BOPSS, the British Oculoplastic Surgery Society, was founded in 2000 with the aim of bringing together surgeons in the United Kingdom and Ireland who share an interest in Ophthalmic Plastic and Reconstructive Surgery, Lacrimal, Orbital and Aesthetic (cosmetic), Eyelid and Facial Surgery.

Richard Collin, Brian Leatherbarrow and Jane Olver, the Founding Executive Committee, saw the necessity for such a society as a reflection of the interest in oculoplastic surgery as a sub-speciality of ophthalmology.

Aims of BOPSS

1. To advance education, research and the quality of clinical practice in the area of ophthalmology known as oculoplastic surgery. This field comprises periocular, plastic reconstructive and aesthetic surgery, specialising in the eyelids, lacrimal system, orbit, upper and mid-face.

2. To provide an opportunity for Members to meet and discuss Oculoplastic Surgery.

3. To provide information and advice to the public in order to gain a better understanding of oculoplastic surgery.

Members

BOPSS has over 120 consultant oculoplastic surgeon members and holds an annual scientific meeting. In order to become a member of BOPSS, you need to send a written submission to the Executive Secretary. You can download the application form from the website (Membership > Application).

Prior meetings


Website

BOPSS’ website (www.bopss.org) provides continuously updated information for both its members and the general public.
Welcome to BOPSS 2012

Dear Colleague

On behalf of the 2012 Organising Committee, we have pleasure in welcoming you to the city of Leicester for the Annual Scientific Meeting of the British Oculoplastic Surgery Society.

We are delighted to have international guests speaking at this year’s meeting. Thanks to Dr Bita Esmaeli, Professor of Ophthalmology from the MD Anderson Cancer Centre, The University of Texas, Dr Santosh Honavar, Consultant Orbital & Ocular Oncologist from the LVP Institute, Hyderabad, India and Dr Allen Putterman, Professor of Clinical Ophthalmology from the University of Illinois. Their contribution to this event is invaluable and it has been a pleasure to work with them.

Once again, we would like to thank the BOPSS Committee and various members who have given their valuable time to work with the organising team to bring you this meeting. Many thanks to Ben Williams, the webmaster, for his patience, guidance and hard work. We are grateful to the contributors and authors of the free papers, rapid fire, posters and, new for this year, the video category. We feel this greatly enhances and forms a major part of the meeting. Thanks also to the reviewers and judges. Please take some time to visit the poster and video displays which are available to view on the ground floor and Mezzanine.

We are very grateful to our sponsors for their continued support of this meeting. Please visit the sponsor’s area on the Mezzanine/ground floor during the refreshment and lunch breaks.

For your convenience, the code for the Wi-fi at the Curve is thisisthecurveleicester. We have been given a reduced rate for the Rutland Street car park. Please get your car parking ticket validated at the café or box office and you will be asked to pay the reduced rate of £3.90 for one days parking.

As usual, the programme book pages are coloured blue for Thursday, green for Friday and gold for posters. We are using a single sheet for feedback. You will find this at the back of the programme, just before the meeting summary, which is on the back page. Please hand in the feedback sheet before you leave the meeting.

The Gala Dinner on Thursday evening will be held at the Space Centre, Leicester. Coaches have been organised to take you from The Curve at 6.30pm to the Space Centre. There will also be coaches to take you back to the Curve at 11.15pm, 11.45pm and midnight. During the Gala Dinner there will be opportunities to explore the Space Centre, watch a space themed show and there will be Bollywood entertainment.

We hope you enjoy the meeting and if you have any queries, please contact one of the meeting organisers. No meeting would be a success without the presence of delegates of all levels and experience - we thank you for giving up your valuable time to attend this meeting.

Raghavan Sampath, Joyce Burns and Sam Thurlow
Sponsors

Advantech Surgical

This year Advantech Surgical showcases the Endotine TransBleph and Midface devices. The TransBleph provides true rejuvenation around the eyes by combining a brow lift and a blepharoplasty in one procedure while the Midface adds volume and elevation to the cheek to take the years off.

Allergan is a multi-specialty health care company established more than 60 years ago with a commitment to uncover the best of science and to deliver innovative and meaningful treatments that help people to reach their life’s potential, through being able to see more clearly, move more freely and express themselves more fully.

Alcon Laboratories (U.K.) Limited is part of the world-wide group of Alcon companies. In April 2011 Alcon became part of Novartis to form its ophthalmic division. Still known as Alcon, this new division unites the strengths of Alcon, Ciba Vision and part of Novartis Ophthalmics portfolio into one eye care business with the capability to support the ophthalmic profession with a complete range of products and services. Alcon is one of the leading companies in ophthalmology and are involved in extensive R&D, ophthalmologist training and marketing products throughout the UK and Ireland.

Altoned are delighted to be to be associated with the 2012 BOPSS annual meeting in Leicester, where we shall be displaying some of the latest additions to our range of instruments and consumables.

Beaver-Visitec International combines a heritage of Beaver® blades, Visitec® cannulae and instruments, Merocel® fluid control products, and Wet-Field® electrosurgery products, providing a single source for trusted brands with a reputation for quality. BVI continues to focus on the development of new, innovative and reliable products for ophthalmic and specialty microsurgical procedures.

The British Thyroid Foundation (BTF) provides support and information based on reliable medical evidence and personal experience via the website, patient literature, telephone support and meetings; works closely with medical professionals and patient support groups; and provides annual research and nurse awards!

Blackwell’s Exhibitions specialises in bringing a wide range of course specific titles to medical events, often offered at below internet prices. Books are available to buy on the day or can be sent worldwide.

DGL Solutions is a specialised software provider for the private medical sector. Its comprehensive software suite provides consultants, secretaries, clinical staff and management with a total solution, from booking to billing, through diagnosis and treatment. Its software is intuitive and easy to use, enabling your practice to run more efficiently.
Malosa Medical is a specialist manufacturer of high quality single-use surgical instruments and procedure packs for Ophthalmology. With our wholly British owned Factory near Shanghai and our UK based packing and warehousing facility, we control all aspects of manufacturing – we can deliver the best quality at factory direct prices.

Karl Storz Endoscopy is a manufacturer and supplier of the highest quality endoscopes, endoscopic instrumentation and HD imaging solutions. We pride ourselves on the quality and reliability of the equipment we supply and the service we provide both pre sale in the form of educational support and post installation support.

Kestrel Ophthalmics offers a wide range of ophthalmic products from quality and innovative manufacturers. Our mission is to seek new developments in ophthalmology and make these available to UK hospitals and private clinics.

MSD Ophthalmics is a scientific leader in ophthalmology, pioneering breakthrough ophthalmic medications for more than 50 years. We are evolving ophthalmic research and expanding global outreach to improve patient care as well as developing new medicines to improve the lives of patients with a wide range of serious ophthalmic conditions.

The most advanced orbital implant:
• 21st century material
• integrated muscle anchor platform
• no tedious intra-operative preparation or wrapping
• simplified surgical procedure
• advanced ceramic surface
• Orbtex™ dramatically reduces valuable surgical time and provides the patient with the finest implant available today.
• Fully interconnected, high porosity alumina
Moorfields Pharmaceuticals have prepared pharmaceutical products in response to clinical needs for over 50 years as the manufacturing facility of Moorfields Eye Hospital NHS Foundation Trust.

We produce the widest range of ophthalmic specials in the U.K and have recently launched a portfolio of licensed products dedicated to treating dry eye syndrome and allergic conjunctivitis.

Q Medical distributes and markets a range of infection control and pain relieving products including:

- The Accufuser range of Local Anaesthetic infusion pumps for post operative pain management and potential to reduce post operative infections.
- TPOD for treatment of Pelvic fractures
- MAT Tourniquet for injuries requiring Tourniquets.
- TOUL Meditech products offering Portable Ultra Clean Air for the operating environment.

Scope Ophthalmics is delighted to sponsor the annual BOPSS congress again. Our Hylo range of sodium hyaluronate based, preservative free lubricants continue to grow in popularity with patients and we have recently launched an exciting new range of Blepharitis treatments with more, innovative new products planned in the coming months.

SD Healthcare ltd is a privately owned British company specialising in single-use micro surgical instruments and surgical devices for all ophthalmic procedures. Sourcing from all corners of the world SD Healthcare is at the forefront of ophthalmic development and innovation.

Stryker Corporation is a leader in the worldwide orthopaedic market and is one of the world’s largest medical device companies. Stryker delivers results through a wide range of capabilities including joint replacements, trauma, spine and micro implant systems, orthobiologics, powered surgical instruments, surgical navigation systems, endoscopic products as well as patient handling and emergency medical equipment.

The Thyroid Eye Disease Charitable Trust (TEDct)

TEDct aims to provide information, a sympathetic ear and support to those affected by Thyroid Eye Disease. We have a telephone helpline, produce a quarterly newsletter and hold Patient Information Meetings twice a year. Patient Information Leaflets are available for clinics.

Veni Vidi continues to bring in to the UK a number of unique and innovative products. The range of products from FCI for Epiphora and Oculo Plastics continue to improve the number of options the Ophthalmologist is able to offer their patients in order to improve the quality of care.
The Gala Dinner on Thursday 14th June will be held at the Space Centre, Leicester.

The National Space Centre is the UK's largest visitor attraction dedicated to space and space exploration, welcoming around a quarter of a million visitors each year since its opening in June 2001. It is the idea of the University of Leicester, with support from Leicester City Council. It was the subject of joint bid to the Millennium Commission as a Landmark Millennium Project for the East Midlands.

Since then the centre has hosted an amazing variety of events ranging from visits from legendary astronauts such as Buzz Aldrin, Helen Sharman, Michael Foale, and Piers Sellars to various events such as Star Wars and Doctor Who. The National Space Centre continues to evolve through the development of new galleries, Sir Patrick Moore Planetarium shows and experiences created for a diverse audience.

After Dinner entertainment will be provided by Jay Kumar Dance and will include demonstrations and fun interactive bollywood dance sessions.

This is a ticketed event: Tickets may be available, please ask at the registration desk

Thursday
14 June
08:50 WELCOME MESSAGE BY RAGHAVAN SAMPATH

09:00 FREE PAPERS / RAPID FIRE
Michele Beaconsfield, Ruth Manners

09:00 Frozen section control in periocular basal cell carcinoma – accuracy compared with paraffin section.
ONG CT, JAYARAMACHANDRAN R, MANNERS RM, TYERS AG - Salisbury, Southampton

09:10 Excision and Delayed Reconstruction for Sebaceous Gland Carcinoma (SGC)
WHILE B, TAN JHY, SALVI SM, CURRIE ZI, MUDHAR HS - Manchester, Sheffield

09:20 Clinical outcome following laissez faire approach for periocular tumours
TRIVEDI D, LAKHANI B, BURNS J, SAMPATH R - Leicester

09:30 The Manchester Mohs' Experience
BARUA A, SIN C, ATAULLAH S, LEATHERBARROW B, GHURA V, COOK A - Manchester, Salford

09:40 Upper eyelid reconstruction after tumour excision at the Royal Hallamshire Hospital, Sheffield
MAUDGIL A, UNG T, SALVI SM, CURRIE ZI, TAN JHY - Sheffield

09:50 The accuracy of microwave processing in serial excision of periocular basal cell carcinomas
RASOOL S, THAMPY R, NOLAN D - Manchester, Oldham

09:55 Sebaceous carcinoma of the eyelids our experience with 22 cases—one of the largest UK series
RAHIM AN, KUMAR P, BURNS J, SAMPATH R - Leicester

10:00 MANAGEMENT OF LACRIMAL GLAND TUMOURS
Bita Esmaeli

10:30 REFRESHMENTS WITH THE SPONSORS / POSTERS / VIDEOS

11:00 UPPER LID BLEPH/TRANS BLEPH BROW LIFT AND HOW TO HANDLE AN UNHAPPY COSMETIC PATIENT
Allen Putterman

11:30 FREE PAPERS / RAPID FIRE
Mark Wright, Soupramanien Sandramouli

11:30 Posterior approach ptosis in adult and paediatric patients
PAKROU NP, LEE RL, TAMBE KT - Nottingham

11:40 Experience of a tertiary referral centre in the management of periocular melanoma
RAHIM AN, SHAH J, KUMAR P, BURNS J, SAMPATH R - Leicester

11:50 Invasive cutaneous melanoma of the eyelid: a large, single-centre experience
HARISH V, BOND J, HAYDU LE, SAW RP, QUINN MJ, STRETCH JR, THOMPSON JF - Sydney

12:00 Measuring Quality of Life in Oculoplastic Surgery
RIDYARD EJR, INKSTER CI - Bolton, Manchester

12:10 Outcome in eyelid burns
FITZGERALD OCONNOR EFOC, FREW QF, PLEAT JP, ASHRAFF SA, GHAZI-NOURI SGN, DZIEWULSKI PD - Chelmsford
12:20 The ICO’s Ophthalmology Surgical Competency Assessment Rubric for Lateral Tarsal Strip Surgery

12:25 Lower lid heightening with ear cartilage: The Sheffield experience
MAUDGIL A, UNG T, SALVI SM, CURRIE ZI, TAN JHY - Sheffield

12:30 LUNCH WITH THE SPONSORS / POSTERS / VIDEOS

13:30 ROUND TABLE DISCUSSION

15:00 REFRESHMENTS WITH THE SPONSORS / POSTERS / VIDEOS

15:30 MANAGEMENT OF OCULAR ADNEXAL MELANOMA: SENTINEL NODE BIOPSY AND SURVIVAL DATA
Bita Esmaeli

16:00 RAPID FIRE
David Verity, Aidan Murray

16:00 Transcanalicular laser assisted endoscopic dacrycystorhinostomy in patients of chronic dacryocystitis with coexisting nasal abnormalities
GOEL RG, NAGPAL SN, DANGDA SD, KAMAL SK, BODH SAB, KUMAR SK, BANSAL SB, ADITYA KA - New Delhi

16:05 Bilateral external DCR vs staged unilateral external DCR in patients with bilateral NLD obstruction - my experience with ten patients
SENTHILNATHAN C - CHENNAI, India

16:10 Endonasal Dacrycystorhinostomy for nasolacrimal duct obstruction in patients with sarcoidosis
AVISAR I, DESOUSA JL, DOLMAN PJ, MCNAB AA, PATEL BCK, SELVA D, MALHOTRA R - Adelaide, South Australia, East Grinstead, UK, Melbourne, Australia, Nedlands WA, Australia, Salt Lake City, Utah, USA, Vancouver, Canada.

