purpose:

A novel description of the posterior displacement of the lamina cribrosa (LC) and prelaminar tissue in response to the subaracnoid space (SAS) decompression after optic nerve sheath fenestration in a patient with idiopathic intracranial hypertension (IIH) and progressive visual loss, using spectral-domain optical coherence tomography (SD-OCT).

Methods:

A 28 year-old woman diagnosed with IIH and treated with lumbo-peritoneal shunt presented with progressive visual loss despite apparently well- controlled intracranial pressure (ICP). A 24-hours register showed spikes of raised ICP. A bilateral optic nerve sheath fenestration was performed using supero-nasal skin crease approach. Serial horizontal B-scan images of the optic nerve head (ONH) were obtained from each eye using enhanced depth imaging SD-OCT.

Results:

A posterior displacement of the LC and cup surface was demonstrated after optic nerve sheath fenestration and SAS decompression with improvement of the visual function.

Conclusion:

Posterior displacement of the LC after optic nerve sheath decompression may be an indirect sign of ICP lowering. Changes in the position of the LC can be assessed non-invasively using SD-OCT and it may represent a new tool in management of patients with IIH.

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Abstract Number: 504

Eyelid Basal Cell Carcinoma in Northern Ireland

Author: **Rohit Saxena** (*eposter presentation*)

Purpose:

To evaluate the epidemiology of basal cell carcinoma, including location and histological sub-types involving the eyelids of patients attending a tertiary referral centre in Northern Ireland.

Methods:

This was a retrospective observational cohort study. Clinical and histopathology records of basal cell carcinoma specimens' received between January'2008 & March'2013 were analysed. The histopathology slides were reported by a pathologist and data was collected regarding the histological type of basal cell carcinoma and the demographic profile of the patients.

Results:

During the study period, 431 patients were confirmed with a diagnosis of basal cell carcinoma. There were 218 females and 213 males. The mean age of patients was 70.34 years. Nodular subtype was the most common, being diagnosed in 323 (74.94%) patients, followed by Infiltrative in 93 (21.57%), Multifocal 13 (3.02%) and Ulcerative in 2 (0.46%) patients.

Conclusion:

Nodular sub-type was the most common histological type of basal cell carcinoma diagnosed in Northern Ireland. The annual incidence of basal cell carcinoma appeared to be increasing.

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Abstract Number: 505

Is there an alternative approach for treatment of invasive melanoma when a patient declines exenteration?

Author: **Valerie Juniat** (*eposter presentation*)

Purpose:

To report a case of successful conservative management for eyelid and conjunctival melanoma when patient declined exenteration.

Methods:

A 67-year-old lady with a chronic red left eye was diagnosed on biopsy with conjunctival primary acquired melanosis with atypia. Four months later she developed extensive biopsy confirmed lentigo maligna (LM) of the skin of the left eyelid, temple and cheek. The patient declined all treatment options at this stage. A year later she developed a new pigmented conjunctival lesion. Conjunctival and eyelid skin map biopsies found florid LM for skin and conjunctiva with invasive conjunctival melanoma extending to the deep margin. There was no lymphovascular or perineural invasion. There was no evidence of nodal or distant metastasis. The patient was offered exenteration but declined it. Topical treatments with Mitomycin 0.04% drops (2 weeks on/off X 3 cycles) and Imiquimod for the skin lesions were therefore instituted.

Results:

Skin biopsies at two-year follow-up were negative for malignancy and there was no evidence of clinical recurrence at three years. Topical Mitomycin therapies resulted in limbal stem cell failure, which will be treated with stem cell transplantation.

Conclusion:

Exenteration is a disfiguring procedure with reconstructive challenges, associated with significant functional and psychological morbidity. This case highlights the efficacy of repeat cycles of topical Mitomycin C and Imiquimod for the treatment of conjunctival melanoma and LM in cases where patients decline surgery or are not medically fit for exenteration. Our patient in particular will need long term follow up for close monitoring of recurrence.

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Abstract Number: 506

A novel physiological manometric system for measuring lacrimal resistance

Author: **Ebube Obi** (*eposter presentation*)

Purpose:

Lacrimal surgery aims to provide a low resistance tear drainage passage. An assessment of lacrimal resistance guides decisions on surgery. We present a novel system to measure lacrimal outflow resistance.

Methods:

Patients in a specialist lacrimal clinic had a full work-up to the point of tear duct syringing (SWO). The tear ducts were then assessed using a manometric system that applies a fixed, known head of fluid pressure via a cannula that seals to the punctum; fluid flow is recorded and the lacrimal resistance derived as fluid pressure/fluid flow (units cmH20secml-¹, for simplicity presented as drops per minute, dpm). Those with reduced flow also had SWO. Patient groups were: A: controls, B: external visible cause for watering (ocular surface/lid/punctum), C: no externally visible cause, D: post op DCR, E: mixed/other.

Results:

444 tear ducts were examined. Mean flows (dpm) were: A (n=19) 55; lower limit of normal 29; B (n=184) 46; C (n=145) 22: D (n=38) 52. Excluding complete obstruction (n=29), SWO only detected 48% of those with impaired manometric flow. Of those with a normal SWO test 53% had impaired manometric flow; 34% had a flow of 0 dpm.

Manometric testing showed high levels of repeatability (paired t-test p=0.76). Differences in A v C and B v C were statistically significant (p<0.0001).

Conclusion:

A new manometric system reliably measures lacrimal resistance and provides a substantial increase in sensitivity over conventional lacrimal syringing.

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Abstract Number: 507

Ocular Complications of Cosmetic Interventions

Author: **Michelle Ting** (*eposter presentation*)

Purpose:

To review the ocular complications arising from ocular, periocular and facial cosmetic surgical and non-surgical interventions.

Methods:

A MEDLINE search was conducted to find articles detailing complications from ocular cosmetic devices and procedures (cosmetics, eyelash and eyebrow enhancement, cosmetic contact lenses, ocular whitening, iris implants, refractive surgery), non-surgical periocular and facial interventions (laser resurfacing and chemical peels, filler injections, botulinum neurotoxin injections) and surgical periocular and facial interventions (blepharoplasty, face lift, rhinoplasty, orthognathic surgery).

Results:

Ocular complications were divided into 3 main groups: complications arising from cosmeuticals and devices, from intraocular or ocular surface cosmetic interventions (including lid margin and eyelashes) and those arising from peri-ocular and facial surgical and non–surgical interventions.

Conclusion:

An awareness of potential complications and the evidence-based management of ocular complications is essential for safe practice.

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Abstract Number: 509

One Stop Basal Cell Carcinoma Excision and Reconstruction- The Advantages And Outcomes

Author: **fizza mushtaq** (*eposter presentation*)

Purpose:

To highlight the outcomes of a one stop basal cell carcinoma excision and reconstruction service.

Methods:

We carried out a retrospective case note analysis over a three year period of patients who underwent excision and reconstructions at the Heart Of England Foundation Trust. Case load and outcomes of surgery were documented.

Results:

We analysed a total of 150 excision and reconstructions; of which 139 were basal cell carcinomas. This was 93 % of the total caseload. All samples had frozen section performed on the same day as reconstruction. Of these only 6 did not have 100% clearance on first excision; therefore requiring a second frozen section. Total cost of this procedure is £2500 and the saving made is that of approximately £500 as a second theatre slot on a different day for the same patient is not required. All procedures were performed on the same day, which meant high patient satisfaction, and effective and prompt management of these lesions. There were no post operative complications in any of these patients. Higher rates of graft failure or prolonged healing were noted in patients on anti-coagulants pre operatively.

Conclusion:

We have proposed that a one stop basal cell carcinoma excision and reconstruction service can be offered to patients on the NHS. Having a facial tumour can be a distressing experience for patients, therefore achieving full surgical clearance in one session is a desired outcome for both patient and surgeon. We have also shown that the cost effectiveness of this procedure means that an extra theatre slot for the same patient is not required and therefore the service is available for a larger patient cohort. This reduces both waiting list times and increases patient satisfaction.

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Abstract Number: 510

The use of industrial models such as Lean Six Sigma to increase efficiency in Oculoplastic Minor Surgery

Author: **Jonathan Norris** (*eposter presentation*)

Purpose:

The NHS is under significant financial strain placing an emphasis on clinicians to increase productivity whilst maintaining quality. We present the use of industrial models to drive efficiency in the oculoplastic minor ops clinic (OcMOPS); a service with historically long waiting times and poor satisfaction.

Methods:

The principles of Lean Six Sigma (LSS) used at Toyota were employed as a framework including tools such as value stream mapping to identify and reduce waste. Retrospective data (Jan–Jun 2011) was collected from patient records to process map the service. The Takt time was calculated illustrating demand and capacity. Post-improvement data (Aug–Dec 2014) was compared assessing: cycle time (CT), referral to treatment time (RTT) and profitability. A satisfaction survey was carried out post-treatment using a Likert scale.

Results:

Prior to streamlining, a mean of 6.1 patients were treated per 4 hour session. The mean RTT was 246.3 days with a mean treatment CT of 55 minutes per patient. Examples of service reform implemented include:(1)combining the 1st review and treatment date, (2)standardisation of case-mix, (3)use of disposable instruments, (4)‘fast-track’ photography and (5)developing a tele-results system. Post-change in practice 11.9 patients were seen per clinic (97% increase). RTT fell by 24% to 186.3 days and CT improved by 62% to 21 minutes. The survey found that all patients were very satisfied with the new service. The change in practice generated an additional £50,000 / annum.

Conclusion:

Industrial models can be successfully applied to the healthcare sector. In OcMOPS we have used the principles of LSS to eliminate waste, improve profitability and patient experience.

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Abstract Number: 511

Ocular adnexal lymphoma long term follow up and treatment outcomes: A 10-year follow up study of a British cohort

Author: **Brent Skippen** (*eposter presentation*)

Purpose:

To report the ten year treatment outcomes of a small cohort of patients with ocular adnexal lymphoma (OAL) primarily treated with chemotherapy in a single British centre. To then compare these results with the long term treatment outcomes of other OAL treatment modalities in the literature.

Methods:

A retrospective cohort study of 12 OAL patients treated primarily with chemotherapy in a single hospital is presented. The average follow up duration was 10 years from the initial treatment. The mean age at diagnosis was 57 years and 75% of the patients were female. 66% of patients had unilateral disease. The majority (66%) of cases were mucosa-associated lymphoid tissue (MALT) lymphoma and 33% had systemic involvement at the onset of disease treatment. Initial treatment consisted of chemotherapy in 75%, radiotherapy in 17% and observation in 1 patient. Initial chemotherapy regimens most commonly contained chlorambucil.

Results:

92% (11/12) of patients were still alive 10 years after initial treatment. 1 patient died, 9 years after initial treatment for MALT lymphoma, of a more aggressive form of systemic B cell lymphoma. 58% (7/12) of patients had recurren disease, mostly local recurrence, which presented on average 6 years following initial treatment. Recurrent disease was treated mostly with systemic chemotherapy (6/7 patients) and with local radiotherapy in 1 patient. Rituximab was the most common chemotherapy agent used for treatment of recurrent disease.

Conclusion:

Most OAL is unilateral, low grade MALT lymphoma and has a good prognosis. No specific guidelines currently exist for the management of OAL but there are many treatment options with long term results in the literature. These treatment options include several regimes for chemotherapy, radiotherapy, intralesional interferon, doxycycline and simple observation. The ideal treatment should be more efficacious than observation, have minimal side effects and be cost effective. This ideal treatment is yet to be determined.