16:15 Lacrimal imaging in the management of functional epiphora: The Coventry management algorithm
YEUNG AM - Coventry

16:20 Relief of symptomatic epiphora after surgery to correct lid laxity vs ectropion
GHOSH S, OXLEY L, CHAPMAN F - Halifax, Sunderland

16:25 Sub-Caruncle Orbital Fat Decompression For Failed Punctal Ectropion
BEIGI B - Norwich

16:30 SEBACEOUS GLAND CARCINOMA – OUR EXPERIENCE
Santosh Honavar

17:00 BOPSS COMMITTEE MEETING

18.30 COACHES TO LEAVE THE CURVE FOR THE SPACE CENTRE AND GALA DINNER

19:00 GALA DINNER AT THE SPACE CENTRE
Dr. Bita Esmaeli is a Professor of Ophthalmology at The University of Texas M. D. Anderson Cancer Center, where she has had an orbital oncology and oncologic oculoplastic surgery practice since 1998.

Dr. Esmaeli was instrumental in establishing the Ophthalmology Section as a comprehensive full-time service at M. D. Anderson Cancer Center in 1998. She served as the Director of the Ophthalmologic Services from 1998 to 2001 and as the Chief of the Ophthalmology Section at M. D. Anderson from 2001 to 2004. She is the Program Director for an ASOPRS-sponsored and ACGME-approved fellowship in oculoplastic surgery and orbital oncology at M. D. Anderson Cancer Center.

Management of lacrimal gland tumors

The natural history and treatment options for epithelial tumors of the lacrimal gland will be outlined. The importance of AJCC classification and its relevance to outcomes for adenoid cystic carcinoma as well as various multi-modality treatment options will be presented.
Allen Putterman

Dr. Putterman is Professor of Ophthalmology and Co-Chief of Oculoplastic Surgery at the University of Illinois College of Medicine. He has also served as president of the American Society of Ophthalmic Plastic Surgery and The Chicago Ophthalmological Society. He is a fellow of the American College of Surgeons and has served on their certification committee. He is one of approximately 30 doctors in the USA to be privileged to have an approved oculofacial plastic surgery fellowship.

Upper lid bleph/trans bleph brow lift and how to handle an unhappy cosmetic patient

Dr. Putterman will review his technique in removing excessive upper eyelid skin folds and reconstructing creases. He will discuss treatment of upper eyelid ptosis with his Muller’s muscle conjunctival resection procedure, as well as full thickness resection ptosis procedure and blepharoplasty frontalis slings. He will present techniques to raise the forehead and brows, emphasizing the transblepharoplasty brow lift. Finally, he will let us know how to handle our unhappy cosmetic patients. He will enhance this talk with two videos.
Invited speakers

Bita Esmaeli

Dr Esmaeli has authored over 120 peer-reviewed manuscripts, over 50 invited articles and book chapters, has spearheaded several clinical trials and has participated in numerous research protocols at M. D. Anderson Cancer Center. She has received many prestigious awards and honors including the Merrill Reeh Pathology Award and the Research Award from the American Society of Ophthalmic Plastic and Reconstructive Surgery, the American Academy of Ophthalmology Achievement Award, Best Doctors in America, and Top Doctors Award.

Management of ocular adnexal melanoma: sentinel node biopsy and survival data

Common clinical presentations of conjunctival and eyelid melanoma will be highlighted. Local treatment options including surgery, topical chemotherapy, radiation therapy as well as evaluation of regional lymph nodes will be discussed.

Indications for sentinel lymph node biopsy and our experience to date with this technique will also be reviewed.
Santosh Honavar

Dr Honavar had his basic medical education at the Bangalore Medical College. He received post-graduate training in Ophthalmology, followed by fellowship in Ophthalmic Plastic Surgery and Pediatric Ophthalmology at the Dr Rajendra Prasad Center for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi. Dr Honavar further trained in Ocular Oncology and was mentored by Prof Jerry Shields, Prof Carol Shields and Dr Arun Singh at the Wills Eye Hospital, Philadelphia, USA. He thereafter established and now heads the comprehensive Ocular Oncology Service at the LV Prasad Eye Institute, Hyderabad.

Dr Honavar’s current research interests comprise of tumors of the ocular surface, eyelid, orbit and retinoblastoma.

Sebaceous gland carcinoma - our experience
Frozen section control in periocular basal cell carcinoma – accuracy compared with paraffin section.

ONG CT (1), JAYARAMACHANDRAN R (1), MANNERS RM (2), TYERS AG (1)

(1) Salisbury District Hospital, Salisbury
(2) Southampton Eye Unit, Southampton

**Purpose** To determine the accuracy of frozen section margin control compared with the subsequent paraffin section in periocular basal cell carcinoma (BCC).

**Methods** Retrospective case notes review of the pathology reports of all patients from the oculoplastic services in Salisbury and Southampton who had frozen section examination of excised periocular basal cell carcinomas between 2000 and 2010. A total of 140 frozen sections in 130 patients with periocular basal cell carcinoma were reviewed. The patients’ age, the site of lesion, the frozen section report and paraffin section report were recorded. The accuracy of the frozen section compared with the subsequent paraffin section, in terms margin clearance, was evaluated. All patients had clear margins on frozen section at the end of surgery. Paraffin section reports confirming clearance were classified ‘Clear’ and those that identified residual tumour were classified ‘Not Clear’.

**Results** The average age of the patients was 72 (range 24-96). The most common sites affected by BCC in order of frequency were lower eyelid (46.32% n= 63), medial canthus (31.62% n=43), upper eyelid (7.35% n=10), lateral canthus (7.35% n=10), cheek and temple (2.21% each n=3 each), bridge of nose and brow (1.47% each n=2 each). 136 paraffin section reports (97.14%) confirmed the frozen section reports and were classified as Clear, 4 paraffin section reports (2.86%) were reported to contain residual tumour and were classified as Not Clear.

**Conclusion** Frozen section is accurate in determining surgical clearance of periocular basal cell carcinoma.

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Excision and Delayed Reconstruction for Sebaceous Gland Carcinoma (SGC)

WHILE B (1), TAN JHY (2), SALVI SM (2), CURRIE ZI (2), MUDHAR HS (3)

(1) Ophthalmology, Manchester Royal Eye Hospital, Manchester
(2) Ophthalmology, Royal Hallamshire Hospital, Sheffield
(3) Histopathology, Royal Hallamshire Hospital, Sheffield

**Purpose** To evaluate the use of excision and delayed reconstruction (slow Mohs’) in patients with SGC of the periocular region.

**Methods** A retrospective study of SGC treated at Sheffield Teaching Hospitals 2003-2011. Patients were identified from a histopathological database and medical notes reviewed. Data was collected on known risk factors. In patients with biopsy confirmed SGC management started with mapping biopsies of the conjunctiva. If the tumour was localised it was excised with a 3 - 4mm clinical margin and sent in formalin for rapid paraffin section histopathological analysis. The patient went home with dressings returning 3 days later. Further excision or reconstruction was performed as indicated. Follow-up data was collected on all patients.

**Results** 16/17 patients had slow Mohs’, the other 1 had primary excision and reconstruction. Of those managed with slow Mohs’ 10 had clear margins after 1 excision, 6 after 2 excisions. Reconstrucive technique varied according to the defect. 1 patient presented to our unit with an incompletely excised tumour. 1 patient developed regional spread without evidence of local recurrence. 1 patient developed regional spread while undergoing slow Mohs’.

**Conclusion** Excision and delayed reconstruction with paraffin section histopathological analysis is widely used in the management of basal cell carcinoma. True Mohs’ surgery in patients with SGC has been questioned due to the possibility of missing pagetoid spread. We feel that slow Mohs’ offers an acceptable option for the management of this rare and highly malignant tumour. Combining successful excision with maximal maintenance of normal tissue.
Clinical outcome following laissez faire approach for periocular tumours

TRIVEDI D (1), LAKHANI B (1), BURNS J (1), SAMPATH R (2)
(1) Leicester Royal Infirmary, Leicester
(2) Leicester Royal Infirmary, Leicester

Purpose To determine clinical signs and symptoms following laissez faire approach for periocular tumours

Methods A retrospective, observational audit of 51 patients who underwent excision biopsy of periocular tumours involving 40 lower lid and 11 medial canthus were allowed to heal by secondary intention based on patient preference between 2005-2011

Results 25 male and 26 female patients had average age of 74.39 years (range, 39-95 years). 28 were asymptomatic (54.90%). 2 had granuloma (3.92%) during the initial healing phase, which resolved with topical steroid. 2 had lid notch (3.92%) due to asymmetrical healing out of which one had notch excision and the other was asymptomatic and declined surgery, seventeen patients had cosmetically acceptable slight shallowing of the lid margin in the excised area. six had fine skin hairs (11.76%) all preferred epilation when required and declined any surgical intervention, 8 patient had punctal ectropion (15.68%), four with medial canthal excision had webbing (7.84%) and 3 with lower lid excision had contracture (5.88%) which improved with massage and topical lubricants, 1 had symblepharon at the lateral canthus (1.96%), 1 had retention cyst (1.96%),six had few punctate epithelial erosion (11.76%), 15 had watering (29.41%) attributed to blepharitis in 2, excision of lacrimal sac system in 5, fine hair in 2, punctal ectropion in 3, lid laxity in 1, notch in 2 alleviated by topical lubricants in most cases. None suffered infection

Conclusion Laissez faire technique is a safe alternative to formal reconstruction with acceptable cosmetic and clinical outcome, and is a useful addition to the reconstructive options which can be offered to selected patients following periocular tumour excision

The Manchester Mohs’ Experience

BARUA A (1), SIN C (2), ATAUULLAH S (2), LEATHERBROW B (2), GHURA V (3), COOK A (2)
(1) Ophthalmology, Manchester Royal Eye Hospital, Manchester
(2) Ophthalmology, Manchester Royal Eye Hospital, Manchester, UK
(3) Dermatology, Salford Royal Hospital, Salford, UK

Purpose Mohs’ micrographic surgery (MMS) is the gold standard for the treatment of periocular basal cell carcinoma (BCC). This study compared 5-year recurrence rates of periocular BCC treated with MMS in a regional unit with published data. Methods used for reconstruction and post-operative complications were also reviewed.

Methods All periocular BCC patients treated with MMS between 2001 and 2006 were identified within the hospital theatre database. Only patients with available 5-year follow-up were included. Electronic and paper records of all patients were reviewed.

Results 390 of 480 fulfilled the inclusion criteria. Six BCC recurrences were identified (1.5%). One (0.3%) was a primary tumour with no previous surgery and five (6.5%) were recurrent tumours following previous surgery prior to MMS. 174 (45%) patients had local flap reconstructions, 136 (35%) had full thickness skin grafts (FTSG) (of which 40 consisted of Hughes’s flaps with FTSGs), 35 (9%) had combined flap and FTSG procedures, and 45 (12%) had direct wound closure. 126 of 390 (32%) had complications from their reconstruction. Of these, 44 (11% of all patients) required revisional procedures (83% involved further surgery, 17% had steroid injections).FTSG only surgery carried the highest complication rate (43% versus 24% for flaps, 11% for combined flaps/FTSG and 22% for direct closure). FTSG complications were mainly cicatricial ectropion (58%).