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Abstract Number: 512

Neglected periocular basal cell carcinoma: a case series

Author: **David Curragh** (*eposter presentation*)

Purpose:

To present a case series of patients presenting with neglected basal cell carcinomas highlighting their destructive nature and complex management

Methods:

5 patients presented to the oculoplastic clinic with neglected periocular skin lesions present for more than one year. They were all biopsied and management options discussed

Results:

All 5 cases were proven to be basal cell carcinomas. Two cases were extensive medial canthal lesions which were excised and required extensive reconstruction. Two cases were lateral canthal lesions which invaded the lateral orbital wall and caused extensive destruction to both the upper and lower lids. One of these cases led to a exposure related corneal perforation and eventual palliative eviscertion. Both cases were not curable by surgical resection and were referred for palliative radiotherapy. Only one was suitable and the other was managed conservatively. The final case was an extensive tumour which had eroded the entire lower lid and underwent exenteration

Conclusion:

The case series highlights the management options available in cases of extensive periocular basal cell carcinoma. The delayed presentations led to more extensive reconstructive surgery than would have likely been required if the patients had presented at an earlier stage. In some cases the lesions were inoperable. Neglected cases still occur and patients' fears of hospitals or healthcare professionals are often a factor in patients not seeking medical attention and can be difficult to address. Education of patients and healthcare professionals is important regarding early identification and urgent referral for investigation of new periocular skin lesions

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Abstract Number:513

Bilateral severe microphthalmia due to VSX2 mutation associated with hepatitis – a previously unreported syndrome

Author: **Claire Murphy** (*eposter presentation*)

Purpose:

To describe a case of bilateral microphthalmia associated with neonatal hepatitis caused by mutations in the VSX2 gene. A literature review of previous reported cases of microphthalmia due to VSX2 mutations will highlight the systemic phenotypic variability of this genetic abnormality which has implications for genetic counselling.

Methods:

Case report with details of genetic analysis and phenotype.

Results:

Our case was noted at birth to have severe microphthalmia with axial lengths of 7.1mm and 8.0mm; the baby was born to consanguineous parents of Pakistani origin. In addition to the micropthalmia the child has unexplained neonatal hepatitis- despite extensive investigations including liver biopsy. Genetic testing revealed a homozygous missense mutation (c679C>T) of VSX2 gene (visual system homeobox 2). The same genotype has been previously described in a distant family member also born to consanguineous parents; in this case the microphthalmia, was associated with profound hearing impairment, low muscle tone and severe learning difficulties. The only other reported case of this genotype is in 2 sisters of Iranian origin with microphthalmia and no extraocular features. This case highlights the systemic phenotypic variability in cases with recognized genetic mutations – this has important implications for genetic counselling.

Conclusion:

This is the second reported case of VSX2 mutation causing bilateral severe microphthalmia and the first reported case with this constellation of systemic features.

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Abstract Number:514

A patient satisfaction survey following lateral tarsal strip (LTS) surgery

Author: **Sarmi Malik** (*eposter presentation*)

Purpose:

We conducted a patient satisfaction survey following LTS surgery performed by a non-consultant for lower lid malposition. The aim was to get an understanding of the patient experience to enable us to improve preoperative counselling.

Methods:

A telephone questionnaire was presented to patients who underwent LTS surgery performed by a single surgeon between January 2010 and July 2012. The interview was conducted by the Oculoplastic Clinical Nurse Specialist, who asked about preoperative symptoms, postoperative improvement, cosmetic appearance and satisfaction with surgery.

Results:

36 patients were included (15 entropion and 21 ectropion), with a median follow-up of 6 months. Twelve entropion patients presented with soreness or grittiness, 3 presented with epiphora or discharge. Seventeen ectropion patients presented with epiphora, while four presented with sore or gritty eyes. Fourteen of 15 (93%) entropion patients and 20 of 21 (95%) ectropion patients reported postoperative improvement in symptoms. One patient in each group reported no change. 81% patients reported an improvement in their cosmetic appearance. 92% patients were satisfied or very satisfied with the surgery. Five patients made positive comments including requests to convey their gratitude to the surgeon. Three patients (8%) were neither satisfied nor dissatisfied with the procedure. In this group, one reported that local anaesthesia was “not pleasant”, one needed subsequent ptosis surgery and one was unable to specify.

Conclusion:

LTS surgery resulted in excellent patient satisfaction scores, with an improvement of symptoms in over 90% of patients. Over 80% reported an improvement in cosmetic appearance. This data helps while counselling patients before LTS surgery.

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Abstract Number:516

The Biomechanics of Eyelid Tarsus Tissue

Author: **Michelle Sun** (*eposter presentation*)

Purpose:

To investigate the viscoelastic behavior of normal tarsus tissue.

Methods:

Ten samples of tarsus tissue were obtained from ten patients with normal eyelid laxity undergoing various ophthalmic procedures at the Royal Adelaide Hospital. Samples were tested fresh within 2 hours of excision using a CellScale BioTester 5000 (CellScale, Waterloo, Canada). A preload of approximately 50 mN was applied for 10 minutes before the sample was subjected to uniaxial tension under linear ramp displacement control. Maximum strain was 30%, as this allowed the sample to reach the linear portion of the stress-strain response without slipping out of the clamps. Thirty dynamic cycles were performed at a strain rate of 1%/s. LabJoy 2.0 software (CellScale, Waterloo, Canada) was used to control the test parameters and collect the data at a sampling rate of 10 Hz. Images were captured at a rate of 1 Hz using the BioTester’s overhead CCD camera. The raw data were

processed with MATLAB R2010b (MathWorks, Natick, USA) using a custom-written program.

Results:

The average width of samples tested was 5.51mm (SD 1.45mm) whilst average thickness was 1.6mm (SD 0.51mm). The elastic moduli ranged from 1.02-2.93 MPa with a mean of 2.00 +/- 0.71MPa. The mean extensibility was found to be 16.73% and mean phase angle 6.44%.

Conclusion:

We found the elastic moduli of human eyelid tarsus ranged from 1.02-2.93 MPa. Our results establish a benchmark for native tarsus tissue, which can be used when evaluating tissue engineered tarsal substitutes in the future.

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Abstract Number: 517

Endoscopic Endonasal Assisted Resection of Orbital Schwannoma

Author: **Michelle Sun** (*eposter presentation*)

Purpose:

Orbital schwannomas are rare and despite a variety of external surgical approaches previously utilized, removal of tumours located in the deep orbital apex remains challenging. The endoscopic endonasal approach has been used increasingly for various apical tumours, but few describe this technique for orbital schwannomas. We therefore aimed to investigate the feasibility of this technique for orbital schwannomas.

Methods:

We present two cases of orbital schwannoma removed using an endonasal endoscopic approach, one of which was completely removed endoscopically with the addition of medial rectus detachment to facilitate access to the medial intraconal apex.

Results:

The first patient was a 31 year-old Cantonese female who was found to have an 11x8mm right orbital apical schwannoma which was removed using a endoscopic endonasal sphenoethmoidal approach. The second patient was a 78 year-old Caucasian male who had a 28x17x18mm orbital schwannoma removed via a transcaruncular and endoscopic endonasal assisted approach. At 6 and 12 month follow-up respectively, there were no signs of recurrence or residual disease.

Conclusion:

Our findings suggest that the use of an endonasal approach may facilitate the safe removal of selected medially located orbital schwannomas whose posterior margins involve the orbital apex.

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Abstract Number: 518

Incidence and changing trends of Enucleation, Evisceration and Exenteration in the United Kingdom- 25 years of practice

Author: **Claire Murphy** (*eposter presentation*)

Purpose:

Regarding enucleation, evisceration and exenteration
1. To describe the current incidence in the UK.
2. To identify changing trends nationally over the last 25 years.

Methods:

The numbers of enucleation, evisceration and exenteration performed annually were obtained from all four home nations from 1989- 2013. Data were obtained from the following sources: Hospital episode statistics (England), Information services division (Scotland), Social Services and Public Safety (Northern Ireland), Patient episode database (Wales).

Results:

In 2013 the incidence of the following procedures in the United Kingdom were: enucleation 0.63/ 100,000, evisceration 0.68/100,000 and exenteration 0.13/100,000. This compares with 1.77/100,000 (enucleation), 0.42/100,000 (evisceration) and 0.12/100,000 in 1989 (exenteration). Overall from 1989 to 2013 the combined rate of all eye removal has fallen from 2.30 to 1.44/ 100,000. Despite an approximate overall 37% decrease in eye removal, rates of evisceration have increased by over 60% whilst enucleations have decreased by 66%. Rates of exenteration have stayed low.

Conclusion:

Over the last 25 years there has been a significant decline in the number of eyes requiring surgical removal within the UK. Current rates of enucleation, evisceration and exenteration remain low and surgical practice has shifted from enucleation to evisceration. This study illustrates the impact of advances in medical and surgical treatment of advanced and end stage eye disease.

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Abstract Number:519

Safety and efficacy of upper eyelid postseptal gold weight placement for treatment of lagophthalmos

Author: **vijay wagh** (*eposter presentation*)

Purpose:

To review the safety and efficacy of upper eyelid postseptal gold weight implant for lagophthalmos.

Methods:

Retrospective case notes review of patients undergoing upper eyelid gold weight implantation.

Results:

Between 2009 and 2014, 33 patients (20 male; 60.6%) were identified as having undergone upper eyelid postseptal gold weight implantation (median age 65 years, range 18-92 years). All patients had lagophthalmos secondary to facial nerve dysfunction (House-Brackmann scale 4-6), primarily due to head and neck surgery (51%), infection (18%) or Bell's palsy (15%). The mean weight of the gold implant was 1.4gms (range 1-2gms). Additional per-operative surgery included medial canthoplasty (18%), lateral tarsal strip (45%) and brow lift (9%). The mean follow-up period was 21months (range 6-48 months). There were no per-operative complications and none of the patients had postoperative infection or implant extrusion. 100% patients had an improvement in lagophthalmos, resulting in reduced keratopathy and reduced ocular discomfort. Mean lagophthalmos on gentle closure was reduced from 5.8mm to 1.6 mm and mean lagophthalmos on blink was reduced from 8mm to 2.8mm. Gold weight implants were removed in 3 patients (9%); due to possible gold allergy in two patients and discomfort in one patient. 4 (12%) patients had further surgeries including brow lift (3) and ptosis correction (1).

Conclusion:

Upper eyelid gold weight implantation was effective in reducing lagophthalmos and exposure keratopathy in our series. Implant related complications are uncommon with our technique of postseptal gold weight implantation and patients are very satisfied with the surgical outcome.

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Abstract Number: 520

En Block Resection Optic Nerve Glioma Via Craniotomy And Orbital Roof Approach With Preservation of Globe and Orbital Structures

Author: **Princeton Wen-Yuan Lee** (*eposter presentation*)

Purpose:

A standard surgical technique with combined trans-cranial and fronto-zygomatic orbitotomy approach to resect optic nerve glioma has been described. We are presenting a case with trans-cranial and orbital roof approach without orbitotomy to resect the intra-orbital and intra-cranial part of the optic nerve glioma.

Methods:

A 13 year old female patient presented with a unilateral proptosis and deterioration of vision. CT and MRI demonstrated a 2 x 1.5 x 1.6 cm optic nerve mass with intracranial extension. She underwent optic nerve biopsy though medial lid crease approach which confirmed the mass to be pilocytic astrocytoma.

A coronal incision and craniotomy approach was made to excise the pre-chiasmatic portion of the optic nerve. Frozen section was done to ensure a tumour free margin. The orbital roof was removed to gain access to the optic nerve glioma. Particular attention was made to preserve the annulus of Zinn while resecting the optic nerve glioma up to the posterior globe. The intra-canalicular portion of the optic nerve was then removed while preserving the ophthalmic artery.

The orbital roof was reconstructed with titanium plate. The craniotomy was repositioned with screws and scalp closed in a standard fashion.

Results:

Histology confirmed clear margin resection of the optic nerve glioma. This patient demonstrated good recovery with minimal residual ptosis. The range of extra-ocular movement is full. The fundoscopy showed compromised retinal blood circulation.

Conclusion:

We demonstrated an alternative approach to resect the optic nerve glioma without a froto-zygomatic orbitotomy while preserving the globe and orbital structures.

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Abstract Number: 521

Effectiveness of lower lid tightening in lacrimal pump failure-related functional epiphora

Author: **Adeela Malik** (*eposter presentation*)

Purpose:

To investigate the influence of lower lid tightening in lacrimal pump failure-related functional nasolacrimal duct

obstruction (FNLDO) epiphora patients, using Munk score subjective epiphora scoring and dacryoscintigraphy objective scoring, as respective outcome parameters.

Methods:

Prospective evaluation of 20 eyes presenting with functional epiphora and lower lid laxity. Only the patients with anatomical patency on lacrimal syringing were retained for the study, and each asked to complete the epiphora Munk score questionnaire as a subjective parameter. At the same time dacryoscintigraphy imaging analysis was undertaken as an objective physiological baseline parameter. Patients with normal anatomical patency were referred for lateral tarsal strip surgery. Three months post-operation, these patients were again asked to complete the Munk score questionnaire, and were also subjected to a repeat objective dacryoscinitigraphy imaging. Objective dacryoscintigraphy radiology reports, and patient subjective epiphora Munk scores both before and after the lower lid surgical tightening, were compared.

Results:

A significant improvement occurred in the subjective (Munk) score of the patients after lower lid surgery, while the physiological objective parameter remained unaltered.

Conclusion:

Surgical correction of lower lid laxity improved patients' subjective epiphora Munk scores, whilst objective physiological dacryoscinitigraphy was unaffected. This suggests that addressing lid laxity in patients with lacrimal pump failure-related FNLDO can be of benefit in reducing patients' symptoms.

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Abstract Number: 522

Peri-ocular basal cell carcinoma (BCC) regression following punch biopsy; a prospective study

Author: **Rongxuan Lim** (*eposter presentation*)

Purpose:

The regression of non-melanoma skin cancers has been recorded following incisional biopsy. The exact mechanism is unknown but wound healing is thought to play a role. Anecdotally, shrinkage of peri-ocular BCCs after incisional biopsy has been noted, but there are no reported studies. The aim of this study was to quantify change in size of peri-ocular tumours post punch biopsy.

Methods:

Patients with suspected BCCs were prospectively recruited between December 2013 and December 2014. All lesions were photographed before the punch biopsy and then again 3-8 weeks later. In each case, a 2-3mm2 punch biopsy was performed in the centre of the tumour so as not to blur the tumour margins. The lesion size was calculated based on the photographs (KLONK image measurement 2013). A 2-tailed paired Student t-test was used for statistical analysis.

Results:

19 patients with a BCC were included, with the mean age at biopsy of 74 years. The mean time between biopsy and follow-up was 37 days.

A malignant tumour may be expected to increase in size between visits, however in this study only 7 tumours increased in surface area, by an average of 7mm2 (22 mm2 to 29 mm2). 2 tumours remained unchanged and 10 decreased by an average of 17mm2 (45 mm2 to 28 mm2).

The mean surface area of the lesion prior to biopsy was 33mm2 (standard deviation=31mm2) and at the post-biopsy visit 27mm2 (SD=19mm2). This difference was not statistically significant (p=0.17).

Conclusion:

We found a reduction in the average surface area of peri-ocular BCCs post- biopsy, although this did not reach statistical significance. 10 of 17 tumours exhibited a reduction in tumour surface area post-biopsy.

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Abstract Number: 523

How can we maximise the use of our operating lists? An analysis of factors influencing theatre efficiency

Author: **Sonali Nagendran** (*eposter presentation*)

Purpose:

Operating theatre utilization has become the principal measure of NHS operating theatre service performance. We analysed operating theatre utilization data from a tertiary centre to identify factors influencing theatre efficiency.

Methods:

This audit used prospective data on oculoplastic surgery performed in a tertiary centre over 3 time periods in 2011, 2014 and 2015. The primary outcome measure was the operating list utilization rate, calculated as the combined value of time spent on anaesthesia and surgery (induction to surgical closure) as a percentage of the total planned session time.

Results:

An initial audit in 2011 recorded the operating list utilization rate as 81.2%. However a reaudit in 2014 recorded a drop to 64.5%, prompting an evaluation of the pathway from scheduling to surgery. Factors contributing to poor theatre utilization included inappropriate scheduling times for cases, last minute operating list changes and cancellations and delays at the list start and between cases. Changes implemented included standardised scheduling, finalising the list 48 hours in advance, reducing staggered patient arrival and enabling same day preassessment for patients to fill cancelled slots.
A reaudit in 2015 analysing the effect of these changes demonstrated that theatre utilization had increased to 78%. The theatre utilization rate was higher for all day lists (82%) compared to half day lists (76%), suggesting that these lists were more efficient.

Conclusion:

Identifying and altering factors that influence efficiency can make a significant difference to theatre utilization, improving service delivery and maximising the use of a valuable resource.

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Abstract Number: 524

The Varied Applications of Botulinum Toxin Injection in Extraocular Muscle Restriction and Overaction - A Consecutive Case Series

Author: **Conor Malone** (*eposter presentation*)

Purpose:

We present a case series describing the varied applications of botulinum toxin injection in extraocular muscle

restriction and overaction.

Methods:

We prospectively identified 10 consecutive patients with inferior rectus or medial rectus restriction or overaction: 1 inferior rectus restriction secondary to retinal detachment repair; 1 residual inferior rectus overaction secondary to 4th nerve palsy correction; 1 residual inferior rectus restriction after thyroid eye disease surgery; 1 idiopathic inferior rectus overaction; 2 inferior rectus restrictions secondary to Graves orbitopathy; 1 medial rectus overaction after 6th nerve palsy; 2 residual medial rectus overactions after strabismus surgery; 1 idiopathic medial rectus restriction.

Results:

Follow-up ranged from 1 month to 6 months. Success was measured objectively by orthoptic assessment and subjectively by patient satisfaction with appearance and decrease in diplopia. Signs and symptoms improved in 9 out of 10 patients after 1 injection. 1 patient had no improvement after 2 injections and underwent further surgical treatment. There were no complications.

Conclusion:

Botulinum toxin injection is a safe, inexpensive, versatile and effective treatment for a variety of extraocular muscle conditions.

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Abstract Number: 525

Oedipism – A case series

Author: **Vasuki Gnana Jothi** (*eposter presentation*)

Purpose:

To study the clinical features, management and visual outcome in self- mutilating eye injuries.

Methods:

Case series of three patients presenting with self-inflicted eye injuries .Two of three patients had bilateral eye involvement.

Results:

Case 1 : 57 year old prisoner with delusional disorder, presented with endophthalmitis due to self inflicted injury. He had recurrent episodes of inserting sewing needles in his left orbit. Recently he inserted a needle in his right (only eye) and left orbit. As the needle in the right eye was beneath the lateral rectus and not causing damage to the optic nerve or any structures in the orbital fissure, no removal was undertaken. This decision was undertaken together with the psychiatrist, who was of the opinion that he was looking for any support to his belief that he had cancer and was likely to self harm again if we removed the needles.

Case 2: 24 year old male psychotic prisoner presented to ophthalmology with attempted bilateral auto-enucleation. He had bilateral globe rupture with extrusion of intraocular contents and underwent emergency surgery. Vision was no perception of light in both eyes and eventually had bilateral phthisis bulbi.

Case 3: 35 year old schizophrenic, in a psychiatric hospital attempted auto enucleation in his left eye with a pen which led to fulminant orbital cellulitis and foreign body close to the orbital fissure. He made excellent progress with treatment with surgical removal and debridement.

Conclusion:

Self mutilating eye injuries occurred in male patients with psychosis and delusional disorders. All our patients had very severe injury. In a majority it led to loss of vision or eye. Management of these patients can be complex requiring appropriate input from psychiatric team and long term rehabilitation.

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Abstract Number: 527

Orbital Trauma at a Tertiary Referral Centre

Author: **Matthew Gillam** (*eposter presentation*)

Purpose:

Complex orbital fractures require multi-specialty input. There are no nationally agreed best practice guidelines (BAOMS Trauma Specialist Group Lead). Our study aims to track the patient pathway from injury, investigation and treatment in multiple departments in a major tertiary referral network and to document demographics, clinical findings, management and outcome to inform the formulation of guidelines for timely optimal management.

Methods:

Data was collected on patients who sustained orbital trauma referred to ophthalmology between April–November 2014 (79 patients). This included timings of A+E, OMFS, ophthalmology and radiology assessment, details of orbital/ocular injuries, motility impairment and management with outcomes.

Results:

61/79 patients attended eye appointments, a 23% DNA rate. 47 patients were male, 14 female with an average age of 44 years (range 5-85). The most common mechanism of injury was assault (26 patients). Average injury-eye assessment time was 4.96 weeks, 65% were seen within 2 weeks of referral. Average injury-surgery/discharge time was 9.04 weeks (range 1.14-43.86). 87% of patients had fractures and 89% of patients underwent CT. 22% had ocular injury with 38% requiring surgery/laser. 23% of patients had enophthalmos, 16% ocular dystopia and 34% ocular motility problems. 33% had fracture surgery and 3 patients required revision surgery.

Conclusion:

“Hub and spoke” trauma networks were formed nationally following recommendations made in 2000. Despite this, there is relatively paucity of UK orbital trauma epidemiology data. Our data is comparable to international data but with some important differences. We are liaising with the BAOMS Trauma Group to form national guidelines for ophthalmic assessment of orbital trauma.

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Abstract Number: 528

Temporal Artery Biopsy by Ophthalmologists - A three year study

Author: **Vasuki Gnana Jothi** (*eposter presentation*)

Purpose:

Does Temporal artery biopsy (TAB) aid in the management of patients with temporal arteritis (TA) and what is the outcome of biopsies performed by ophthalmologists?

Methods:

This study was performed as a retrospective audit which includes all biopsies performed by ophthalmologists

from February 2011 to May 2014. Data was obtained by review of patient notes.

Results:

Eighty two biopsies were performed by Ophthalmologists which included referrals from rheumatology and ophthalmology. 44% of temporal artery biopsies were performed by Oculoplastic consultants. 65% had visual symptoms at presentation.28% of biopsies were diagnostic of TA, normal in 53.2 %, equivocal in 11.4%, alternate diagnosis made in 3.7% and other tissue was biopsied in 3.7%.Length of biopsy specimen was 10 mm and more in 38% of cases only.The majority of patients continued on steroids despite a normal biopsy based on clinical grounds.TAB does not make a difference in management of TA in 83.6% of patients.Patients with a strong clinical diagnosis of GCA with an ACR (American College of Rheumatology) criteria>/= 3 without a biopsy, do not need a TA biopsy to confirm the same. No complications of biopsy were encountered.

Conclusion:

The overall yield rate for biopsy of temporal artery is 96%. Oculoplastic surgeons perform a large number of TA biopsies compared to other ophthalmologists.TAB has changed management only in a very small percentage where histopathology ruled out TA or diagnosed TA. In majority of cases it does not contribute to patient management, although it is still very useful to obtain a diagnosis. Clinicians need to assess the need for biopsy based on clinical and biochemical features. The length of biopsy specimen could be improved to increase the sensitivity.

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Abstract Number: 531

Evaluation of VITOM: A High Definition Video Exoscope for Intraoperative Extraocular Imaging

Author: **Fariha Shafi** (*eposter presentation*)

Purpose:

The ideal video equipment for intraoperative extraocular imaging should offer high definition footage of surgical anatomy whilst maintaining sterility of surgical field. We report our experience of the VITOM exoscope system as an effective intraoperative video imaging and teaching modality for extraocular surgery.

Methods:

VITOM (Karl Storz Endoscopy, Tuttlingen, Germany) is a specially designed exoscope mounted onto a versatile mechanical arm. It is attached to a high definition (HD) digital camera displayed on a HD video monitor and slave screen via a standard endoscopy stack. This technology has been used in other surgical subspecialties, but never in ocular or extraocular surgery. VITOM was evaluated by four surgeons during surgery for ptosis, lid malposition, periocular malignancy, and strabismus. Image quality, VITOM handling, ease of use, ability to maintain sterile field and value as teaching aid were evaluated. Theatre layout will be shown as part of the presentation along with representative videos and images from the VITOM system.