Conclusion This study confirms the low recurrence rate of BCC following MMS in primary periocular BCC, in line with published standards. Periocular defect size and reconstruction method, but not BCC subtype and location, was correlated with the complication rate. Using a flap with or without a FTSG to close the defect may be preferable to using a FTSG alone.
Upper eyelid reconstruction after tumour excision at the Royal Hallamshire Hospital, Sheffield

MAUDGIL A, UNG T, SALVI SM, CURRIE ZI, TAN JHY
Eye Department, Royal Hallamshire Hospital, Sheffield

Purpose To elucidate the surgical methods used to reconstruct defects in the upper eyelid after tumour excision at the Royal Hallamshire Hospital, Sheffield

Methods 66 patients were identified who underwent upper lid reconstruction. Retrospective case note review was performed to find out the patient demographics, pathology, whether the resection was staged, as well as the method used for reconstruction and any surgical complications.

Results Patients were aged between 18-96 years, 60% were female. 95% underwent staged resections of tumours and the pathology of these was predominantly basal cell carcinoma (55%), sebaceous gland carcinoma (23%) and squamous cell carcinoma (11%). 48% patients had anterior lamellar resection only. Methods of reconstruction depended on size of the lesion. Most patients were reconstructed with direct closure (40%). Flaps were used for reconstruction more frequently than grafts (25% v 10%). 10% of patients were closed by combination of flap and graft, while in 5% the laissez faire approach was used. Significant surgical complications requiring further surgery were rare, and no patients had tumour recurrence.

Conclusion This study demonstrates local experience of closure of the upper eyelid after tumour excision. For defects too large for direct closure, flaps are used more commonly than grafts for reconstruction. The laissez faire approach remains uncommonly used. Surgical complications are rare.

The accuracy of microwave processing in serial excision of periocular basal cell carcinomas

RASOOL S (1), THAMPY R (2), NOLAN D (1)
(1) Ophthalmology, Oldham
(2) Ophthalmology, Manchester

Purpose Moh’s surgery is regarded as the gold standard of achieving accurate surgical clearance of periocular basal cell carcinoma with the benefit of minimising sacrifice of unaffected tissues. There are however limitations on access to this regional service. Traditional frozen section technique to assess surgical margins for clearance has been replaced in our Trust with microwave processing to allow more rapid diagnosis and patient management. The purpose of our study was to assess the accuracy of microwave processing of tumour margins in patients with biopsy-confirmed periocular basal cell carcinoma.

Methods All the patients who had serial microwave excision from January 2010 to October 2011 were selected from theatre lists by ICD-10 clinical codes. The histology laboratory technician was then able to filter out who had microwave processing. These patients histology results were analysed to see whether residual tumour was present at tumour margins on each day of excision.

Results Six out of seven patients’ biopsy results showed residual tumour at margins with microwave processing, which have then not been evident on wide clearance. Two out of these six patients had surgical closure with a Hughes flap as part of their rehabilitative reconstruction of the residual tissue.

Conclusion The six patients had to have more tissue taken out with resultant further excision(s) and left with a more complex and debilitating reconstruction than may have been necessary. Microwave processing may have improved tissue processing time but in most cases results were incorrect and adversely affected patients’ management.
Sebaceous carcinoma of the eyelids: our experience with 22 cases—one of the largest UK series

RAHIM A N, KUMAR P, BURNS J, SAMPATH R
OPHTHALMOLOGY, University of Leicester, LEICESTER

Purpose To describe clinical features, management and prognosis of sebaceous gland carcinoma of the eyelids.

Methods Presenting features, sites of origin, location, histopathologic findings, management, incidence of recurrence, metastasis, and mortality rate were analysed in this retrospective interventional case series.

Results Twenty-two patients were identified with sebaceous gland carcinoma between 1997 and 2011. The median age of presentation was 72 years ranging from 35 to 98 years, with female preponderance of 77%. Five (23%) patients were tertiary referrals. The common anatomical sites were upper eyelid 11 (50%), lower eyelid 5 (23%), medial canthus 2 (9%), cheek 1 (5%) and more frequently occurred on the left eye lids 13 (59%). Orbital exenteration was necessary in 6 patients (27%). One (5%) patient developed local recurrence within 2 years and needed exenteration. Two (9%) patients developed metastasis to regional lymph nodes. Pathologically 85% of sebaceous carcinomas arose from the meibomian glands, 10% showed intraepithelial (pagetoid) involvement and 5% arose from both meibomian and Zeis glands. Two (9%) patients died, one of them due to lymphoma related illness and the other one died of bony metastasis.

Conclusion Sebaceous gland carcinoma represents 1–5.5% of eyelid malignancies and is considered to be the third most common eyelid malignancies after basal cell and squamous cell carcinoma. Diagnosis and management can be difficult due to its rarity and we would like to share our experience and hopefully improve the knowledge base in their management.

Posterior approach ptosis in adult and paediatric patients

PAKROU NP, LEE RL, TAMBE KT
Ophthalmic Plastic Surgery, Nottingham

Purpose There has been recent renewed interest in posterior approach ptosis surgery, with good success rates reported. Ptosis correction can be an unpredictable procedure with reported success rates from 57–95%. Any surgical procedure that can improve the predictability and outcome of ptosis correction is desirable.

Methods A retrospective analysis of patients undergoing ptosis correction surgery via the posterior approach, with a minimum three months follow up. Patients demonstrating positive phenylephrine test underwent conjunctivo–Mullerectomy, those with aponeurotic dehiscence, white-line advancement, and those with congenital ptosis, posterior approach levator resection.

Results 20 eyes of 15 patients (9 adults, 6 children) underwent a posterior approach ptosis correction. The pre-operative phenylephrine test was positive in 4 eyes, which underwent a posterior approach conjunctivo–Mullerectomy. Of the remaining 16 eyes 5 adult patients had bilateral aponeurotic dehiscence and 6 children had unilateral simple congenital ptosis. All of the eyes undergoing a conjunctivo–Mullerectomy had a satisfactory result, with only one patient having a slight medial peak. The post operative lid height in these patients was within 1 mm of the corresponding eye. Patients undergoing a white line advancement procedure had excellent results with equal lid heights and contour. Out of the 6 children with levator resection, 4 had an excellent result, whilst two were under corrected.

Conclusion The posterior approach is a versatile surgical approach for the management of ptosis. It is especially suited to patients with a positive phenylephrine test, but also in patients with a negative phenylephrine test, in whom photos of their youth demonstrates upper-lid fullness.
Experience of a tertiary referral centre in the management of periocular melanoma

RAHIM A N, SHAH J, KUMAR P, BURN J, SAMPATH R
LID, LACRIMAL AND ORBIT, UNIVERSITY HOSPITAL LEICESTER, LEICESTER

**Purpose** Eyelid melanoma is a rare condition with incidence of less than 1% of all eyelid malignancies. The aim of the study is to present our experience.

**Methods** Retrospective interventional case series of patients (19) treated at our centre from 2000 to 2011.

**Results** The ages of the patients ranged from 56 to 96 years with an average age of 73 years. In 5 (26%) patients tumour was located on the inferior eyelid in continuity with the malar region, 4 (21%) upper lid, 1 (5%) medial canthus, 3 (16%) conjunctiva involving the lid, 2 (11%) lateral canthus, 5 (26%) periocular area. Resection and reconstruction were performed in 16 (84%) patients. Various techniques including Hughes flap, full thickness skin graft, hard palate graft with bucket handling, cervicofacial flap, rhomboid and bilobed flap were performed to reconstruct the lid after attaining histological clearance. Majority (72%) of cases had superficial spreading melanoma, 11% nodular type, 11% lentigo maligna melanoma, 6% desmoplastic melanoma. Surgery was declined in two patients after incisional biopsy due to metastasis and one patient refused further treatment. Recurrence was noted in 7 (37%) patients. Metastasis was noted in 5 patients (21), 2 to lung and 3 to regional lymph nodes. Mortality was noted in 5 patients due to metastasis. All the patients were managed as part of the Multidisciplinary team (MDT). AVAST-M and sentinel node biopsy were used in a few. The mean follow up was 35 months.

**Conclusion** Melanoma of the eyelid is rare accounting for less than 1% of eyelid malignancies. We would like to share our experience -inspite of these patients being managed as part of MDTs they do have a high morbidity and mortality rate compared to other eyelid malignancies.

Invasive cutaneous melanoma of the eyelid: a large, single-centre experience

HARISH V, BOND J, HAYDU LE, SAW RP, QUINN MJ, STRETCH JR, THOMPSON JF
Melanoma Institute Australia, Sydney

**Purpose** To determine whether margins of excision for cutaneous eyelid melanoma influence locoregional recurrence and to identify prognostic factors for survival.

**Methods** Multivariate survival analysis was performed on a series of 56 patients with invasive cutaneous eyelid melanoma recorded on the database of Melanoma Institute Australia from 1985-2011. Data recorded for each patient included: gender, age at diagnosis, location, Breslow thickness, histological type, surgical excision margins, pathological margins, reconstruction method, nature of and time to recurrence, and survival (analysed using the Kaplan–Meier method and Log Rank test).

**Results** Fourteen (25%) developed local recurrence, 6 (11%) developed nodal metastases and 2 (4%) developed distant metastatic disease. 6 deaths occurred, 2 attributable to metastatic disease, 2 unrelated to melanoma, and 2 cause unknown. Pathological margins >2mm were associated with a statistically significant survival benefit compared with pathological margins ≤2mm (P=0.028). Surgical margins did not have a statistically significant effect on recurrence or survival. Lower eyelid melanomas were found to have a significantly higher recurrence rate than upper eyelid melanomas, regardless of excision margin or Breslow thickness (P=0.044).

**Conclusion** This series of 56 patients with invasive cutaneous eyelid melanomas is the largest yet reported. The results suggest that, at the very minimum, an in vivo surgical margin of 3mm is desirable (corresponding approximately to a 2mm pathological margin after tissue fixation). Patients with lower eyelid melanomas warrant particularly close surveillance given their high recurrence rate independent of excision margin or Breslow thickness.
Measuring Quality of Life in Oculoplastic Surgery

RIDYARD EJR (1), INKSTER CI (2)
(1) University of Manchester Medical School, Manchester
(2) Royal Bolton Hospital Ophthalmology Unit, Bolton

Purpose In April 2011, the Audit Commission produced a report entitled “Reducing Spending on Low Clinical Value Treatments”. The aim of the report is to look at progress made by PCT’s on reducing funding for these procedures, which it is estimated could result in savings of up to £441 million annually. There is no nationally agreed list defining such treatments, and individual PCT’s have been left to produce their own lists, based on the best evidence available. Many oculoplastic procedures are starting to appear on these lists, despite a lack of evidence for defining them as of “low clinical value”. The aim of this review is to provide a baseline detailing evidence for quality of life improvement following common oculoplastic interventions.

Methods A number of databases were searched to determine the level of evidence available for common conditions amenable to oculoplastic surgical intervention. Search terms concentrated on quality of life measures rather than anatomical correction of deformities.

Results The level of evidence available for different conditions was very variable. Certain conditions have extensive research documenting reduction in quality of life, with some evidence for improvement after surgery. Other common conditions have little or no quality of life evidence supporting surgical intervention.

Conclusion Evidence remains sparse for quality of life improvement after some of our most commonly performed procedures. Many of these procedures are now being identified by PCT’s as of “low clinical value”, and are no longer being routinely commissioned in certain parts of the UK. There is an urgent need to address this evidence deficit if oculoplastic surgery is to continue to be delivered by the NHS.

Outcome in eyelid burns

FITZGERALD OCONNOR EFOC (1), FREW QF (1), PLEAT JP (1), ASHRAFF SA (1), GHAZI-NOURI SGN (2), DZIEWULSKI PD (1)
(1) St Andrews Centre for Plastic Surgery and Burns, Chelmsford
(2) Ophthalmology, Chelmsford

Purpose Periocular burns are an infrequent but potentially devastating injury. This study aimed to elucidate the spectrum of such injuries presenting to a UK burns centre and the outcome achieved in the cases requiring periocular reconstruction for the restoration of function and form.

Methods Patients admitted to a UK regional burns centre since 2005 with periocular burns were identified from the Patient Administration System (PAS), theatre logs and the International Burns Injury database (IBID). Multiple parameters were assessed using patient notes, ITU and hospital image databases.

Results Over 5 years, 167 patients with facial burns requiring surgery were treated, including 75 patients with eyelid burns (46 male, mean age 30, SD 21). The mean burn size was 30% total body surface area (SD 23), eyelid burn depth varied; 75% superficial partial thickness, 15% deep dermal and 10% full thickness. Two patients lost complete vision in one eye, one patient underwent amniotic membrane grafting. In total 15 patients required periocular reconstruction to maintain eye closure, with 1.8 operations on average per patient. Acute surgery was required in 10 patients, whilst late intervention (>3 months) was needed in 5, 2 patients had both acute and delayed surgery. 8 patients were treated with full thickness skin grafts, the remainder with Z plasty or local flaps. Average time for final reconstruction with delayed surgery was 4.5 months.