Results:

The consensus of opinion was that image quality was excellent. Surgeons found VITOM easy to use, and agreed it provided excellent still and video images of the surgery. Trainees and medical students felt that imaging aided their understanding of surgical anatomy and operative steps. Theatre staff perceived improved operation flow through better visualisation of the procedure.

Conclusion:

VITOM is an excellent intraoperative video imaging and teaching tool allowing the entire theatre team to visualise

surgical anatomy and operative steps whilst maintaining a sterile field. Videos can be edited in real-time and the system allows accurate documentation of surgery.

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Abstract Number: 532

Eyelid malignant melanoma metastasizing to contralateral eyelid

Author: **Cornelius Rene** (*eposter presentation*)

Purpose:

Malignant melanoma (MM) of the eyelid is rare representing 1% of malignant tumours of the eyelid and less than 1% of all cutaneous MM. It is rarer still to have metastatic spread to the contralateral eyelid and, to the authors' knowledge, this is the first reported case of such.

Methods:

Single case report

Results:

An 84-year-old woman was referred for further management of a barely excised MM of the left lower lid. The original lesion was excised by a plastic surgeon without margin control and the defect repaired with a full-thickness skin graft. Histology confirmed MM of 8mm Breslow thickness, Clark's level 5, with lymphovascular invasion, 3.5 mm peripheral margin, 1.3 mm deep margin and BRAF-V600E negative. There was no clinical evidence of recurrence in the skin graft, no regional lymphadenopathy and staging CT (abdomen, pelvis, thorax) was clear.

The skin graft was excised down to periosteum with a 5mm peripheral margin. However, at surgery a small nodule of recurrent MM was evident on the deep aspect of the graft. After clearance was confirmed, reconstruction was performed 3 days later using a palmaris longus tendon sling and radial forearm flap.

Six-months later, she developed a 16mm pigmented nodule on her right lower eyelid/upper cheek without regional lymphadenopathy but repeat staging CT scans revealed multiple metastases in her lungs, liver, kidney and pelvis. Due to the advanced nature of the MM palliative treatment was advised.

Conclusion:

MM has the highest mortality rate of any primary skin malignancy. Metastatic spread to skin, subcutaneous tissue and lymph nodes predominate. The eyelid is an uncommon site for metastases. From the eyelid it can spread locally, involving conjunctiva, or metastasize mainly via the lymphatic channels. However, a primary eyelid MM spreading to the contralateral eyelid, even in the context of widespread distant metastases, has not been previously described.

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Abstract Number: 533

An Unusual Cause of Wound Dehiscence: Kodamea Ohmeri

Author: **Huw Oliphant** (*eposter presentation*)

Purpose:

We present a case of a 56 year old female who underwent excision and subsequent reconstruction a biopsy proven lower eyelid basal cell carcinoma, which was complicated by wound dehiscence caused by a fungal

infection of kodamea ohmeri. This unique case provides the learning point that one must always keep an open mind with regards to more rare surgical site infections.

Methods:

As indicated the patient underwent a lower lid excisional biopsy and reconstruction, consisting of a free hughes flap, along with a rotating autograft from the upper eyelid skin.

Results:

One week following reconstruction the patient went abroad to Mexico, during which time the surgical site became painful and red. She also developed areas of redness on the left side of her face which were distant from the original surgical site.

At two weeks the surgical site dehisced, with peri-orbital cellulitis and satellite lesions on the face. This will be demonstrated with clinical photographs. The patient was commenced on both topical and systemic antibiotics, and underwent repair of the wound dehiscence. Following a swab of the conjunctival surface, the organism Kodamea Ohmeri was grown. The patient was commenced on systemic voriconazole and topical amphotericin, with subsequent resolution of the surgical site infection.

Conclusion:

Kodamea Ohmeri is a rarely reported fungal pathogen most commonly seen in immuncompromised patients, and the critically ill. Whilst Kodamea Ohmeri has been reported in lower limb cellulitis, this to our knowledge is the first case involving the eye, and specifically contributing to wound dehiscence following reconstruction of the lower eyelid.

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Abstract Number:535

Paraneoplastic Enlargement of Superior Rectus-Levator muscle Complex secondary to Thyroid Carcinoma

Author: **Amun Sachdev** (*eposter presentation*)

Purpose:

The authors describe a male patient who was diagnosed with papillary thyroid carcinoma (Thy Ca) following investigation for an enlarged superior rectus-levator muscle complex. This is the first reported case of paraneoplastic extraocular muscle (EOM) enlargement associated with thyroid malignancy.

Methods:

Clinical, radiological and histological findings are presented.

Results:

44-year old male had previously been assessed for a left superior orbital mass involving superior rectus and lacrimal gland. Orbital biopsy and whole-body computed tomography (CT) were negative for any pathology. He presented five years later with right upper lid swelling. On clinical examination, he had right-sided 2mm non-axial proptosis and diplopia in downgaze. Orbital CT revealed enlarged right superior rectus-levator muscle complex. Blood tests confirmed low levels of thyroid stimulating hormone and normal levels of thyroid hormones. All other blood tests were normal. He was further investigated with Positron Emission Tomography-Computed Tomography (PET-CT) which showed focal uptake within a small thyroid nodule, but no increased activity within the EOM. This suggests a paraneoplastic EOM enlargement rather than metastasis. Fine needle aspiration of thyroid nodule confirmed Thy Ca. The patient underwent total thyroidectomy followed by radioactive iodine therapy. Histology confirmed papillary Thy Ca.

Conclusion:

This case demonstrates that EOM enlargement can be a presenting feature of malignancy and a paraneoplastic cause should be considered as a differential diagnosis for non-thyroid causes of EOM enlargement. It should prompt an appropriate systemic work-up for the occult primary when all other preliminary tests are negative.

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Abstract Number: 536

Localising extraocular muscles in secondary orbital implant surgery: Our experience with the “rectus strumming technique"

Author: **Tsong Kwong** (*eposter presentation*)

Purpose:

One of the difficulties in secondary orbital implant surgery is the identification of the recti muscles. One technique was initially described by Jordan though little further data is published of surgical outcomes and complications. We would like to describe our experience of secondary orbital implant surgery using a modified version of this technique which combines visualistion of the rectus “tunnel” and digital “strumming” of the bulbar tenon’s fascia on tension to palpate the muscle belly.

Methods:

Retrospective case note analysis carried out on 27 consecutive patients who underwent secondary orbital implant surgery at a tertiary referral orbital service by a single surgeon over a 10 year period. The following data was recorded: age, gender, surgical indication, type and size of implant, number of muscles localized, follow up duration, surgical outcomes and complications. Digital pre- and post-operative photographs were analysed by an independent observer regarding orbital volume and artificial eye motility.

Results:

The commonest indication for surgery was orbital volume deficiency with the next being poor artificial eye motility. Successful surgical outcome was high with orbital volume enhancement in over 85%. Ocular motility was either unchanged or increased in over 90% of cases. Complications were relatively low with implant exposure occurring in 4 cases which were all eventually successfully treated, either by direct conjunctival closure, periosteal patch grafting or orbital implant exchange.

Conclusion:

Stretch visualisation of the rectus tunnel and muscle-belly strumming is useful in identifying recti with excellent surgical outcomes and relatively low complication rate.

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Abstract Number: 537

Paediatric orbital volume adjustment to optimise bony and adnexal development: a complex case

Author: **Sana Hamid** (*eposter presentation*)

Purpose:

A seven-year-old infant with neurofibromatosis type 1 was referred to the Chelsea and Westminster Hospital craniofacial team for management of a right retro-orbital plexiform neurofibroma and co-existent congenital glaucoma, with buphthalmos. He had no significant vision in the right eye. Management options were isolated

neurofibroma debulking, evisceration or enucleation to prevent unwanted bony and adnexal secondary changes. Studies have demonstrated the relationship of intraorbital volume and socket and soft tissue size. A mismatch of intraorbital volumetric growth on the two sides results in orbital and facial asymmetry. Removal of this tissue mass should be deferred, if possible, until the socket and soft tissue proportions reach adult size and the depleted volume should be replaced. It is postulated that the cranio-orbito-zygomatic skeleton reaches more than 85% of adult size by 5 years of age. Accurate orbital volume measurements are difficult to perform. CT based methodologies employing different software and anatomical landmarks have been available since the 1980s. Volume assessment allows comparison with adult size, informing the correct timing of orbital adjustment.

Methods:

Bilateral orbital volume measurements were made using the Mimics software from CT images.

Results:

Right and left orbits were measured at 16575.37mm3 and 10090.85mm3 respectively.

Conclusion:

Our patient proposed a challenge in selecting the appropriate timing for intraorbital debulking, evisceration or enucleation. There is a possible subsequent reduction in orbital growth leading to an unacceptable defect into adulthood. An overgrowth of the orbit beyond that of adult size due to the neurofibroma stimulus must also be prevented.

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Abstract Number: 538

Autologous Periorbital Fat Grafting for Facial-Paralysis

Author: **We Fong Siah** (*eposter presentation*)

Purpose:

To evaluate the benefit of autologous fat grafting (AFG) in improving function and volume loss-related symmetry in facial-paralysis patients and to assess patient satisfaction.

Methods:

A retrospective, noncomparative clinical audit of periorbital AFG performed on 15 patients with facial-paralysis (5M:10F). Standard photos taken pre-op were compared to post-op at 0-3 months, 3-6 months and >6 months and scored by 2 graders. Clinical parameters were noted: brow ptosis, lagophthalmos, lower lid retraction, temporal/periorbital hollowness, symmetry and MRD2. Adverse outcomes were recorded. Patient satisfaction was assessed by questionnaire-survey.

Results:

Mean age was 54.8 years (SD=15.1, range 26-76 years). A total of 16 procedures were carried out. One patient (6.3%) developed cheek cellulitis 5 days post-AFG; pre-operative lower eyelid oedema increased and persisted for 6 months in 3 (18.8%). An early significant improvement for infraorbital rim visibility (p=0.014) was obvious. AFG alone did not influence other clinical parameters. Twelve (80%) responded to the survey; Patient Satisfaction: “very satisfied” (n=4), “satisfied” (n=4), “neutral” (n=3) or “dissatisfied” (n=1); Regarding Symmetry: “very happy” (n=2), “happy” (n=6), “neutral” (n=2) or “unhappy” (n=2); Less ocular lubricants: “agree” (n=4), “neutral” (n=4), “disagree” (n=3), “strongly disagree” (n=1); Will you recommend it? “Yes” (n=11), “No” (n=1).

Conclusion:

AFG may be a useful adjunct in improving symmetry in patients with facial-paralysis. Patient-satisfaction is high

and would recommend it. Objective outcome measures are difficult to report and in isolation it is not expected to improve lagophthalmos or resolve asymmetry. Eyelid oedema may persist if present pre-operatively.

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Abstract Number: 539

Multiple primary basal cell carcinomas: risk factors, anatomical distribution, and likelihood of new primary tumors in the same location.

Author: **Jessica Lee** (*eposter presentation*)

Purpose:

To describe the characteristics of a population of patients with multiple primary basal cell carcinomas (BCCs) and identify risk factors for development of further tumors. To evaluate the likelihood of a subsequent primary BCC developing at the same anatomical site as a previous tumor.

Methods:

This is a retrospective review of all patients who had histological diagnosis of multiple primary BCCs at Hereford County Hospital between 2009 and 2014. Records of included patients were reviewed and details of the histology reports were recorded for all primary BCCs and any other skin malignancies diagnosed over the last 25 years.

Results:

Data was collected from 394 patients with 1,356 primary BCCs. Head and neck was the most common site (62%), follower by the torso (27%). Most common periocular sites were lower lid (37%) and medial canthus (24%). Risk of new BCCs increased cumulatively with the number of lesions. Average number of lesions in males was 3.8 compared with 2.8 in females. Eighty four percent of patients with more than 4 BCCs were male. Median time to histological diagnosis of a new lesion was 11 months. Greater number of BCC was associated with shorter time between episodes. Patients who had a diagnosis of other skin cancers (14%) developed an average of 5 primary BCCs, compared to 3.2 BCCs in patients without other skin malignancies. Patients with a BCC on the head or neck had 76% chance of a subsequent BCC being in the same location, compared to 17% chance for tumors of the lower limb.

Conclusion:

The probability of a new primary BCC developing at the same anatomical region as s previous BCC, varied depending on the site and the histological tumor subtype. The risk of the development of new BCCs was higher in males, patients with previous BCCs, other skin malignancies and those presenting at a younger age. These patients are likely to benefit from a complete skin examination under dermatology care.

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Abstract Number: 540

The use of remifentanyl as a single agent in sedation for oculoplastic surgery

Author: **Adriana Kovacova** (*eposter presentation*)

Purpose:

The use of intravenous sedation is a common practice during peri-ocular local anaesthetic injection and oculoplastic surgery. Commonly used propofol can cause haemodynamic instability and sneezing. This study investigates the effectiveness and safety of remifentanyl as a single agent.

Methods:

Patients from 47 consecutive oculoplastic procedures who had intravenous sedation with remifentanyl were prospectively recruited. Data collected include patient demographics, remifentanyl concentration, and level of sedation. Patients had routine intraoperative anaesthetic monitoring. They were interviewed post-operatively to assess presence of recollection, stress, level of pain and if they would have the same anaesthetic again.

Results:

41 patients underwent 47 procedures, 35 eyelid procedures and 12 DCRs. At the time of local anaesthetics injection the average concentration of remifentanyl was 4.72ng/ml and the average Observer Assessment of Alertness and Sedation (OAAS) was 4.85. All patients were haemodynamically stable throughout and 3 had transient oxygen desaturation. 42 patients recalled the injection. The average pain score was only 1.34/10. No patient had sneezing. 3 patients experienced pain during the operation, 4 patients had nausea and 3 patients felt stressed. 37 patients out of 41 would have the same anaesthetic again.

Conclusion:

Remifentanyl as a single agent for intravenous sedation for oculoplastic procedures has not previously been reported. Our study has shown that it is safe and effective with a high level of patient satisfaction. It has confirmed that opioids may have a protective effect against the sneezing reflex and the main side effect of respiratory depression has not shown to be clinically significant.

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Abstract Number: 541

Endoscopic Dacryocystorhinostomy in Children

Author: **Thomas Jackson** (*eposter presentation*)

Purpose:

To present data from 11 years experience of endonasal dacryocystorhinostomy (DCR) in children undertaken by 2 surgeons at a tertiary referral centre

Methods:

All cases of endoscopic DCR undertaken in patients under 18 years of age were identified from the computerised surgical log. Case notes and letters were reviewed to retrospectively collect data

Results:

Between September 2003 and February 2015, 25 endoscopic DCRs were performed on 21 patients. The average age at surgery was 10 years (range 2-17 years). 80% had placement of stents at the time of surgery which were removed after an average interval of 4 months (range 2-8 months).

80% were successful based on resolution of symptoms. Further subdivision showed success to be 83% in patients <10 years and 77% in patients ≥10 years. The 20% of patients with ongoing symptoms after endoscopic DCR went on to have further surgery with ultimate resolution of symptoms. There were no intra-operative or post-operative complications

Conclusion:

Our results indicate that endoscopic DCR is a safe and effective operation in children

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Abstract Number: 542

Significance of early postoperative eyelid position on late postoperative result in Muller's muscle conjunctival resection surgery.

Author: **Daniel Rootman** (*eposter presentation*)

Purpose:

Following Muller's muscle conjunctival resection (MMCR) surgery eyelid height change at an early stage can be suboptimal. The purpose of this investigation is to understand the relationship between these early results and late outcome.

Methods:

All cases of MMCR surgery performed over a 10-year period at a single institution were screened for entry. Patients with previous or concurrent upper eyelid, orbital or eyebrow disease or surgery were excluded. Marginal reflex distance (MRD) was calculated based on photographs utilizing public domain software. Measurements were made at baseline, 1 week postoperatively and at 3 to 12 month follow up. The sample was split into those that had an early change of greater than 0.5 mm and those that did not. Repeated measures ANOVA was performed.

Results:

Ninety eight patients were included in the analysis, of which 65% were female. Mean length of follow up was 4.5 (+/- 2.25) months. Individuals who had <0.5mm change in MRD at early follow up (n=45) tended to have a higher preoperative MRD (0.77mm, $p<0.05$), and a lower early postoperative MRD1 (-1.22, $p<0.05$). The final MRD was not significantly different between the two groups. Within and between subject ANOVA effects were statistically significant ($p<0.05$).

Conclusion:

Although early postoperative MRD can change by less than 0.5mm in almost half of patients, these individuals do not have a significantly different MRD outcome. The process of MRD elevation in MMCR surgery is dynamic and requires patience on the part of physician and patient alike in making final assessments of success. This relationship tends to argue against a mechanical mechanism for MMCR surgery.

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Abstract Number:543

Extraocular extension of a choroidal melanoma simulating optic neuritis

Author: **Sarah Chamney** (*eposter presentation*)

Purpose:

The aim of this case report it to highlight the rare but serious condition of orbital extension of a small choroidal melanoma simulating optic neuritis

Methods:

39 year old female was referred by her optician with recent onset blurred vision in her right eye and discomfort on down gaze. Her vision was 6/6-2 and 6/5. She had no RAPD, her colour vision was full and her visual fields were full to confrontation. Dilated fundal examination showed that her right optic disc was swollen. Her retina was otherwise normal. She was diagnosed with a right optic neuritis and went on to have an MRI in a private facility which showed multiple periventricular white lesions consistent with demyelination. The patient was seen by a neurologist and started on interferon treatment for presumed multiple sclerosis. Her vision however did not improve and 3 months after presentation she was documented to have an RAPD and loss of the right superior hemi field on formal visual field testing. Her optic disc remained swollen. One month after this she developed a

painful red right eye with decreased vision. Dilated fundal exam revealed a right pigmented choroidal mass, inferior to the right optic disc. Subsequent MRI scanning showed a rounded, well defined soft tissue mass in the intraconal space in the right orbit which seemed to originate from the posterior margin of the globe. A review of her initial MRI scan showed that a smaller mass had been present but not commented on.

Results:

This was a case of a choroidal melanoma which had initially extended into the orbital cavity and compressed the optic nerve. The patient went on to have a modified enucleation. Pathology showed orbital extension > 5 mm , >90% epitheloid cells, closed loops, monosomy of chromosome 3 and gain in chromosome 8 (high risk tumour). PET scanning showed lung and left femoral head metastases.

Conclusion:

This is a rare condition but should be considered in patients with optic neuritis whose condition does not fit with the normal time course

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Abstract Number: 544

The successful use of Hydrocolloid dressing in a child with excessive eyelid scarring due to chalazion

Author: **Sarah Chamney** (*eposter presentation*)

Purpose:

The aim of this case report is to highlight the successful use of hydrocolloid dressing in reducing scarring of the eyelids following scarring due to chalazion.

Methods:

: A 7 year old girl presented with a 3 month history of a right lower eyelid chalazion which had resulted in excessive scarring and retraction of the lower lid. This scarring resulted in a v shaped distortion of the lower lid and excessive inferior scleral show. The affected skin was red. The child underwent examination under anaesthetic and had the chalazion incised. She was treated with a course of oral erythromycin and topical chloramphenicol. 1 week after the surgery a hydrocolloid dressing (brand name Granuflex) was applied to the area for 4 weeks

Results:

The dressing resulted in a massive improvement of the lid scarring

Conclusion:

The use of hydrocolloid dressing helped in the management of this difficult case and was used without difficulty or side effects in a paediatric patient.

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Abstract Number: 545

Ultrasound guided intralesional bleomycin injection as a treatment modality for orbital lymphangioma

Author: **David Meyer** (*eposter presentation*)

Purpose:

Orbital lymphangiomas are difficult to treat. Recently our group reported a case series of orbital lymphangiomas where intralesional bleomycin (IB) was successfully used after other measures have failed. We now describe our updated technique where intralesional bleomycin injection is assisted by high-resolution orbital ultrasound guidance.

Methods:

A single case will be used to describe and demonstrate the technique. Pre- and post-treatment photographs and clinical assessments will be presented. Treatment was performed on a 4-8 weekly basis until satisfactory clinical endpoints were achieved, using the following technique: An initial ultrasound examination of the orbit and tumor is performed. With the aid of sedation, a needle is placed in the center of the tumor under ultrasound guidance. After negative aspiration, a solution containing 1 international unit of bleomycin per ml saline together with 2 percent lignocaine is injected. The spread of the injectate is observed on ultrasound and further injections are performed as necessary to assure distribution throughout the tumor. The total volume injected is limited to the volume that the surgeon estimates as the maximum safe volume for the particular orbit.

Results:

The tumor was clearly visualized with ultrasound imaging. Needle placement was accurate and easy. Injection of bleomycin could be guided and spread through the tumor confirmed. Intralesional bleomycin induced significant regression with marked clinical improvement and reduction in tumor size of all oribital lymphangiomas treated this far. No damage to the optic nerve or vision was recorded.

Conclusion:

Based on our experience, we propose that high-resolution ultrasound guided intralesional bleomycin could be considered as an effective treatment modality in orbital lymphangiomas not responding to traditional treatment.

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Abstract Number: 546

The use of phenylephrine in preoperative evaluation of ptosis: a national survey of BOPSS members

Author: **Michael Mota** (*eposter presentation*)

Purpose:

To assess current practice using phenylephrine (PE) drops by British Oculoplastic Surgery Society (BOPSS) consultants in the surgical management of ptosis.

Methods:

All UK consultant BOPSS members were invited to participate in an e-survey in Dec 2014, consisting of 7 MCQs relating to the use of PE in the management of ptosis. Inclusion criteria included the use of PE in primary adult surgery in patients with involutional aetiology and normal levator function.

Results:

53 BOPSS consultants (42%) completed the survey, of which 76% perform anterior approach levator advancement (APLA) as the first-line option. 25 consultants (47%) use PE, with 77% using 2.5% as opposed to 10%. 77% of consultants use PE to illustrate the predicted outcome of surgery for the patient's benefit and 65% modify their approach on the basis of the test. If PE raises the ptotic eyelid >2mm those using APLA reduces to 14%, with majority using a posterior approach including 59% using a mullers muscle-conjunctival resection (MMCR) and 27% using the white line advancement (WLA). In cases where PE is less effective (<2mm increase

in eyelid height) 46% use APLA, 33% MMCR and 21% WLA. If PE induces no improvement 76% use APLA, 8% MMCR and 16% WLA. If PE induces a contralateral ptosis 79% perform simultaneous bilateral surgery.

Conclusion:

Less than half of BOPSS consultants use PE in the management of involutional ptosis, of which two thirds will alter their surgical approach based on the test. The majority of consultants will switch from an anterior approach to the MMCR approach when the PE test is strongly positive. Over 20% of consultants still perform unilateral surgery despite eliciting a contralateral ptosis with PE.

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Abstract Number: 547

Our experience in the management of solitary fibrous tumour of the orbit

Author: **Aneesa Nazreen Rahim** (*eposter presentation*)

Purpose:

To present the clinical manifestations, radiological,histopathological features and management outcome of patients with orbital SFT

Methods:

Retrospective interventional case series of 4 patients presented with unilateral painless proptosis.

Results:

Four patients with solitary fibrous tumour were reviewed.There were 2 female and 2 male patients.Age at diagnosis ranged from 24 years to 80 years.The duration of symptom ranged from 2 to 4 months.The most common clinical presentation was unilateral painless axial proptosis(2),non-axial proptosis (1) and upper eyelid swelling (1).Two cases had restricted ocular movements;one patient had optic nerve compression.One patient had comorbidity of parotid gland pleomorphic adenoma treated with radiotherapy. All patients underwent computed tomography.Three patients had extra conal mass with lacrimal gland enlargement,one patient showed both extra and intra conal involvement.All patients underwent excision/debulking biopsy of the lesion.One patient had complete excision,three had incomplete resection and 2 of them required further excision.Histopathology and immunohistochemical study showed lesions were positive for CD34 and BCL-2 in 4 and vimentin positive in 2.Two patients had recurrence of lesion in 2 years,required further debulking surgeries.One patient received radiotherapy.No surgical complication was noted.