Conclusion The goal in management of periocular burns is preservation of vision, prevention of future complications and restoration of an acceptable aesthetic outcome. Total visual loss is thankfully rare, but early ophthalmology intervention is vital given the evidence of corneal damage as a brief therapeutic window exists.
The ICO’s Ophthalmology Surgical Competency Assessment Rubric for Lateral Tarsal Strip Surgery

SALEH GM (1), GAUBA V (2), COLLIN JRO (3), NAIK M (4), DEVOTO M (5), NERAD J (6), GOLNIK KC (7)
(1) Moorfields Eye Hospital NIHR Biomedical Research Centre and Institute of Ophthalmology, London
(2) Imperial Healthcare Institute, Dubai
(3) Moorfields Eye Hospital and the Institute of Ophthalmology, London
(4) LV Prasad Eye Institute, Hyderabad
(5) Consultores Oftalmologicos and the Instituto de Oncologia Angel Roffo, Universidad de Buenos Aires, Buenos Aires
(6) Department of Ophthalmology, University of Cincinnati and the Cincinnati Eye Institute, Cincinnati
(7) Department of Ophthalmology and Neurology, University of Cincinnati and the Cincinnati Eye Institute, Cincinnati

Purpose
To produce an internationally valid tool to assess skill in performing lateral tarsal strip surgery

Methods
A panel of seven content experts adapted a previously published tool for assessing lateral tarsal strip surgery by using a modified Dreyfus scale of skill acquisition and providing behavioral descriptors for each level of skill in each category. The tools were then reviewed by a further 11 international content experts and their comments assimilated in the final tool’s construction.

Results
A validated final rubric was produced following the feedback from all the content experts. The tool presented has been designed for structured formative feedback in the task specific components of LTS surgery along with more global performance measures.

Conclusion
A validated, easy to use and free to download tool has been produced for global use in LTS surgical training

Lower lid heightening with ear cartilage: The Sheffield experience

MAUDGIL A, UNG T, SALVI SM, CURRIE ZI, TAN JHY
Eye Department, Royal Hallamshire Hospital, Sheffield

Purpose
To review all cases of lower lid heightening using ear cartilage at the Royal Hallamshire Hospital, Sheffield to elucidate the indications for surgery, the materials and methods used, the success rates and complications.

Methods
28 patients who underwent lower lid heightening were identified. Notes were retrospectively reviewed for the indications for surgery, the materials and methods used, whether the surgery was successful and any complications were encountered.

Results
Of the patients undergoing lower lid heightening, 57% were male with an age range of 13-74. The underlying pathology was principally the anophthalmic socket (40%), followed by thyroid eye disease (20%) and facial nerve palsy (20%). 90% of operations were a success. 5 patients had minor complications, but only 1 patient required re-do. No patients had problems at the site of harvested ear cartilage.

Conclusion
Patients require lower lid heightening for a range of pathologies. Ear cartilage is a safe material to give support to the lower lid, which has been used with very good success rates and no complications at the site of harvest in the ear.
Transcanalicular laser assisted endoscopic dacryocystorhinostomy in patients of chronic dacryocystitis with coexisting nasal abnormalities

GOEL RG, NAGPAL SN, DANGDA SD, KAMAL SK, BODH SAB, KUMAR SK, BANSAL SB, ADITYA K A
Ophthalmology, Gurunanak Eye Center, Maulana Azad Medical College, New Delhi

Purpose To study the operative difficulties and success rate of Transcanalicular laser assisted endoscopic dacryocystorhinostomy(TCLAEDCR) in patients of chronic dacryocystitis with coexisting nasal abnormalities.

Methods A prospective interventional clinical study of 28 consecutive patients of chronic dacryocystitis with coexisting nasal abnormalities undergoing primary TCLAEDCR from March 2011 to June 2011 was carried out. A large, 64mm2 ostium removing the frontal process of maxilla was created in all the patients. The patients were followed up weekly for 1 month and then monthly till 9 months. Success was defined as anatomical patency and absence of symptoms at 9 months following surgery.

Results Out of the 28 patients, 20 were females with age varying from 20 to 72 years and 17 were left sided. There were 11 high, 7 mid and 4 basal deviated nasal septa (DNS) towards the side of surgery mild to moderate in severity. The other nasal pathologies were spur and turbinate hypertrophy. Intraoperatively there was difficulty in visualizing the aiming beam in the nose and tedious manipulation of endoscope especially in high DNS. Excessive intranasal bleeding occurred in 3 patients which was managed by nasal packing and successful completion of the surgery. The procedure was successful in 92.85% cases with average ostium size of 24.46mm2 at 9 months. Two patients had complete anatomical blocks and required resurgery. One was presaccal due to laser burn and the other postsaccal. Two patients had partial blocks at one month.

Conclusion TCLAEDCR is an effective procedure in patients with mild- moderate DNS and obviates the need for multiple procedures and a cutaneous scar.

Bilateral external DCR vs staged unilateral external DCR in patients with bilateral NLD obstruction - my experience with ten patients

SENTHILNATHAN C
OPHTHALMOLOGY,BILLROTH R.A.PURAM HOSPITAL,CHENNAI, CHENNAI,INDIA

Purpose To compare the efficacy of performing single stage bilateral external dcr in patients who had bilateral chronic nld obstruction(nldo) instead of doing them as single procedures in two sittings.

Methods Ten patients who had bilateral nld obstructions were chosen to undergo single stage bilateral external dcr. The patients were followed up for a period of 6 months and patency of ducts on syringing was noted in all patients.

Results All the 20 ducts of ten patients who underwent single stage bilateral external dcr were patent on syringing at the end of 6 months with no major intraoperative/ postoperative complications.

Conclusion Bilateral single stage external dcr is as effective as performing two stage dcr in patients with bilateral nld obstruction. It has the advantage of being more cost and time effective for the patient.
Endonasal Dacryocystorhinostomy for nasolacrimal duct obstruction in patients with sarcoidosis

AVISAR I (1), DESOUSA JL (2), DOLMAN PJ (3), McNAB AA (4), PATEL BCK (5), SELVA D (6), MALHOTRA R (1)
(1) Corneo-Plastic Unit, Queen Victoria Hospital, East Grinstead, UK
(2) Lions Eye Institute, Nedlands WA, Australia
(3) University of British Columbia, Department of Visual Sciences, Oculoplastic Unit, Vancouver, Canada
(4) Ophthalmic Plastic & Lacrimal Clinic, Royal Victorian Eye & Ear Hospital, Melbourne, Australia.
(5) Division of Facial Cosmetic & Reconstructive Surgery, University of Utah, Salt Lake City, Salt Lake USA
(6) South Australian Institute of Ophthalmology, Adelaide, South Australia

**Purpose** To evaluate the results of endonasal dacryocystorhinostomy (DCR) surgery in patients with sarcoidosis.

**Methods** Patients with sarcoidosis and nasolacrimal duct obstruction (NLDO) were treated with endonasal dacryocystorhinostomy in 6 practice settings during 1999-2011.

**Results** We included 18 cases of 14 patients (8 female, 6 male) who underwent endonasal dacryocystorhinostomy for acquired NLDO secondary to sarcoidosis. The mean age was 53.7 years. Presenting symptom in all cases was epiphora, 11 (79%) of them had signs of expressible mucocele. Eight patients (57%) complained of having additional nasal congestion. Two operations were revision operations following failed external DCR. All patients underwent endonasal surgery. Surgery was performed using powered-type DCR with flaps in 12(67%) and mechanical DCR in 6(33%) cases. In 15 cases the lacrimal sac and nasal mucosa appeared abnormally crusty and oedematous. There were no intra-operative or post-operative complications. Ten patients had oral prednisolone post operatively 30-60 mg tapered within 10 days-8 weeks. One patient had difficulties in tapering down the oral steroids. All patients were free of epiphora and patent to syringing at a mean follow-up of 11.3 months.

**Conclusion** We present 18 cases of acquired NLDO secondary to sarcoidosis. All cases were treated successfully with endonasal dacryocystorhinostomy with flaps. Abnormal appearance of nasal mucosa is an important sign. Nasal congestion is a frequent sign. A successful outcome may not require intensive long term therapy with local or systemic steroids. The surgical treatment for nasolacrimal duct obstruction secondary to sarcoidosis through an endonasal approach is advocated.

Lacrimal imaging in the management of functional epiphora: The Coventry management algorithm.

YEUNG AM (1), ELAROUD I (1), ADESANYA O (2), MEHTA P (1), AHLUWALIA HS (1)
(1) Ophthalmology, University Hospital Coventry, Coventry
(2) Radiology, University Hospital Coventry, Coventry

**Purpose** We investigated the efficacy of Dacryoscintigraphy in predicting the likely site of physiological tear drainage delay in patients with functional epiphora. CT DCG was performed in selected patients as an adjuvant in the Post-sac delaysubgroup considering DCR’s surgery. We also describe its value in helping with the choice of surgery and propose a management algorithm.

**Methods** A retrospective case note & lacrimal imaging analysis of patients with functional epiphora patent on syringing between 2006 and 2011.

**Results** A total of 138 patients (276 eyes) were included (from 2006 -2011). 56.5% were female and 43.5% were male. Following Dacryoscintigraphy, patient eyes were classified according to the level of delayed drainage: 25.7% Pre-Sac, 33.7% Post-Sac, 10.9% Slow drainage, 23% Patent and 8.7% Unclassified. 28.9% of patients declined surgery and 34.9% elected to be treated conservatively. 35.2% of eyes with Pre-Sac delay went onto have eyelid or punctal surgery. Of those, 92% gained symptomatic relief. Only 8% of eyes with Post-Sac delay went on to have DCR. Of those, 62.5% gained symptomatic relief.

**Conclusion** Dacryoscintigraphy is a useful diagnostic tool that may assist clinicians in treatment of functional epiphora. The location of delay may indicate the optimal management plan for these patients. We propose a management algorithm for this group of patients corroborating clinical findings and the results of lacrimal imaging.
**Relief of symptomatic epiphora after surgery to correct lid laxity vs ectropion**

GHOSH S (1), OXLEY L (2), CHAPMAN F (1)

(1) Sunderland Eye Infirmary, Sunderland
(2) Calderdale Royal Hospital, Halifax

**Purpose** To determine the efficacy of lid tightening procedures in relief of epiphora due to lid laxity and ectropion

**Methods** Two prospective interventional case series. Relief of epiphora was assessed by a standardised questionnaire.

**Results** First study included 41 eyes. After a mean follow-up of 38 (range 17-150) days, 70.7% of the patients reported significant or better improvement of their epiphora symptoms. The success rate (significant improvement or no watering) of surgery for lid laxity was better than ectropion 78% Vs 46%. A follow-up study included 54 eyes. Lid laxity only was present in 23 (42.59%), ectropion in 15 (27.7%). Lid laxity with punctal stenosis was present in 13 (24%), and ectropion with punctal stenosis in 3 (5.5%). Four (7.4%) had lateral canthal sling (LCS) with 3 snip punctoplasty, 27 (50%) had lateral wedge resection (LWR), 4 (7.4%) had LWR and inferior retractor plication (IRP), 11 (20.3%) had LWR and 3 snip punctoplasty, and 8 (14.8%) patients had multiple procedures. Mean follow-up duration was 32 days (8-102 days), when 44 (81.5%) patients reported significant or total improvement of epiphora. Lid laxity patients had a better outcome of epiphora symptoms when compared with ectropion (88.8% Vs 66.6%).

**Conclusion** In the total cohort of 95 eyes operated, lid tightening procedures were significantly helpful in alleviating epiphora symptoms in 76.84% of patients as assessed by the questionnaire survey. Overall patients with preoperative lid laxity had a better chance of relief of epiphora symptoms (83.4%) when compared with patients with ectropion (56.3%). These results inform preoperative counselling of such patients.

**Sub-Caruncle Orbital Fat Decompression For Failed Punctal Ectropion**

BEIGI B
Eye Department, Norfolk and Norwich University Hospital, Norwich

**Purpose** In a subgroup of patients who present with punctal ectropion and secondary epiphora, we observe that sub-caruncle fat prolapse is a contributory factor in failure of surgical repair of medial ectropion and resolution of symptoms. We describe a novel surgical technique that may be utilised for successful surgical repair in this subgroup of patients.

**Methods** Patient with persistent Medial ectropion in spite of successful lower lid horizontal shortening were studied. Those with medial sub caruncle fat prolapse were enrolled. They were treated with medial orbital fat decompression through a sub-caruncle incision; the surgical tech will be described.

**Results** Ten patients, age range from 62 – 89 were enrolled. All had previous ectropion repair with persistent epiphora. All had sub-caruncle fat reduction. After a mean follow up of 14 months All had normal lower lid position with resolution of epiphora.

**Conclusion** Sub-caruncle orbital fat decompression is a useful adjunct to current techniques of medial ectropion repair. In this particular subgroup of patients normal anatomical position of the punctum within the lacus lacrimalis is restored.
Friday
14 June
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<th>Time</th>
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<tr>
<td>09:00</td>
<td>FREE PAPERS / RAPID FIRE</td>
<td><strong>Jane Dickinson, Geoffrey Rose</strong></td>
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<tr>
<td>09:00</td>
<td>The Use of Amniotic Membrane Graft in the Management of Conjunctival Lesions: Sheffield Ocular Oncology Centre Experience</td>
<td><strong>AGRAVAL U, SALVI SM, RUNDLE PA, RENNIE IG - Sheffield</strong></td>
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<tr>
<td>09:20</td>
<td>Visual outcome in meningiomas around the anterior visual pathways treated with LINAC fractionated stereotactic radiotherapy</td>
<td><strong>REICH RE, STIEBEL-KALISH SKH, GAL GL, RAPPAPORT RZH, NISSIM NO, PFEFFER PR, SPIEGELMANN SR - Petah Tikva, Israel, Ramat Gan, Israel, Tel aviv, Israel</strong></td>
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<td>09:30</td>
<td>Histological Calcification in Periocular Basal Cell Carcinoma: A Clinical Correlation</td>
<td><strong>PATWARY, SN - Wolverhampton</strong></td>
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<td>09:40</td>
<td>Masticatory oscillopsia post lateral wall decompression: underreported and overrated?</td>
<td><strong>FAYERS T, BARKER LE, VERITY DH, ROSE GE - London</strong></td>
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<tr>
<td>09:50</td>
<td>Novel use of Cone Beam CT Scan in Thyroid Eye Disease</td>
<td><strong>RAOOF N, ANDREW D, PAYNE M, SALVI SM - Sheffield</strong></td>
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<td>09:55</td>
<td>Reactivation of thyroid orbitopathy following orbital decompression</td>
<td><strong>CHUAH JL, SHAHID F, OBI EE, BURNS J, SAMPATH R - Leicester</strong></td>
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<tr>
<td>10:00</td>
<td>SURGICAL MANAGEMENT OF THYROID OPHTHALMOPATHY – MY EYELID TECHNIQUES</td>
<td><strong>Allen Putterman</strong></td>
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<tr>
<td>10:30</td>
<td>DERMIS FAT GRAFT FOR SEVERE CONTRACTED SOCKET</td>
<td><strong>Santosh Honavar</strong></td>
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<td>11:00</td>
<td>REFRESHMENTS WITH THE SPONSORS / POSTERS / VIDEOS</td>
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<td>11:30</td>
<td>NASOLACRIMAL DUCT OBSTRUCTION AND DCR SURGERY IN CANCER PATIENTS</td>
<td><strong>Bita Esmaeli</strong></td>
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<td>12:00</td>
<td>RAPID FIRE</td>
<td><strong>Carol Lane, Anthony Tyers</strong></td>
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<td>12:00</td>
<td>Indications for orbital decompression for patients undergoing keratoprosthesis surgery</td>
<td><strong>NORRIS JH - East Grinstead</strong></td>
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<td>12:05</td>
<td>The result of delayed orbital fracture repair.</td>
<td><strong>BEIGI B, KHADWALA M - Norwich</strong></td>
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<td>12:10</td>
<td>Assessment of the impact on quality of life of secondary orbital implants using the Glasgow Benefit Inventory.</td>
<td>GREGORY ME, CONNOLLY J, KEMP EG</td>
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<td>12:15</td>
<td>How Benign are Orbital Benign Reactive Lymphoid Hyperplasia?</td>
<td>MEHTA P, DURRANI OM, BURNS J, SAMPATH R</td>
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<tr>
<td>12:20</td>
<td>Superior bulbar conjunctival injection and chemosis, an important sign in Thyroid Eye Disease (TED).</td>
<td>UDDIN JM, DANIEL C</td>
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<td>12:25</td>
<td>Primary intraosseous cavernous haemangioma of the orbit - a rare localisation</td>
<td>GUPTA T, ROSE GE, MANISALI M, MINHAS P, UDDIN JM, VERITY DH</td>
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<tr>
<td>12:30</td>
<td>EYELID NEUROFIBROMATOSIS MANAGEMENT TECHNIQUES</td>
<td>Santosh Honavar</td>
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<td>13:00</td>
<td>LUNCH WITH THE SPONSORS / POSTERS / VIDEOS</td>
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<tr>
<td>14:00</td>
<td>THE POWERFUL ORBICULARIS FLAP IN LOWER LID BLEPHAROPLASTY AND TREATMENT OF FESTOONS</td>
<td>Allen Putterman</td>
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<td>14:30</td>
<td>FREE PAPERS / RAPID FIRE</td>
<td>Lorraine Abercrombie, Vladimir Thaller</td>
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<td>14:30</td>
<td>Outcomes and complication rate of acrylic orbital implantation after evisceration and enucleation</td>
<td>RACHDAN D, SHAFI F, FORD R, DHILLON N, WEHBEH L, DURRANI O</td>
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<tr>
<td>14:40</td>
<td>Observational Retrospective Survey of the Diagnostic Accuracy of the Edinburgh One-Stop Peri-ocular Malignancy Clinic</td>
<td>TIMLIN H, GOUDEIE C, MITRUT I, WRIGHT M</td>
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<tr>
<td>14:50</td>
<td>Epiblepharon and High Body Mass Index: The Singapore Experience</td>
<td>TAN M CJ, AMRITH S, WONG IB, SUNDAR G</td>
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<td>14:55</td>
<td>Eviseration: Orbital Implant exposure rates – 4 Flap Technique, 6 Layered Closure</td>
<td>OBI EE, SAUNDERS D, LAKHANI BK, CHUAH JL, BURNS J, SAMPATH R</td>
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<td>15:00</td>
<td>REFRESHMENTS WITH THE SPONSORS / POSTERS / VIDEOS</td>
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<td>15:30</td>
<td>LYMPHOMA – WHAT HAPPENS AFTER PERIOcular BIOPSY</td>
<td>Martin Dyer</td>
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<td>16:00</td>
<td>PRIZES AND CLOSE</td>
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</table>
Allen Putterman

Dr. Putterman has published over 325 scientific papers, mostly on oculoplastic surgery procedures and instruments he has invented. He has contributed to more than 50 textbooks, and recently published the 4th edition of his definitive textbook, Cosmetic Oculoplastic Surgery. Dr. Putterman has also given over 310 lectures in his field, both nationally and internationally.

Surgical management of thyroid ophthalmopathy - my eyelid techniques

Dr. Putterman will present his approach to surgically treating: Exophthalmos with transeyelid orbital decompressions, upper eyelid retraction with his graded Muller's muscle excision-levator recession procedure, lower eyelid retraction with hard palate grafting, tarsorrhaphies, fat excision and strabismus surgery.
Santosh Honavar

Dr Honavar had his basic medical education at the Bangalore Medical College. He received post-graduate training in Ophthalmology, followed by fellowship in Ophthalmic Plastic Surgery and Pediatric Ophthalmology at the Dr Rajendra Prasad Center for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi. Dr Honavar further trained in Ocular Oncology and was mentored by Prof Jerry Shields, Prof Carol Shields and Dr Arun Singh at the Wills Eye Hospital, Philadelphia, USA. He thereafter established and now heads the comprehensive Ocular Oncology Service at the LV Prasad Eye Institute, Hyderabad.

Dr Honavar’s current research interests comprise of tumors of the ocular surface, eyelid, orbit and retinoblastoma.

Dermis fat graft for severe contracted socket
Bita Esmaeli

Dr. Bita Esmaeli is a Professor of Ophthalmology at The University of Texas M. D. Anderson Cancer Center, where she has had an orbital oncology and oncologic oculoplastic surgery practice since 1998.

Dr. Esmaeli was instrumental in establishing the Ophthalmology Section as a comprehensive full-time service at M. D. Anderson Cancer Center in 1998. She served as the Director of the Ophthalmologic Services from 1998 to 2001 and as the Chief of the Ophthalmology Section at M. D. Anderson from 2001 to 2004. She is the Program Director for an ASOPRS-sponsored and ACGME- approved fellowship in oculoplastic surgery and orbital oncology at M. D. Anderson Cancer Center.

Nasolacrimal duct obstruction and DCR surgery in cancer patients

Unique scenarios for nasolacrimal duct obstruction and canalicular stenosis in cancer patients and their management and outcomes will be reviewed. Specifically radiation induced or chemotherapy induced lacrimal obstruction and unique surgical considerations in this subset of lacrimal patients will be discussed.
Santosh Honavar

Dr Honavar had his basic medical education at the Bangalore Medical College. He received post-graduate training in Ophthalmology, followed by fellowship in Ophthalmic Plastic Surgery and Pediatric Ophthalmology at the Dr Rajendra Prasad Center for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi. Dr Honavar further trained in Ocular Oncology and was mentored by Prof Jerry Shields, Prof Carol Shields and Dr Arun Singh at the Wills Eye Hospital, Philadelphia, USA. He thereafter established and now heads the comprehensive Ocular Oncology Service at the LV Prasad Eye Institute, Hyderabad.

Dr Honavar’s current research interests comprise of tumors of the ocular surface, eyelid, orbit and retinoblastoma.

Eyelid neurofibromatosis management techniques
Allen Putterman

During his illustrious career, Dr. Putterman has garnered many prestigious awards, including recognition in each publication of the Best Doctors Book and Castle Connolly’s Top Doctors books, and inclusion in Chicago Magazine as one of the “500 Top Doctors in Chicago.” Dr. Putterman is recipient of the Baylis Award for Lifetime Achievement in Cosmetic Surgery and the Lester Jones Anatomy Award. He is a black belt instructor of NIA, which combines the martial, dance, and healing arts. He is also a certified Zumba instructor.

The powerful orbicularis flap in lower lip blepharoplasty and treatment of festoons

Dr. Putterman will present how an orbicularis flap can smooth lower eyelid excessive skin, with or without lower eyelid fat excision or fat repositioning, as well as lifting the mid-face and filling in inferior orbital rim depressions. A modification of this procedure will be presented to treat cheek festoons.
The Use of Amniotic Membrane Graft in the Management of Conjunctival Lesions: Sheffield Ocular Oncology Centre Experience

AGRAVAL U, SALVI SM, RUNDLE PA RENNIE IG
Ophthalmology, Royal Hallamshire Hospital, Sheffield

**Purpose** Conjunctival lesions suspicious of being malignant in nature are excised with a healthy tissue margin to achieve complete clearance resulting in a large area of bare sclera. This area is usually covered by direct closure of the surround conjunctiva although this has the potential of causing scarring, restriction of eye movements or discomfort. Since January 2011, at the Ocular Oncology Centre at Sheffield, we have introduced the use of fresh amniotic membrane grafts (having previously used freeze-dried amniotic membrane) in large conjunctival lesions with promising results.

**Methods** Retrospective review of case notes of the ten patients who had an amniotic membrane graft following excision of conjunctival lesions in Sheffield 2011-2012.

**Results** Of the ten patients (six left eyes, four right eyes) to date, four had invasive conjunctiva melanoma, two had in-situ conjunctival melanoma, two had in-situ squamous cell carcinoma, one had benign capillary haemangioma and one had sebaceous gland carcinoma. Lesions were excised and amniotic membrane grafts used in the following areas: temporal limbal (two), nasal limbal conjunctiva (one), temporal conjunctiva (one), nasal conjunctiva (one), medial canthus (three), superior fornix (one) and inferior fornix (one). Seven patients had amniotic membrane graft sutured directly; three patient secured with sutures and tisseal glue. All grafts were completely conjunctivalised with good cosmetic result; no recurrences at the site. Six patients had no post-operative complications; three had minimal scarring, one had restricted eye movements secondary to lid reconstruction.

**Conclusion** The use of fresh amniotic membrane graft has improved the outcome of surgical excision of large conjunctival lesions in various conjunctival sites. Therefore, we recommend its routine use in the management of suspicious conjunctival lesions requiring wide surgical excision.

Classification of Orbital Fractures using the AO/ASIF scheme (Arbeitsgemeinschaft für Osteosynthesesfragen/Association for the Study of Internal Fixation) in a National Multicentre Population Surveillance Study of Traumatic Optic Neuropathy

ONG HS (1), QATARNEH D (1), FORD R (1), LINGHAM R (2), LEE V (1)
(1) Central Eye Services, Central Middlesex Hospital, North West London NHS Trust, London, UK
(2) Department of Radiology, Central Middlesex Hospital, North West London NHS Trust, London, UK

**Purpose** Various systems for classification of orbital fractures (OF) have been proposed in previous studies. These classifications often focus on specific parts of the orbit and their grading have little correlation to prognosis. Development of a standard algorithm for OF is important in the assessment of injury severity, sharing of information among clinicians and development of treatment protocol. We aimed to classify orbital fractures using the AO/ASIF scheme in traumatic optic neuropathy (TON) patients and to correlate this modality of classification with visual outcomes.

**Methods** TON patients who sustained orbital fractures were identified prospectively by population-based active surveillance through the British Ophthalmic Surveillance Unit over a 2-year period. Available CT scans were classified according to the AO/ASIF scheme. The face was divided into 4 units. Fractures in each unit were graded according to displacement (A-C) and severity (1.1-3.3).

**Results** 44 of 121 patients with TON had OF. 12 CT images were classifiable (48 units). 3 of 48 (0.06%) units were undisplaced (grade A), 18 of 48 (29%) units were minimally displaced (grade B), and 4 of 48 (0.08%) units had largely displaced (grade C) fractures. 5 patients had radiological evidence of optic canal fractures. Poor visual acuities positively correlated with severity of fractures (Spearman’s rho=0.95, p=0.05) and number of fractured units (Spearman’s rho=1.0, p=0.0001).