Conclusion:

Orbital SFT is a rare mesenchymal tumour rarely involves the orbit.The diagnosis of orbital SFT cannot be made in certainty without immunohistochemical studies.Complete excision is the recommended treatment as there is a high risk of local recurrence after incomplete excision.As there is no conclusive evidence supporting benefit of adjunctive radiotherapy or chemotherapy.

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Abstract Number: 548

Management of ptosis in patients with myotonic dystrophy

Author: **Aneesa Nazreen Rahim** (*eposter presentation*)

Purpose:

To review the clinical features and management of patients affected by ptosis in myotonic dystrophy.

Methods:

A retrospective interventional case series of patients with ptosis secondary to myotonic dystrophy over a ten year period was made in a tertiary oculoplastics practice

Results:

Eighteen patients with myotonic dystrophy presented with ptosis were identified. There were 8 females and 10 males with the mean age of 54 years. The levator function was between 4 and 12 mm. 10 patients with ptosis obscuring the visual axis and marginal reflex distance <2mm were corrected surgically. Eight patients were managed conservatively. 7 patients in our series underwent bilateral frontal brow suspension and 3 patients had bilateral levator surgery. The mean follow up was 20 months. 2 out of 3 patients who had levator surgery had recurrence of ptosis and required brow suspension.In our study group no recurrence was noted after brow suspension. The overall success rate was 80%. Only one patient required release of suspension for lagophthalmos. 3 out 10 patients required regular lubricants for mild corneal exposure.

Conclusion:

Frontalis suspension is a safe and effective procedure for ptosis with minimal levator function and provides good long-term results with a low complication in this sub group of progressive muscle dystrophy.

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Abstract Number:549

Fibrin sealant-augmented excision of anophthalmic socket cysts

Author: **Gordon Lau** (*eposter presentation*)

Purpose:

To describe a novel surgical technique for excision of anophthalmic socket cysts.

Methods:

We report a case series of three patients managed by a tertiary referral specialist socket clinic with unstable or uncomfortable ocular prostheses due to socket cyst.
Under general anaesthesia, fibrin sealant was injected into the cyst cavity. The resulting solidified sealant and cyst wall were excised en bloc.

Results:

There has been no recurrence of cyst formation in all three patients who had socket cysts removed using this technique. Duration of follow-up ranged from six months to three years. There were no complications related to the surgery or fibrin sealant usage.

Conclusion:

Intracystic fibrin sealant injection aids accurate intraoperative delineation of a cyst's extent, and minimises collateral damage to the socket. Residual cyst lining is thought to promote cyst recurrence. All three patients in this case series successfully resumed wearing their ocular prostheses, with no socket cyst recurrences.

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Abstract Number:550

Orbital and ocular amyloidosis:clinical features and management

Author: **Aneesa Nazreen Rahim** (*eposter presentation*)

Purpose:

To present the clinical manifestation and management outcome in patients with ocular and orbital amyloidosis.

Methods:

Retrospective, case notes review of 6 patients

Results:

The study included 6 patients (3 male,3 female) with the mean age of 58 years presented to our unit with eyelid swelling(2),proptosis(1),entropion(2)and ocular discomfort(1).The mean duration of symptom was 10 months.2 patients had systemic amyloidosis prior to ocular involvement.For 4 patients the primary presentation was in the eye. Biopsy was carried out in all patients except one patient with bilateral lid puffiness who had systemic amyloidosis.The 4 cases with primary ocular lesion were investigated for systemic involvement and one patient was diagnosed with systemic involvement.All patients were referred to National amyloidosis centre.The main modality of treatment was debulking surgery. The mean follow up time was 26 months. Two patients with systemic amyloidosis with orbital involvement showed progression of disease and required further debulking surgery.One patient with conjunctival amyloidosis had rebiopsy for recurrence of lesion with entropion which showed marginal zone lymphoma. No surgical complication was noted in our study group.One patient died due to systemic amyloidosis.

Conclusion:

Periocular and orbital amyloidosis presented with a variety of symptoms, depending on the location of the disease. A mass lesion was the most common presentation. Definitive diagnosis is based on the histopathological findings. Multi-disciplinary team involvement is vital in view of its systemic associations.Long term follow up is necessary since transformation to lymphoma is possible.

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Abstract Number:551

“Annulus Deep Disc Method”, a novel method frozen section alternative to Moh’s, for non-melanoma periocular skin cancers

Author: **sreedhar jyothi** (*eposter presentation*)

Purpose:

To assess the effectiveness of a circumferential complete margin frozen section analysis for non-melanoma skin cancers of periocular region. This novel technique has been developed locally due to limited local Mohs service / long waiting lists

Methods:

Two surgical techniques were employed. Annulus with deep disc for lesions of the face/periocular skin or a conventional narrow margin wedge excision for lesions from the eyelid. In the former technique a narrow margin excision of the lesion was combined with separate excision of a 1 mm thick rim of tissue of the entire peripheral margin and deep margin. The specimens were breadloafed and 6 micron thick Frozen sections of the specimens were obtained using a freezing microtome, stained and assessed real time by routine microscopy. The surgeon was then informed of the characteristics of the lesion and the clearance of various margins. Residual tissue was fixed in formalin and processed as routine

Results:

35 lid lesions, 14 medial canthus lesions, 1 lateral canthal lesion, 1 brow lesion and 19 lesions from elsewhere in the face and body were assessed. Complete excision was achieved in 98% with 0% recurrence at mean follow up of 6m (1-23m). Complete excision was achieved at first attempt in 71%

Conclusion:

The above described complete margin frozen section analysis is a novel and a useful alternative technique to Moh's in regions with long waiting times or where the facility is not available. The technique also has distinct advantages over the Moh's technique in estimating the exact clearance of the various margins, assess prognostic parameters i.e. vascular/perineural invasion and occasionally identify a second pathology

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Abstract Number: 552

Use of the Lac-Q Questionnaire to Standardise Evaluation of Dacrocystorhinostomy Success Rates

Author: **Freia McGregor** (*eposter presentation*)

Purpose:

Surgical intervention by dacrocystorhinostomy (DCR) is the mainstay for treatment of epiphora resulting from nasolacrimal duct obstruction, but currently there is no standardised scoring system to assess success rates of the procedure. Outcomes are not standardised in the literature; some using clinical findings e.g. syringing results, others quote functional improvement.
The Lac-Q questionnaire has previously been developed to evaluate outcomes after DCR procedures, but has only been used on a small number of cases. This study uses the validated questionnaire to produce a numerical figure which can be used to assess the severity of symptoms post-operatively using both eye-specific and social impact scores, thereby enhancing the ability to evaluate success rates.

Methods:

We verified the use of this questionnaire on a 2 year DCR audit at a district general hospital. Patients who underwent a DCR between 2012-2014 were identified and sent a questionnaire. 44 patients (including 12 bilateral operations) were included.

Results:

Response rate was 77% and showed a mean Lac-Q score of 2.3 representing low symptom rates post-operatively. 50% of patients undergoing DCR had idiopathic obstruction (average score 2.4), 22% had functional blockage (score 2.0), and those with a diagnosis of mucocele had the best outcome with a score of 1.75. Results also showed good correlation between clinician's documented success rates in patient notes and low Lac-Q Scores.

Conclusion:

This is a useful tool to assess outcomes after DCR surgery, and allows standardisation of success rates as not previously possible. We hope other departments will follow suit and use the Lac-Q questionnaire so a benchmark for audit can be developed.

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Abstract Number: 553

Do too many specialists spoil the patient experience?

Author: **CHIN PEY YAP** (*eposter presentation*)

Purpose:

To investigate the patient experience of a multidisciplinary Thyroid Eye Disease (TED) outpatient clinic in a district general hospital.

Methods:

Prospective patient questionnaire survey.

Results:

Twenty eight patients completed the patient questionnaire survey.96% of patients were satisfied with the treatment received for the management of TED. Patients underwent consultation with an orthoptist, ophthalmologist and endocrinologist with 96% stating a preference to be seen by all specialists in one hospital visit. During the outpatient appointment 93%of patients felt the likely course and outcomes of TED were explained to them. All patients were made aware of the treatment options available and of those who smoked all were explained the potential risks associated with progression of TED.

Conclusion:

This study demonstrates that delivery of specialist services through a multidisciplinary approach enhances patient experience. The reduction in hospital appointments and administrative time provides substantial cost savings with a more effective delivery of service.It also provides a basis to further empower patients to make informed choices and be more involved in their own care.

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Abstract Number: 554

NOVEL USE OF STAMMBERGER SINU-FOAM NASAL DRESSING AS STEROID DEPOT IN EXT/ENDO DACRYOCYSTORHINOSTOMY

Author: **sreedhar jyothi** (*eposter presentation*)

Purpose:

Stammberger Sinu-Foam® with new modification as steroid depot is a dissolvable post-op nasal dressing (intranasal splint) intended to minimize bleeding, oedema, adhesions and delay healing of the new ostium. We successfully used this novel device for our dacryocystorhinostomy cases

Methods:

The prefilled carboxymethylcellulose (CMC) fiber gel within a syringe impregnated with long acting steroid, forms viscous foam when properly mixed with sterile water, which conforms and takes the shape of the cavities. The foam could be left to dissolve slowly or could be easily debrided with gentle suction and poses less risk of aspiration compared to its predecessors

Results:

None of the patients reported post operative bleed and no other foam related complications were noted, with good long term surgical success

Conclusion:

Stammberger Sinu-foam modified as steroid carrier is a very versatile novel operative device, which could be successfully used as a nasal pack to prevent postoperative bleed and also delay adhesion formation and healing

there by improving surgical outcome

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Abstract Number: 555

A prospective outcome study of distal common canalicular obstructions using membranotomy or canalicular trephination

Author: **Pari Shams** (*eposter presentation*)

Purpose:

To prospectively evaluate the outcome of both membranous and solid distal common canalicular obstructions using endoscopic dacryocystorhinostomy (EnDCR) combined with either membranotomy or trephination and lacrimal intubation.

Methods:

Prospective, non-randomized, consecutive interventional case series. Inclusion criteria: patients undergoing EnDCR with evidence of a membranous or more solid distal common canalicular obstruction (CCO), treated with membranotomy or canalicular trephination. All patients received bicanalicular silicone intubation for 12 weeks with a minimum a follow-up at 12 months. Complete CCO was identified pre-operatively using dacryocystography and dacryoscintigraphy. Functional and anatomical success was assessed at 4 weeks and 12 months following surgery. Functional success was defined as subjective improvement of epiphora and anatomical success as the presence of a patent ostium and a positive dye test on nasal endoscopy.

Results:

Twenty-nine patients were included in the study with a mean age of 58 years. Twenty-one patients (72%) received a membranotomy and eight (28%) required trephination. At 12 months the overall combined functional and anatomical success rate was 90% (19/21) in the membranotomy group and 63% (5/8) in the trephination group. There were no intraoperative or lacrimal stent related complications.

Conclusion:

Identifying and excising distal common canalicular obstructions in association with EnDCR is associated with a high degree of functional and anatomical success, and the success of membranous obstructions may be superior to outcomes for solid obstructions within the common canaliculus that require trephination.

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Abstract Number: 556

The effects of gravity on eyelid position in adults without ptosis.

Author: **Daniel Rootman** (*eposter presentation*)

Purpose:

The current study aims to understand the effect of gravity on eyelid position for normal individuals.

Methods:

Subjects were excluded if they had blepharoptosis, a history of previous surgery, neurodegenerative or neuromuscular disease. Botulinum toxin washout period for study entry was > 5 months. Photos were taken parallel to the plane of the face, with eyes looking directly forward in primary gaze. These were captured in three postural positions: upright, supine and inverted. Measurements from the center of the pupil to the upper eyelid

margin (MRD) were made digitally and standardized to a reference scale placed on the subjects' malar eminence. Repeated measures ANOVA were utilized in the analysis.