**Conclusion** AO/ASIF classification system provides a uniform method in the assessment of OF which appears to correlate with visual outcome.
Visual outcome in meningiomas around the anterior visual pathways treated with LINAC fractionated stereotactic radiotherapy


(1) Department of Ophthalmology, Rabin Medical Center., Petah Tikva, Israel
(2) Sackler School of Medicine, Tel Aviv University, Tel Aviv Israel
(3) Department of Neurosurgery, Rabin Medical Center, Petah Tikva, Israel
(4) Department of Neurosurgery, Sheba Medical Center, Ramat Gan, Israel
(5) Stereotactic Radiosurgery Unit, Sheba Medical Center, Ramat Gan, Israel

Purpose To describe a case series of AVP meningiomas treated with LINAC fractionated stereotactic radiotherapy (FSRT) using the multiple, non-coplanar, dynamic conformal rotation paradigm, and to compare the success and complication rates with those reported for other techniques

Methods Patients with AVP meningiomas followed at our neuro-ophthalmology unit for a minimum of 12 months after FSRT. We compared details of neuro-ophthalmological examinations and tumor size pre- and post radiation and at the end of follow-up

Results Of 87 patients with AVP meningiomas, 17 were referred for FSRT. Sixteen patients completed more than 12 months’ follow-up (mean 39 mo). Eleven had prior surgery, while 5 had FSRT as first line management. Tumor control was achieved in 14/16 cases, with three meningiomas shrinking in size after radiation. Two meningiomas progressed, one of them in an area that was outside of the radiation field. Visual functions improved (6) or stabilized (8) in 14 (88%) patients and worsened in two (12%).

Conclusion Fractionated LINAC radiotherapy using the multiple non-coplanar dynamic rotation conformal paradigm may be offered to patients with meningiomas threatening the anterior visual pathways as an adjunct to surgery or as first-line.

Histological Calcification in Periocular Basal Cell Carcinoma: A Clinical Correlation

PATWARY S N (1), PUREWAL J (1), SUNDARARAJEN S (2), SALMONS N (2), SANDRAMOULI S (1)

(1) Wolverhampton Eye Infirmary, Wolverhampton
(2) Pathology, New Cross Hospital, Wolverhampton

Purpose A previous study involving head and neck basal cell carcinoma (BCC) reported that calcifying neoplasms were more likely to be an aggressive histological subtype as compared to non-calcifying BCC. The incidence of histological calcification of periocular BCC and its clinical implications have not been previously described. The aim of this study is to describe the prevalence of calcium in periocular BCC and its clinicopathologic correlations.

Methods This is a prospective observational study of 65 consecutive cases of periocular BCC presenting to a regional eye centre. We obtained full ethical approval to conduct this study. We collated clinical data regarding the epidemiological details, site, size and clinical subtype of BCC and performed histological examination which included looking for the presence of calcium.

Results Of the 65 cases included in the study, we found calcium to be present in 27 cases (41%). BCC with calcium presence had a higher proportion of clinically ulceronodular tumours (26%) as compared to the non-calcified group (10%). The cases with calcium presence tended to be larger in size with an average area of 90mm² (16-375mm²) as compared to 42mm² (4-144mm²). We did not identify any correlation between the histological classification of the tumour and the presence of calcium. In our study group, five cases were recurrences with two showing signs of calcium while three did not.

Conclusion Our study showed a higher proportion of calcification as compared to similar studies on BCC from non-periocular sites. Although BCC with calcium tended to be larger in size, we did not find any other clinicopathological correlation.
Masticatory oscillopsia post lateral wall decompression: underreported and overrated?

FAYERS T, BARKER LE, VERITY DH, ROSE GE
Moorfields Eye Hospital, London

Purpose Masticatory oscillopsia is a recognised complication of lateral wall orbital decompression but there are no reports in the literature of its frequency, duration, or indeed, how problematic it is to patients.

Methods A retrospective telephone review was conducted of patients who underwent orbital decompression involving the lateral wall for thyroid eye disease by two consultants at Moorfields Eye Hospital between January 2008 and December 2010. Patients were asked questions related to post-operative oscillopsia, diplopia and scarring.

Results 158 patients underwent lateral +/- medial +/- inferior wall orbital decompression. Contact details unavailable for 31; two patients could not speak English. 33/85 (39%) had post-operative oscillopsia, occurring on chewing in 27 and on walking in 8 (in particular when the feet strike the ground). In the majority of patients it lasted less than one year. Although many found it bothersome initially, all said that it had either resolved or they had got used to it and it was no longer a problem. 28 patients reported that diplopia developed or worsened immediately following decompression, all of who had medial +/- inferior wall decompression (i.e. none were solely lateral wall decompressions). Interestingly, 12 patients who had just lateral wall decompressions said that their pre-existing diplopia improved or resolved. 26 had a noticeable skin scar at the lateral canthus; 7 were troubled by it.

Conclusion Rates of oscillopsia were 39%, which is higher than anticipated. In most cases it occurred only on mastication; in a few it was related to walking. In most cases it resolved within less than one year and there were no reports of resulting long-term morbidity.

Novel use of Cone Beam CT Scan in Thyroid Eye Disease

RAOOF N (1), ANDREW D (2), PAYNE M (2), SALVI SM (1)
(1) Department of Ophthalmology, Royal Hallamshire Hospital, Sheffield
(2) Department of Radiology, Charles Clifford Dental Hospital, Sheffield

Purpose Cone Beam CT Scan (CBCT) is a tomographic scanning technology that is commonly used by various dental specialties for its capability to generate a 2D /3D data set at much lower radiation doses than conventional CT scanning. We would like to present our experience in the novel use of CBCT to image patients with thyroid eye disease requiring decompression surgery at Sheffield between 2011-12.

Methods Patients requiring orbital decompression surgery in 2011-12 were imaged with CBCT instead of conventional CT scanning.

Results In all 10 patients, the bony anatomy of the orbit was imaged clearly with CBCT, allowing precise surgical planning for patients requiring lateral wall as well as medial 1.5 wall decompression surgery. Postoperative CBCT scans adequately demonstrated the anatomical result of surgery. The soft tissue anatomy, as expected, was not as clearly demonstrated as with MRI or a conventional CT scan. One patient with claustrophobia who had previously refused a CT scan tolerated CBCT.

Conclusion CBCT is a compact, faster and safer version of conventional CT. The time needed for a full scan is typically under one minute and the radiation dosage is 25-50% less than that of a regular CT scan. It is useful in patients with claustrophobia. The quality of images is adequate for surgical planning of decompression surgery and to review the postoperative results. We present the novel and successful utilization of CBCT technology and suggest its use in place of regular CT scan, due to its advantages, in the surgical management of thyroid eye disease.
Reactivation of thyroid orbitopathy following orbital decompression

CHUAH JL, SHAHID F, OBI EE, BURNS J, SAMPATH RG
Eye Department, Leicester

Purpose To evaluate the outcome, post-operative complication and incidence of reactivation following orbital decompression for thyroid orbitopathy.

Methods Retrospective interventional case series of patients with thyroid orbitopathy.

Results 177 eyes of 106 patients were included. 35 patients had unilateral orbital decompression and 71 had bilateral orbital decompression. The average follow-up duration was seven years. The thyroid status were hyperthyroidism (78), hypothyroidism (7) and euthyroid (21). 29 patients had additional procedures for diplopia (15 squint correction) and cosmesis (15 levator & muller recession, 2 lid orbital fat decompression, 5 ptosis correction and 3 blepharoplasty). The indications for orbital decompression were active thyroid orbitopathy (60) and cosmesis (46). Following orbital decompression, the number of patients who had experienced improvement were 35 lid retraction and 99 exophthalmos. One patient had post-operative complication of hypoglobus. There were 5 cases of reactivation i.e.2.82% (two had 1 trigger factor, one had 2 trigger factors and one had 3 trigger factors).

Conclusion Orbital decompression for thyroid orbitopathy is a safe and effective operation. Reactivation is rare and more likely in patients with trigger factors.

Indications for orbital decompression for patients undergoing keratoprosthesis surgery

NORRIS JH (1), CARPENTER D (2), AL RAQQAD N (3), BRITAIN P (3), DAYA S (1), LIU C (3), MALHOTRA R (1)

(1) Corneo-Plastic Unit, Queen Victoria Hospital NHS Foundation Trust, East Grinstead
(2) Ocular Prosthetics Department. Moorfields Eye Hospital, London
(3) Ophthalmology Department, Sussex Eye Hospital, Brighton and Sussex University Hospitals NHS Trust, Brighton

Purpose To highlight a novel indication for orbital decompression surgery for patients, who are usually one-eyed, undergoing Keratoprosthesis (KPro) surgery. We illustrate the importance of globe position to either optimize the ocular surface or allow a cosmetic shell to be worn. To our knowledge, such indications for orbital decompression have not been reported to date.

Methods We present two patients with KPros undergoing orbital decompression surgery. Outcomes in terms of cosmesis, visual acuity, globe position and ocular surface integrity were assessed.

Results Two-wall and intra-conal fat orbital decompression surgery achieved globe retro-placement of 6mm and 7mm, allowing fitting of a cosmetic shell over the OOKP (case 1) and reducing lagophthalmos and corneal exposure (cases 1 and 2). In case 2 visual acuity improved from perception of light to 6/48+2.

Conclusion Indications for orbital decompression exist in patients undergoing OOKP or KPro to reduce pseudo-proptosis or exposure.
The result of delayed orbital fracture repair.

BEIGI B, KHADWALA M
Eye Department, Norfolk and Norwich University Hospital, Norwich

Purpose To present a retrospective case series review of orbital floor fractures and their management. To assess the outcome of delayed repair.

Methods Eighty five patients with floor fractures were identified (2001-10). A retrospective review of their medical records and computed tomography (CT) scans was completed. On CT scanning, fractures with large defect with incarcerated tissue and depressed fractures were included. All trapdoor fractures underwent early repair were excluded. Successful surgical criteria were enophthalmos <1mm, no hypoglobus / hyperglobus, extra ocular muscle restriction < 5 degrees as measured on Hess charting in up gaze but normal in all other positions and no diplopia other than in extreme up gaze (5 degrees).

Results Thirty seven patients were managed conservatively, whilst 45 underwent delayed surgical repair 8-50 weeks later. Overall success rate was 87%.

Conclusion There is a high success rate following a late repair of the floor fracture when there is not an entrapped muscle.

Assessment of the impact on quality of life of secondary orbital implants using the Glasgow Benefit Inventory.

GREGORY ME, CONNOLLY J, KEMP EG
Tennent Institute of Ophthalmology, Glasgow

Purpose To determine the impact on quality of life of secondary orbital implants

Methods A cross-sectional study was undertaken using the Glasgow Benefit Inventory, in the form of a postal questionnaire, to assess the subjective patient benefit of secondary orbital implants in patients attending an Oculoplastic and Oncology Service. The Glasgow Benefit Inventory generates a score from -100 (maximum harm) through 0 (no effect) to +100 (maximum benefit) for the intervention under investigation. The patients were also asked additional questions (not validated) to allow subjective assessment of conversational and extreme gaze prosthetic motility, change in appearance and satisfaction.

Results A response rate of 29 out of 52 (56%) was achieved. The median total benefit score was 14.2 (95% CI = 1.4 to 27). The median subdomain scores were: general 18.8 (95% CI = 3.1 to 34.4), social 3 (95% CI = -2.5 to 8.5), and physical 7.1 (95% CI = -9.2 to 23.5). Patient self-assessment revealed 64.3% satisfaction with the surgical outcome. Conversational motility and far-gaze motility was deemed to be adequate by 45% and 45% of patients respectively and minimal in 32% and 21% respectively.

Conclusion This study demonstrates modest quality of life benefit following the insertion of a secondary orbital implant, and supports continued treatment. Secondary orbital implants play an important role in the rehabilitation of the anophthalmic patient. The complex nature of secondary implants often necessitates further socket reconstruction and cosmetic surgery which may have an impact on the patients’ quality of life.
How Benign are Orbital Benign Reactive Lymphoid Hyperplasia?

MEHTA P (1), DURRANI OM (2), BURNS J (3), SAMPATH R (3)

(1) Department of Ophthalmology, University Hospital Coventry and Warwickshire NHS trust, Coventry
(2) Birmingham and Midland Eye Centre, Birmingham
(3) Department of Ophthalmology, Leicester Royal Infirmary, University Hospital of Leicester, Leicester

Purpose
Orbital benign reactive lymphoid hyperplasia (BRLH) usually has an indolent clinical course. It can be associated with systemic lymphoma (SL). The chance of developing SL within 5 years is 15-25%, however lymphoma related death (LRD) has rarely been reported in association with orbital BRLH. To analyze clinical features, systemic involvement and lymphoma related death in patients diagnosed with orbital BRLH.

Methods
Retrospective case note analysis of 14 patients who were diagnosed with BRLH following orbital biopsy between 1998 and 2008 at 2 centres in UK.