Results:

A total of 44 eyes in 22 subjects were included in the study. The mean (SE) change in MRD from neutral in the supine and inverted positions were 0.37 mm (0.05) and 0.28mm (0.08) respectively. There was a significant main effect of position on change in MRD ($p<0.05$). Multiple comparisons revealed that MRD was greater in the upright position than in either supine or inverted posture ($p<0.01$). No significant difference in MRD was noted between supine and inverted positions.

Conclusion:

The effect of gravity on eyelid position is somewhat counterintuitive, with higher eyelid positions being evident when gravity is exerting its greatest force. Although gravity may play a role in stimulating the relative strength of tonic contraction for the protractors and retractors of the eyelid, the actively regulated musculature is able to compensate for small changes in gravitational forces.

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Abstract Number: 557

A retrospective review of paediatric ptosis at the Newcastle Eye Centre over 12 years

Author: **Yun Wong** (*eposter presentation*)

Purpose:

To review the type of surgery and outcomes of paediatric ptosis at the Newcastle Eye Centre over a 12 year period.

Methods:

A retrospective review of 40 case notes was completed. A proforma was used to extract the relevant data and a literature review was completed to provide comparable publications.

Results:

Of the 40 patients, 48 eyelids were operated on. 8 of these operations were bilateral ptosis surgeries. The mean age at presentation was 25 months and the mean age at surgery was 51 months. 60% of the operations were performed for congenital ptosis, 10% for blepharophimosis syndrome and 30% for other diagnoses.
35% had levator resection and 33% of patients had frontalis sling with gortex. Of the levator resections 18% of them were through a posterior approach. 20% of the patients went on to have a further procedure due to persistent or recurrent ptosis.
10% of patients had significant lagophthalmos, which required treatment and none developed exposure keratopathy. 2% of procedures were complicated by infection and granuloma.

Conclusion:

The outcomes of this study compare favourably with others studies in the literature using non-autogenous materials in paediatric ptosis repairs. There was no difference in reoperation rate and complication rates between levator resection and gortex frontalis sling procedures.

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Abstract Number: 558

Recovery of Bell`s phenomenon after levator resection and correlation with amount of resection

Author: **Smriti Nagpal** (*eposter presentation*)

Purpose:

To study the variability of Bell's phenomenon and time taken for recovery of normal Bell's phenomenon, in 32 cases following levator resection for blepharoptosis and to correlate it with the amount of resection

Methods:

A prospective case study was conducted on 32 patients of blepharoptosis, who underwent levator resection. The patients were > 5 years old with simple congenital ptosis, levator action ≥4mm and good Bell`s phenomenon. Patients with dry eye, previous ptosis surgery, other lid abnormalities and systemic contraindications to surgery, were excluded.Postoperative Bells' phenomenon was graded and complications like lid oedema, ecchymosis, exposure keratopathy, lid lag, lagophthalmos, if any, were noted.Patients were followed up on day 1, week 1 and then every 2 weeks for 5 mnths

Results:

We evaluated 15 male and 17 female patients with a mean age of 16.26years. 9 patients had mild ptosis, 16 had moderate and 7 patients had severe ptosis. In 30 eyes the ptosis correction was satisfactory. In 13 patients, Bells' phenomenon was good on the first post-operative day. Of the remaining, majority recovered within the first week. In two of these patients, with lid oedema and ecchymosis, inverse Bells was noted. One patient had poor Bells for upto 14 days and developed exposure keratopathy

Conclusion:

Large resections are associated with deranged Bell's, in which, recovery can be hastened by tarsorrhaphy to prevent movement induced microtrauma. Concurrent resolution of eyelid edema and Inverse Bell's suggests the latter may be due to soft tissue edema secondary to increased intraoperative manipulations. Thus a minimum tissue dissection and hemostasis during surgery is recommended to facilitate early recovery

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Abstract Number:559

Orbital emphysema – a missed diagnosis

Author: **Andre Grixti** (*eposter presentation*)

Purpose:

Orbital emphysema following blow-out fractures is well-known. We describe three cases of atypical orbital emphysema which were a diagnostic challenge.

Methods:

There were three patients whose history and clinical signs led to an initial misdiagnosis. Patient A complained of recurrent unilateral proptosis, the cause of which had remained obscure for many years, despite investigation including orbital imaging. The patient had an undiagnosed orbital blow-out fracture, and his proptosis was caused by orbital emphysema secondary to forceful sneezing. Patient B developed a tense orbit following a lid-sparing exenteration. The orbital cavity was thought to contain a post-operative haematoma and was drained but found to contain only air. Despite repeated drainage of the air and pressure dressings the orbit continued to re-inflate. Patient C developed an acute pre-septal swelling one day after a routine orbital decompression, which was originally treated as infection, but was found to be diffuse orbital emphysema.

Results:

The emphysema resolved spontaneously in the patient with the undiagnosed fracture and in the post-decompression patient, with advice to avoid forceful nose blowing. However the patient who had undergone exenteration required opening of the skin and muscle lid flaps to prevent repeated re-accumulation of air. They were left with a small sinus in an otherwise healed orbit.

Conclusion:

Any combined bony and periorbital defect in the medial wall or floor of the orbit potentially will allow air to enter the orbital soft tissue. These defects may be iatrogenic as in orbital exenteration and decompression surgery, or from traumatic injury. Awareness of this potential complication can help surgeons advise and treat patients appropriately.

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Abstract Number: 560

Correlation of the Graves' Orbitopathy Quality of Life Score with Diffusion Weighted Imaging and Clinical Activity

Author: **Farzana Rahman** (*eposter presentation*)

Purpose:

Graves' Orbitopathy (GO) patients continue to present with advanced disease prior to starting disease modifying treatment and are left with significant residual handicap. One goal of the 2010 Amsterdam Declaration is to address this care deficit. Recent published case reports suggest MRI diffusion weighted imaging (DWI) may mirror clinical activity. We wanted to examine whether it also serves a predictive function to target patients who go on to develop severe GO.

Methods:

A retrospective case study of 25 GO clinic patients who had DWI orbital imaging, correlating thyroid function, clinical activity score (CAS), GO-QOL and DWI values. Data was collected from February 2011 to February 2015 with a median follow-up of 8 months

Results:

17 patients had a low CAS and low DWI value; 12 of these had high GO-QOL score and did not develop significant disease. A higher CAS was associated with higher DWI values and a lower GO-QOL value. Similarly, reduced GO activity with reduced CAS and DWI values showed increased GO-QOL scores. A larger number of patients reported increased visual function compared to visual appearance in the GO-QOL. 5 patients had persistent low GO-QOL despite reduced CAS and DWI values. In 3 cases the high DWI values predate the rise in CAS score.

Conclusion:

DWI values correlated well with CAS and GO QOL scores. This study may offer predictive benefit that DWI is elevated prior to other disease parameters so may help clinicians target patients at high risk of developing severe GO. It may provide an objective assessment of treatment response and likelihood of relapse and may influence the use of radio-iodine treatment to control systemic hormonal imbalance.

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Abstract Number: 561

Does AdenoPlus test have a role in the Acute set-up in patients with recurrent, recalcitrant or unknown cause of conjunctivitis?

Author: **Stavroula Boukouvala** (*eposter presentation*)

Purpose:

The purpose of the study was to compare the sensitivity and specificity of AdenoPlus with viral polymerase chain reaction (PCR) at detecting adenoviral conjunctivitis in patients with recurrent conjunctivitis (group a), conjunctivitis not responding to treatment (group b) or those where the cause for conjunctivitis was not clinically apparent (group c).

Methods:

This was a prospective study of 27 patients who presented to the acute eye clinic with conjunctivitis as described above. They had AdenoPlus and viral PCR done. Patients with clinically diagnosed adenoviral conjunctivitis were excluded.

Results:

Of the 27 patients, 2 patients (7%) belonged to group a, 5 patients (19%) in group b and 20 patients (74%) in group c.

Two patients (7%) in group c, showed positive result for both tests. Four patients (15%) showed positive result for viral PCR, but negative for AdenoPlus of which 2 patients belonged to group b and 2 in group c. One patient was positive with AdenoPlus but negative on PCR, however there was a delay in sending the PCR. This patient had recurrent conjunctivitis (group a). The remaining 20 (74%) were negative for both.

Compared with PCR, AdenoPlus showed a sensitivity of 33% (2/6) and specificity of 95% (20/21), a negative predictive value of 83%, a positive predictive value of 67%, and overall agreement of 81%(22/27).

Conclusion:

The results of our study show, although AdenoPlus has got a very high specificity, its sensitivity is very low in these groups of patients and hence does not have a role as a screening tool in the acute eye clinic set-up for their initial management.

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Abstract Number: 562

Anterior segment complications of high-dose orbital radiotherapy

Author: **Sri Gore** (*eposter presentation*)

Purpose:

To assess the incidence of anterior segment complications in a cohort of patients receiving high-dose orbital radiotherapy.

Methods:

Retrospective review of 35 patients who received unilateral fractionated high dose (>50 Gy) orbital radiotherapy between 1997 and 2012.

Results:

35 patients had a diagnosis of lacrimal gland carcinoma, and one had microcystic adenocarcinoma. Radiotherapy dosages ranged from 50 Gy to 75 Gy. Median age of treatment was 49 years with a mean follow-up of 41 months

(range 29 – 82 months).
All patients developed ocular surface symptoms requiring topical lubricants. Six patients (17%) developed severe corneal toxicity post-radiotherapy, these including corneal perforation (3), severe corneal scarring (2), and a non-healing epithelial defect requiring a conjunctival flap (1). The intervals between completion of radiotherapy and corneal perforation were 4, 24 and 30 months respectively (mean 19 months), this occurring despite punctual occlusion in 2 of the 3 patients. Tectonic keratoplasty was performed on 2 perforated corneas after failed repair with glue.

Conclusion:

High-dose orbital radiotherapy can cause a severe ocular sicca syndrome and lead to corneal melting and perforation. Based on these data, we advise close monitoring of the ocular surface for at least 3 years after radiotherapy treatment.

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Abstract Number: 563

Patient satisfaction following DCR under local anaesthetic

Author: **David Armstrong** (*eposter presentation*)

Purpose:

DCR has traditionally been performed under general anaesthetic, however there has been a move towards local anaesthetic recently. The advantages of local anaesthetic over general are many fold, however patient comfort is of paramount importance and therefore this audit sought to assess patient satisfaction following DCR under local anaesthetic with sedation.

Methods:

Data was retrospectively collected for a 4-year period (2011-2015) from all available patients who underwent an external DCR under LA with intravenous sedation by one surgeon and one anaesthetist, using a standardised technique. A standardised patient questionnaire was used and patients were enrolled and their outcomes assessed during a telephone interview.

Results:

The age range of patients on whom data was collected was 50 - 90 years (average 71 years). Three patients had contralateral DCR on separate occasions, all elected to have LA for their second side surgery. Over 90 % of patients described the surgery and the performed technique as an outright success, the two patients who found the technique unacceptable stated this was due to levels of intra-operative awareness and discomfort

Conclusion:

DCR performed under LA with sedation in this cohort appeared to be generally well tolerated. Interestingly, both patients who commented on some mild discomfort during the procedure stated that they would not choose a general anaesthetic if offered the procedure again. There remains a group of patients for whom the anxiety associated with local anaesthetic and DCR means that the option for GA is likely to remain. The results of this audit have helped to create a clear, evidence based pathway for future anaesthetic provision when performing DCR procedures in the department.

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Abstract Number: 564

Retrospective review of rehabilitative orbital decompression in Thyroid-Associated Orbitopathy using the swinging eyelid approach.