Results
The mean age at presentation was 58 years. 57% of patients were females. Commonest presentation was mass effect in the form of lid swelling in 71% and proptosis seen in 71%. Lacrimal gland involvement was seen in 64% of patients. The mean follow-up was 57 months (median-72 months). Two patients (14%) had bilateral orbital BRLH of which one had SL before. Neither patient had LRD. Systemic lymphoma was seen in 4 (28%) out of 14 patients. 14% had SL before and developed orbital BRLH after a mean interval of 18 months. 14% had simultaneous SL. Of the remaining 10 patients who presented with orbital disease alone, none developed subsequent SL. Of the 14 patients, 2(14%) had LRD. One patient had SL before and 1 had simultaneous SL. Their systemic diagnosis included diffuse large B cell lymphoma in one and high grade NHL in one. 86% of patients had regression of the orbital disease following treatment.

Conclusion
All patients with orbital BRLH should have an assessment for SL. In absence of SL, it can be treated by surgical excision or radiotherapy. None of the patient developed subsequent SL, however orbital BRLH was associated with LRD in 14% of patients in our series.

Superior bulbar conjunctival injection and chemosis, an important sign in Thyroid Eye Disease (TED).

UDDIN JM, DANIEL C
Moorfields Eye Hospital, London

Purpose
We report a previously unreported clinical sign, which we believe helps in differentiating active TED and signs due to exposure that may be inappropriately attributed to active TED.

Methods
Retrospective, observational case series of 10 cases of possible active TED were examined for superior bulbar conjunctival injection & chemosis, and interpalpebral conjunctival injection & chemosis. The severity of superior bulbar conjunctival injection & chemosis was compared to the interpalpebral conjunctival injection & chemosis. They also underwent a full orbital history and examination, including Mourits score. These patients were followed up to assess if their disease was active and alteration of their signs in association with treatment, in particular, superior bulbar conjunctival injection & chemosis.

Results
We will report the association of superior bulbar conjunctival injection & chemosis and interpalpebral conjunctival injection & chemosis in active and inactive TED.

Conclusion
We feel superior bulbar conjunctival injection and chemosis is an important clinical sign which should be looked for in every patient with interpalpebral conjunctival injection & chemosis to help differentiate active and inactive TED.
Primary intraosseous cavernous haemangioma of the orbit - a rare localisation

GUPTA T (1), ROSE GE (1), MANISALI M (2), MINHAS P (1), UDDIN JM (1), VERITY DH (1)
(1) Moorfields Eye Hospital, London
(2) Neurosurgery, St Georges’ Hospital, London

Purpose Primary intraosseous cavernous haemangioma (IOCH) is a rare benign neoplasm presenting in the 4th and 5th decades of life. The spine and skull are most commonly involved, orbital involvement is extremely rare. We describe six patients with cranio-orbital IOCH, the largest case series to date.

Methods Retrospective review of 6 patients with histologically confirmed primary intraosseous haemangioma involving the orbit. Clinical characteristics, imaging features, approach to management and histopathological findings are described.

Results 5 patients were male with a median age of 56 (range 40 – 69 yrs). Presenting symptoms included localised swelling in all cases. 2 cases described more acute signs of progression with pain a presenting feature. Restriction of ocular motility and diplopia occurred in 2 patients. A “characteristic honeycomb” pattern on CT imaging was demonstrated in 4 of the cases. 3 cases involved the anterior maxillary wall and inferior orbit. Complete surgical excision was performed in all cases. Presurgical embolisation was performed in 1 case. In all cases, histological studies identified bony tissue within which were cavernous vascular spaces, with thin walled blood vessels lined by single layer of flat cytologically normal endothelial cells.

Conclusion IOCH of the cranio-orbital region is rare; in the absence of typical imaging features (radiating, or ‘sunburst’ intradiploic trabeculae), the differential diagnosis includes chondroma, chondrosarcoma, bony metastasis and lymphoma. Imaging is contributory in the management of IOCV, but complete surgical excision is necessary to exclude more sinister pathology. Intraoperative haemorrhage may be severe and may be reduced by preoperative embolization.

Outcomes and complication rate of acrylic orbital implantation after evisceration and enucleation

RACHDAN D, SHAFI F, FORD R, DILLON N, WEHBEH L, DURRANI O
Birmingham and Midland Eye Centre, Birmingham

Purpose To report the outcomes of patients that have undergone enucleation or evisceration with acrylic orbital implant.

Methods Retrospective consecutive case series of patients undergoing either evisceration or enucleation, with orbital implantation between January 2008 and January 2011. Demographic data, ocular diagnosis, implant characteristics and intraoperative details and postoperative complications were recorded.

Results 40 patients underwent primary orbital implantation after evisceration (n= 37) or enucleation (n=3) during the study period. A further 5 patients underwent secondary orbital implantation at a later date having had previous evisceration. The study included 11 females and 34 males. The mean age of patients was 45.3 years (range 12-89 years). The most common underlying ocular diagnosis was trauma (25 patients) followed by end-stage glaucoma (5 patients) and corneal perforation (4 patients) causing a painful blind eye. Acrylic sphere implants were used in the majority of cases (44/45 patients). The remaining one patient had an enucleation for a uveal melanoma with a medpor implant. No intraoperative complications were encountered in our case series. The mean duration of follow-up was 13.4 months (range 1-46 months). Postoperative complications were noted in 2 patients that had developed conjunctival retention cysts, which required excision. There were no instances of implant exposure or extrusion.

Conclusion Acrylic orbital implants are safe and cost effective for restoring orbital volume after evisceration and enucleation.
**Observational Retrospective Survey of the Diagnostic Accuracy of the Edinburgh One-Stop Peri-ocular Malignancy Clinic**

TIMLIN H, GOUDIE C, MITRUT I, WRIGHT M  
Princess Alexandra Eye Pavilion, Edinburgh

**Purpose** The diagnostic accuracy of referrals to the peri-ocular malignancy clinic were audited, with the aim to better prioritise future referrals.

**Methods** The notes of patients who attended the peri-ocular malignancy clinic for a 12 month period between July 2010 to June 2011 were retrospectively analysed. The referral diagnosis was compared to the oculoplastic consultant’s clinical diagnosis and then the histological diagnosis.

**Results** There were 13 clinics with 59 new referrals. 8 were excluded from further analysis as they were referred with punch biopsy reports and the diagnosis was not in question. The remaining 51 referrals had no histological diagnosis prior to referral. These referrals have been analysed further. At the peri-ocular malignancy clinic, the oculoplastic consultant diagnosed 16/51 lesions as benign. Of these, 11 required no investigation or treatment, 1 had an incisional biopsy, and 5 were treated with excisional biopsy as they were symptomatic. All of these biopsies confirmed benign lesions. 34/51 lesions as basal cell carcinoma, which were treated with excisional biopsy. 32 of these biopsies confirmed histological basal cell carcinoma. 2 biopsies showed benign lesions; 1 epidermoid cyst and 1 intradermal naevus. 1/51 lesion as possible squamous cell carcinoma, which was treated with excisional biopsy showing seborrhoeic keratosis on histology.

**Conclusion** 32/51 referred lesions were malignant and 41/51 patients had investigation or treatment. Aiming for a higher referral accuracy rate would improve the efficiency of use of this specialised clinic. However, this cannot be at the expense of ‘turning away’ malignant lesions i.e. false negatives.

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**Epiblepharon and High Body Mass Index: The Singapore Experience**

TAN M CJ, AMRITH S, WONG IB, SUNDAR G  
Department of Ophthalmology, National University Hospital, Singapore

**Purpose** To evaluate the relationship between epiblepharon and Body Mass Index (BMI) in the Singaporean population.

**Methods** In a pilot prospective case control study, 15 patients diagnosed with epiblepharon in the oculoplastics department were studied and compared with an age-matched control group of 15 participants. Data including gender, height, weight, symptoms and severity of epiblepharon were recorded.

**Results** Mean age of the patients was 11.26 years and 11.33 years for the control group. 93.3% of the patients had bilateral involvement and there was no gender predilection for epiblepharon. Among the 29 eyes diagnosed with epiblepharon, 69.0% had keratopathy, with mild (40.0%) and moderate (40.0%) keratopathy being the most common. The most common symptoms of epiblepharon included irritation and tearing. The average BMI of patients with epiblepharon was 21.3. Using the independent t-test, the BMI of the patients with epiblepharon was significantly higher than the BMI of the control group (p = 0.0478). None of the patients in the epiblepharon group were on systemic corticosteroids or any medication that may cause an increase in weight.

**Conclusion** Epiblepharon is a common eyelid condition in Singapore and is shown to be associated with an increased BMI. A continuation of this study to a larger case control study is proposed.
Eviseration: Orbital Implant exposure rates – 4 Flap Technique, 6 Layered Closure

OBI E E (1), SAUNDERS D (2), LAKHANI B K (3), CHUAH J L (1), BURNS J (1), SAMPATH R (1)

(1) Department of Ophthalmology, Leicester Royal Infirmary, Leicester
(2) Department of Medicine, Leicester Royal Infirmary, Leicester
(3) Department of Medicine, Leicester Royal Infirmary, Leicester

Purpose To determine the rate of exposure in all patients who had globe evisceration, insertion of an orbital implant and closure of the orbital implant using a scleral 4 flap technique from August 2001 to November 2011.

Methods A retrospective clinical case series of patients who underwent globe eviscerations. Surgery was carried out by two oculoplastic surgeons. After an evisceration has been performed, the sclera is divided into four flaps and the implant inserted. Closure is achieved by sequentially overlapping each of the four scleral flaps. A 5.0 Vicryl suture is used to secure the flaps and to anchor the flaps to the orbital medpor implant. Further closure is achieved by individual closure of tenons capsule and conjunctiva using 8.0 Vicryl. This provides a six layered closure of the orbital implant.

Results 52 patients met the inclusion criteria and had unilateral eviscerations. 35% were female and 65% were male, mean age was 57 years (range 31 – 95 years). Trauma was the most frequent cause for evisceration. Orbital Implant size ranged from 16 to 22mm (median 20, n=32). Mean follow up period was 14 months (median 8 months). Only two patients (3.8%) had small areas of conjunctival dehiscence, which occurred within the first 50 post-operative days and resolved completely with conservative management. There was no associated infection. The remaining 50 patients (96.2%) had no incidence of exposure.

Conclusion A scleral four flap sequential closure followed by closure of tenons and conjunctiva gives rise to a six layered closure of the orbital implant. Using this technique has resulted in a significant reduction in orbital implant exposure. In light of our results, we advocate and recommend this technique.
Posters & Videos
Optometry led paediatric chalazia clinic: Is it an efficient & cost effective service?

ODEDRA N (1), YUSUF S (1), GRAVES T (2), ANWAR S (3)
(1) Ophthalmology Dept, Leicester
(2) Ophthalmology Dept, Leicester
(3) Ophthalmology Dept, Leicester

**Purpose**

- **Background**: A new service was set up as an extension of optometry led paediatric clinics where patients undergo internal and external eye examination by specialist optometrist. Those diagnosed with chalazion were given conventional hot compressing treatment and were followed up a month later. Those with unresolved cysts were referred for surgical intervention either under local anaesthetic or general anaesthetic based on age of child and discussion with parents.

- **Aim & Objectives**: To find out how many children required surgical intervention and to see if there any cost savings with the new service.

**Methods**

6 month audit (June to Dec 2010) of all patients seen by the new service. Notes were reviewed to check on diagnosis and action taken and an excel database was set up to analyse information collected.

**Results**

- 34 patients were seen by the new service in the 3 month audit period, 26 were diagnosed with chalazia, 5 with other conditions and 3 were normal.
- Of the 26 diagnosed with Chalazia, 21 (81%) resolved with conventional treatment & 5 (19%) needed surgical input. 3 were seen under local in minor ops and 2 required general anaesthesia.

**Conclusion**

- Discussion: Although we had little retrospective data on the old system, other studies have found that only 1 in 4 resolve by conventional treatment and 3 out of 4 are booked in for surgery. Cost savings are obvious if only 1 in 5 versus 3 in 4 need surgical intervention.
- There are also cost savings to be made between the types of surgical intervention i.e. GA versus LA. Nearly £80 of savings to be made per patient in the new clinic as apposed to old service.

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Is this merely a simple xanthelasma?

ROJANASAKUL A, DUNLEAVY D, HADID O

Ophthalmology, Doncaster

**Purpose**

- We describe a rare case of Necrobiotic xanthogranuloma (NXG). This diagnosis should be considered in the differential diagnosis of a unilateral orbital mass associated with xanthelasma like lesion. NXG is a progressive disease. It is characterised by red or yellow skin papules or indurated plaques with surface telangiectasia, which subsequently ulcerate and scar.
- Approximately 80% of patients have a monoclonal gammopathy and 10% of these patients develop multiple myeloma.

- **Methods**: Case Report: A 65 year old lady presented with a 2 year history of progressive left proptosis, erythema and fullness of the left upper lid and associated ptosis. She also had a yellow xanthelasma like skin plaque in the medical aspect of the lid. Visual acuity was 6/5 on the right and 6/6 on the left. She had no optic neuropathy.