Author: **Xiner Guo** (*eposter presentation*)

Purpose:

Thyroid associated orbitopathy (TAO) is an autoimmune inflammatory disorder of the orbit. Orbital decompression (OD) with or without orbital fat excision is considered for patients with disfiguring proptosis and exposure keratopathy. This study aimed to determine the safety and efficacy of rehabilitative OD via the swinging eyelid approach. The relationship between amount of orbital fat removed and proptosis reduction was also evaluated.

Methods:

We conducted a retrospective review of 90 patients with TAO who had undergone single or balanced 2-wall OD by two surgeons between 2005 and 2014. The amount of orbital fat removed, mean reduction in proptosis and post-operative complications were evaluated.

Results:

All patients were operated one eye at a time. Preliminary results from 26 patients (43 eyes) show a significant reduction of proptosis with a mean reduction of 4.5mm. The mean amount of orbital fat removed was 1.9ml. There is a significant correlation between reduction in proptosis and volume of orbital fat removed (p-value = 0.0049). 3 patients experienced new-onset diplopia after balanced 2-wall OD. No patient experienced visual loss after 12 months follow-up. Other published results are compared in the review.

Conclusion:

Rehabilitative OD for TAO using the above-mentioned technique is effective and well tolerated by patients. The absent usage of a standardised exophthalmometer remains a limitation in our study. The amount of fat excised is correlated to the reduction in proptosis, but is also affected by the number of walls decompressed.

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Abstract Number: 565

Use of a Punch for Punctoplasty

Author: **Anuradha Jayaprakasam** (*eposter presentation*)

Purpose:

Punctoplasty is traditionally and most commonly performed as a 3 snip procedure, although 2 and 1 snip procedures have been described (Jones 1962). Some patients are still encountered who have had a longitudinal incision along a large length of the horizontal canaliculus, as originally described by Bowman in 1853. Most surgeons use St Martin's forceps and Vanna scissors to create a punctoplasty. Punctoplasty using a punch has previously been described (Reiss punctal punch 1991, Kelly punch 2011) but this method had not been popularised. This presentation serves to highlight an alternative method of performing a physiologically desirable punctoplasty, with simplicity and ease using a punch such as a Kelly punch.

Methods:

In our unit, punctoplasty is frequently performed using a Kelly punch, particularly when upper and lower lid punctoplasty is required. This punch is commonly used in trabeculectomy surgery.

After local anaesthetic injection, the punctum is dilated using a punctal seeker/dilator, the upper eyelid is distracted away from the globe with the non-dominant hand. The Kelly punch is inserted into the newly dilated punctum with the dominant hand such that when the punch is engaged, a segment of posterior ampulla is

removed. The procedure can be repeated 2-3 times to create the size of punctum desired.

Results:

This procedure is found to be ergonimically efficient, without the need for an assistant, which would otherwise be necessary, particularly for upper lid punctoplasty. It is equally effective in creating a lower lid punctoplasty. The cost is not prohibitive, as the cost of a disposable Kelly punch is one third of the cost of a disposable St Martin's forceps and Vanna scissors.

Conclusion:

The use of the Kelly punch ensures that the punctoplasty is small, more round, and arguably more physiological in appearance, therefore likely to better maintain the lacrimal pump mechanism and capillarity of tear flow. It has ergonomic simplicity of use, and is easily availability in an ophthalmic theatre.

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Abstract Number: 566

Mucoepidermoid Carcinoma in Nasolacrimal Sac and Orbit

Author: **Egle Rostron** (*eposter presentation*)

Purpose:

Our purpose is to share experience in managing rare presentation of mucoepidermoid carcinoma involving the orbit. Mucoepidermoid carcinoma is a malignant epithelial tumour most typically seen arising from salivary glands. It has also been reported in other organs such as lacrimal gland, bronchi and thyroid, but reports of it arising from nasolacrimal sac are exceedingly rare. They may mimic chronic inflammation and recurrent dacrocystitis resulting in delay of diagnosis and treatment. Other presenting features may be those relating to the tumour compression and invasion of the orbit as the tumour advances, as in a case described by us.

Methods:

We report a case of 70-year-old male patient who initially presented with reduced vision in the left eye and symptoms of dacrocystytis. Further examination revealed a subchoroidal elevation and an ultrasound (B-scan) confirmed a solid subretinal mass. Further imaging with CT has demonstrated an irregular mass in the inferomedial quadrant of the orbit. The mass appeared to have arisen from the nasolacrimal sac and caused invasion of the orbital structures including the globe as well as destruction of maxillary bone. Histology upon biopsy revealed mucoepidermoid carcinoma.

Results:

The patient underwent large left sided mid facial resection including orbital exenteration and resection of left maxilla and left nose with access neck dissection and free rectus abdominis flap.

Conclusion:

Mucoepidermoid carcinoma is a rare tumour to originate from nasolacrimal sac. When the tumour is advanced extensive resection may be necessary. Early suspicion and diagnosis is the key in patient management. Multidisciplinary team involvement is crucial.

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Abstract Number: 567

Complete remission of a medial canthal basal cell carcinoma with Vismodegib

Author: **Chris McLean** (*eposter presentation*)

Purpose:

Oral vismodegib is a new therapy for the treatment of metastatic or locally advanced basal cell carcinoma. It may be considered for the treatment of suitable patients with basal cell carcinoma that threatens the eye.

Methods:

An 84 year old man presented with a 12mm diameter basal cell carcinoma that involved the full thickness of the lower and upper eyelids and adjacent conjunctiva. His case was considered by the local Skin Cancer Multidisciplinary Team. Due to a previous treatment of a tumour on the adjacent nasal skin with radiotherapy, further radiotherapy was ruled out. A decision made to start treatment with vismodegib 150mg once daily with the aim of carrying out a wide excision of the remaining tumour as soon as any reduction in tumour size had plateaued.

Results:

There was a steady and dramatic reduction in the size of the basal cell carcinoma over a ten week period. A wide excision of the tumour site was arranged, with the aim of removing any remaining, viable tumour. The surgery was carried out under frozen section control and the defect repaired with a glabellar transposed flap. Histological analysis reported a complete absence of any remaining basal cell carcinoma from the excised tissue.

Conclusion:

Vismodegib is a new treatment for locally advanced and metastatic basal cell carcinoma. In this case, treatment for ten weeks resulted in complete tumour remission. This was confirmed with subsequent histological analysis.

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Abstract Number: 568

Fungal orbital disease: a case report

Author: **Orla McNally** (*eposter presentation*)

Purpose:

Sino-orbital-orbital fungal disease in immunocompromised patients is a rare and potentially fatal clinical entity. The purpose of this case report is to describe the clinical features, treatment and outcome in a case of invasive sino-orbital aspergillosis.

Methods:

A 79 year old gentleman with a background history of Type 2 diabetes and chronic rhinitis presented with reduction in vision, proptosis and restriction of eye movement. Computed tomography of orbits showed severe maxillary sinusitis with erosion of right orbital floor but no subperiosteal abscess.

He was initially treated with standard intravenous antibiotic regime but failed to respond and subsequently clinical condition deteriorated. He required surgery and treatment with amphotericin B for chronic invasive fungal sinusitis.

Results:

Clinical improvement in vision and restriction of eye movement following treatment.

Conclusion:

This case illustrates the need to consider other aetiologies in immunocompromised patients not responding to standard antibiotic treatment. Prompt recognition of fungal sino-orbital disease can be both vision and life saving.

It highlights the importance of reviewing previous radiological investigations and utilising the Electronic Care Record (an electronic patient information database) to aid in diagnosis.

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Abstract Number:569

Outcome of posterior approach white-line advancement ptosis repair: the Preston experience.

Author: **Amreen Qureshi** (*eposter presentation*)

Purpose:

To assess the efficacy and predictability of posterior approach white line advancement ptosis repair.

Methods:

Retrospective analysis of all patients with primary aponeurotic ptosis undergoing posterior-approach repair using white-line advancement between January 2010 to September 2014. We use the previously published technique whereby after dissection of the Müller's-conjunctiva composite flap, the levator aponeurosis is advanced with double armed sutures through the white line, then through tarsus and out through skin.

Results:

150 ptosis procedures in total during this period of which 82 eyelids of 48 patients were eligible for inclusion. There were 15 males and 33 females. The mean age was 67.5 years (range 20 to 89 years). Minimum follow up was 3 months (12-48 weeks). Of the 82 procedures, 36 were combined with a blepharoplasty. 77 eyelids achieved their desired lid height, contour and symmetry (93.9% success rate). One patient was overcorrected.

Conclusion:

We present the largest series of posterior approach white line advancement ptosis repair since it was first described in the literature. This modified approach to ptosis correction via a posterior approach has a high success rate and good cosmetic outcome.

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Abstract Number:570

Late Migration of Bio-Alcamid Filler Causing Eyelid Swelling and Granulomatous Inflammation

Author: **Michael Tsatsos** (*eposter presentation*)

Purpose:

Soft tissue fillers are increasing in popularity worldwide. With increasing use and the passage of time the number of complications reported in the medical literature have multiplied. We report a rare case of late migration of Bio-Alcamid, a permanent hydrophilic gel filler, resulting in pain and swelling in the right lower lid 8 years after injection into the both cheeks. The mechanisms of late migration are discussed.

Methods:

Case report and review of the literature. Mechanisms of late filler migration are discussed.

Results:

A 62 year old lady presented with right lower lid swelling, discomfort and mild epiphora 8 years after receiving an injection of Bio-Alcamid gel filler in both cheeks. Examination revealed a diffuse rubbery mass in the right lower lid with minimal right inferior punctal ectropion. The right lacrimal apparatus was freely patent to syringing. Surgical exploration of the right lower lid was performed and a well-circumscribed, pale lobulated mass containing a turbid gel was excised. Histological examination of the mass confirmed chronic granulomatous inflammation with fibrosis surrounding an amorphous material, confirming the clinical suspicion of late migration of the filler into the lower lid. There has been no recurrence after 3 years.

Conclusion:

Serious complications of injectable fillers occur rarely, but are increasing. They include infection, eyelid swelling, granulomatous inflammation, tissue necrosis, scarring and even blindness. Bio-Alcamid, a hydrophilic, non-biodegradable gel, is prone to migration which may present many years later leading to unnecessary investigation. Such late migration is not unique to permanent fillers, and has also been attributed to the more commonly used hyaluronic acid fillers. Practitioners should be aware of this complication.

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Abstract Number: 571

Needling as a means of choosing the most appropriate incision site in chalazion surgery

Author: **John BEARE** (*eposter presentation*)

Purpose:

With small chalazia where there is no obvious tarsal conjunctival hyperaemia nor tarsal thinning, it can sometimes be difficult to know precisely where to make the tarsal incision during incision and curettage surgery. Probing with an orange 25 gauge needle can be very useful in these situations rather than making an unecessary exploratory incision with a blade.

Methods:

A video of the technique will be shown.

Results:

We used this technique in about 1 in 10 cases in a series of 50 chalazion cases

Conclusion:

We have found this technique to be extremely useful in occasional cases when it is not obvious as to where to make the tarsal incision.

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Abstract Number: 572

Departmental experience on efficacy and safety of three day course of megadose intravenous methylprednisolone for the management of moderately active Thyroid Eye Disease(TED)

Author: **Michail Malandrakis** (*eposter presentation*)

Purpose:

To evaluate and share our current approach on active TED

Methods:

Data from 24 patients with active TED based on MRI imaging and clinical examination were gathered. Three doses of i.v. methylprednisolone were received,1 gram each day for 3 consecutive days.
Efficacy was evaluated clinically at 4 weeks follow up and Clinical Activity Score (CAS) compared prior and after treatment.

Results:

CAS decreased by 2 points in 10 patients and by 1 point in another 9.Symptomatic overall improvement occurred in 16 over 24 patients. Following 6 months 6 out of 24 patients were treated with a second dose of IV methylprednisolone.
Major parameters of CAS (proptosis,diplopia ,EOM restriction) were improved. No significant differences noted in soft tissue involvement and retrobulbar pain.

Conclusion:

Treatment of 1 gram of I.V methyprednisolone did appear to improve patient's TED.

The need of subconsequence doses may suggest that additional treatment is appropriate.

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