- **Results**: Orbital imaging confirmed the presence of a non-destructive anterosuperior ill-defined orbital lesion. Orbital biopsy revealed features typical of NXG. Systemic work-up including haematological investigations were inconclusive.

**Conclusion**

- NXG should be considered in the differential diagnosis of orbital lesions and ipsilateral xanthelasma. It is known that simple biopsy of the skin lesion may provide the diagnosis. We aim to describe this rare condition and to increase awareness of a simple alternative diagnostic tool that may save patients from undergoing an orbital biopsy.
Management of periocular basal cell carcinoma by Mohs micrographic surgery

LITWIN AS (1), RYTINA ED (2), HA T (3), RENE C (1), WOODRUFF SA (1)

(1) Ophthalmology, Addenbrookes, Cambridge
(2) Histopathology, Addenbrookes, Cambridge
(3) Dermatology, Addenbrookes, Cambridge

Purpose To determine the success of Mohs micrographic surgery (MMS) for periocular basal cell carcinoma (BCC) at Addenbrooke’s Hospital, a tertiary referral centre in Cambridge, England and to compare the findings with international standards.

Methods Retrospective interventional case series covering 5 years of practice. Medical records of 104 consecutive patients who underwent MMS for confirmed periocular BCC were reviewed. The main outcome measure was biopsy-proven recurrence of BCC at the same anatomical location after MMS. Secondary outcome measures included tumour site, histological subtype and length of follow-up.

Results 104 patients were identified as having undergone MMS for periocular BCC from January 2003 to July 2008. 63 (62%) of the surgeries were for primary BCC and 25 procedures (25%) were for recurrent or residual BCC. 64% of tumours were nodular BCC. The mean follow-up was 28 months (range 1-85 months). Six (5.9%) recurrences were identified in total. The recurrence rate following MMS for primary BCC was 1.3-1.6% compared to 13.2-20% in the patient group treated for residual or recurrent tumours. The mean time to recurrence was 39 months (range 16-71 months).

Conclusion The results confirm that MMS success rates for primary BCC in the UK are very high and match previously published data from the US and Australia. The recurrence rate for previously treated tumours may be higher than previously thought.

A Reconstructive Technique for the Management of Growing Fractures of the Frontal bone and Orbit

WHILE B (1), SAHA K (1), RADFORD R (2), LEATHERBOW B (1)

(1) Manchester Royal Eye Hospital, Manchester
(2) Ophthalmology, Preston

Purpose Growing fractures involving the frontal bone and orbit occur infrequently. The risk of neurological sequelae means surgical management is mandatory. There is no accepted standard surgical technique for the management of these fractures. We present a technique using Norian CRS (Craniofacial Repair System) fast set putty over a Medpor scaffold.

Methods Two paediatric patients with growing fractures of the frontal bone extending into the orbital roof underwent surgical repair in conjunction with a neurosurgical team. The fractures were exposed via a bicoronal flap approach. Herniated brain and adherent meninges were cleared from the fractures. In Case 1 the orbital fracture was managed conservatively. In Case 2 a Medpor sheet was secured over the orbital roof fracture with a single titanium screw. In both cases the internal aspect of the frontal bone fracture was repaired with a Medpor sheet over which a pericranial flap was placed. The dural defect was closed with Tisseel fibrin sealant. The orbital fracture site was filled with Norian CRS and the contour smoothed.

Results Both patients made a full and uneventful recovery. Case 1 has been followed up for 11 years with no ophthalmic or neurological sequelae and an excellent cosmetic appearance.

Conclusion Norian CRS fast set putty is a calcium phosphate cement. It hardens in 6 minutes at body temperature and in wet conditions. It is removed over time by active cell-mediated bone remodeling and animal studies have found no growth restriction of immature crania following the use of Norian CRS. We have found that combining Medpor and Norian is very simple and effective, avoiding the need for calvarial bone grafting in the management of growing fractures.
Overview of clinical manifestations and management of periorbital discoid lupus erythematosus

(1) Hereford County Hospital, Hereford, UK
(2) Tulane University & Tulane Health Sciences Centre, New Orleans, USA
(3) North Shore Medical Centre, St Leonards, Australia
(4) South Australian Institute of Ophthalmology, Adelaide, Australia
(5) Hereford County Hospital, Hereford

Purpose To describe the clinical features, laboratory findings and management of 4 new cases of periorbital discoid lupus erythematosus and provide a review of the relevant literature.

Methods Retrospective, multicenter case note analysis of 4 patients with histopathologically confirmed discoid lupus erythematosus and a major review of the English language literature.

Results Four new cases of periorbital discoid lupus erythematosus were identified with varying clinical manifestations and treatments. Literature review yielded 54 cases in total. Presentation is often in the third and fourth decades (47.1% cases); with bilateral lower eyelids being the most commonly affected sites. Median duration of symptoms before presentation was 3.5 years with an erythematous plaque (66.0%) and associated scaling (42.3%) and madarosis (55.3%). Due to its clinical similarities to a wide range of cutaneous conditions, in particular blepharitis, it is often initially misdiagnosed. A more prolonged disease course was associated with destruction of the ocular appendages and adnexa.

Conclusion Periorbital discoid lupus erythematosus remains a diagnostic challenge and multiple biopsies may be required to facilitate the diagnosis. Oral antimalarials offer an effective treatment with a favorable safety profile.

An ocular manifestation of Wegener’s Granulomatosis: A Case Report

QURESHI HF (1), JABIR M (2)
(1) Lincoln
(2) Ophthalmology, Rotherham

Purpose To report a case of poor levator palpebrae superioris function with ptosis occurring as a manifestation of Wegener’s Granulomatosis and managed effectively with oculoplastic surgery.

Wegener’s Granulomatosis (WG) is a rare necrotising granulomatous vasculitis of unknown aetiology that predominantly affects the upper and lower respiratory systems and kidneys. WG has been shown to have ocular manifestations in various studies such as one by Bullen et al (1983) which showed that 40 out of 140 people with WG had ocular involvement. 45% of these had an orbital inflammatory process, 38% had scleral involvement and 20% had involvement of retro-orbital structures. However, this case report is of a case where WG has manifested as poor levator palpebrae superioris function with ptosis (due to involvement of the muscle). This seems to be a rare ocular presentation of WG as there seems to be no cases of this specific presentation reported in previous literature.

Methods Case report: We present a 55 year old male with WG presenting with bilateral ptosis, redundant skin and poor levator function, resulting in difficulty opening his eyes and impaired vision. We also give a literature synthesis, comparing this case to other cases of ophthalmic presentations of WG mentioned in the literature.

Results He was successfully treated surgically by having a bilateral levator resection with bilateral blephroplasty and bilateral ptosis repair. He reported improved vision. (NB. We will include photographs to demonstrate this.)

Conclusion This case demonstrates that another ocular presentation of WG is poor levator function with ptosis. Such a case can be managed very effectively with lid surgery rather than immunosupresants.
Adverse reactions to Novabel; an alginate dermal filler – why UK legislation should re-classify dermal fillers as medicines

BASHEER K (1), LINGHAM R (2), LEE V (1)
(1) Ophthalmology, London
(2) Radiology, London

Purpose: To highlight weakness in UK legislation for licensing medical devices, such as dermal fillers, which do not require the same rigorous testing standards as medicines.

Methods: We present two females referred for an oculoplastic second opinion 10 months following the development of severe fibrosis after Novabel® was injected into lower eyelid tear troughs at a cosmetic plastic surgery clinic. Preliminary trials by the manufacturer demonstrated good results post injection into nasolabial folds with 18 month follow up. There was no previous data on periorbital injection sites.

Results: There was significant facial disfigurement from subcutaneous hypertrophic fibrosis which developed 6–8 weeks after the injections. MRI and ultrasound imaging demonstrated extensive infiltration of lower eyelid periorbita despite the treating doctor administering triamcinolone injections in the preceeding months. We review the current evidence base into safety and efficacy of widely used dermal fillers in the periorbital area.

Conclusion: Novabel®, a cross-linked alginate filler, was removed from the market just two months after it was released due to multiple reports of adverse effects. Along with the recent PIP® breast implant scandal, this case highlights weakness in EU legislation for medical devices. The standards of clinical testing are lower requiring only CE certification, neither a mark of safety or efficacy, whereas USFDA approval is required as for medicines in the United States. A review of UK legislation is being considered and should include the re-classification of dermal fillers as medicines to ensure they undergo adequate clinical trials before becoming available to the public.

Overview of Medical Photography for Oculoplastic Surgery: A picture is worth a thousand words.

ONG C T (1), JONES M (2), BISHOP D (3)
(1) Ophthalmology department, Salisbury District Hospital, Salisbury
(2) Medical Photography, Salisbury District Hospital, Salisbury
(3) Medical Photography, Royal Free Hospital Hampstead, London

Purpose: To highlight the basic principles of oculoplastic clinical photography. To cover the basic camera types, lens choices and lighting options with emphasis on the technical and medico-legal aspects of clinical photography relevant to oculoplastic surgery. To demonstrate standardized photographic views for various oculoplastic conditions that may be used as reference images.

Methods: A Nikon D700 digital single lens reflex (DSLR) camera and a 105mm Micro-Nikkor lens were used in photographing the subjects. Bowen's studio lighting and a black background were used in the studio set up. Informed consent was obtained from the model who posed for the standardized photographs. Photographs were taken at various magnifications in line with the Westminster reproduction ratios. The images were downloaded and archived in a computer in a manner which complied with the requirements of data protection and local Trust policies.

Results: The poster/presentation demonstrates standardized views for photography of: eyelids, facial palsy, eyelid positions, orbit. The authors also recommended optional views that may be added to form part of a routine oculoplastic photographic series. Tips and potential pitfalls in oculoplastic photography are presented and discussed. The legal aspects of data storage and handling are also briefly mentioned.

Conclusion: It is possible for clinicians to take good quality clinical photographs if these general principles are followed.
Use of Mini-Monoka stents for Punctal/Canalicular Stenosis

HUSSAIN RN (1), MCMULLAN T (2)

(1) Ophthalmology, Leicester
(2) Ophthalmology, Northampton

**Purpose** To assess the effectiveness of mini monoka punctocanaliculoplasty (MMPC) for the treatment of punctal/canalicular stenosis.

**Methods** A retrospective analysis of patient case notes was performed on 77 consecutive patients (123 eyes) who underwent MMPC over the course of January 2008-December 2009

**Results** 73% of eyes had punctal stenosis, 72% canalicular stenosis; 46% had a combination of the above. 20% had some degree of lid laxity and 29% nasolacrimal duct stenosis. 101 patients (82%) had significant improvement in symptoms and were discharged without further intervention. Excluding patients with structural comorbidity the success rate improves to 88%.

**Conclusion** MMPC is an effective, safe, simple and relatively non-invasive treatment strategy for the management of epiphora secondary to punctal and/or canalicular stenosis.

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Modified Medial Canthoplasty

CHUAH JL, SAMPATH RG, BURNS J

Eye Department, Leicester Royal Infirmary, Leicester LE1 5WW, UK, Leicester

**Purpose** To describe the modified medial canthoplasty by J Burns

**Methods** Case report A 79 year old man was referred with bilateral epiphora secondary to bilateral lower lid laxity with severe medial canthal tendon dehiscence and mild lateral laxity. Bilateral modified medial canthoplasty, medial spindle and lateral tarsal strip were carried out. Following the surgery, the patient’s symptoms completely resolved.

**Results** Following the surgery, the patient’s symptoms completely resolved and cosmesis maintained.

**Conclusion** Discussion Lower lid laxity can cause epiphora due to impaired lacrimal drainage. Once the lid laxity is corrected, the epiphora should stop. Lateral tarsal strip is a popular surgery used to correct lower lid laxity. Though it works in most cases, it may not be adequate for patients with severe medial canthal tendon dehiscence like this patient. We have treated this patient’s medial canthal tendon dehiscence with medial canthoplasty which has been modified as follows: 1. Probe the upper and lower canaliculi to support the canaliculi 2. Use the blade to carry out the skin incision (‘V’ shape incision around the medial canthus) to the medial canthal tendon level. 3. Then suture the upper arm of medial canthal tendon and the lower arm of the medial canthal tendon with two 6-0 vicryl to provide shortening but not obscuration of the canalicular portion of the eyelid. This simple procedure addresses medial canthal tendon laxity without risking kinking of or damage to the canaliculi.
Periocular lymphoma treatment and outcome

CHUAH JL (1), BROWN L (2), OBI EE (1), BURNS J (1), SAMPATH RG (1)

(1) Eye Department, Leicester Royal Infirmary, Leicester LE1 5WW, UK, Leicester
(2) Pathology Department, Leicester Royal Infirmary, Leicester LE1 5WW, UK, Leicester

Purpose To evaluate local efficacy, patient tolerance and adverse effects of different treatment modalities for periocular lymphoma.

Methods Retrospective interventional case series of patients with periocular lymphoma treated with different treatment modalities.

Results 72 eyes of 61 patients were included. The average follow-up period was 6 years. 1 patient had conservative treatment ie observation, 26 radiotherapy, 12 chemotherapy, 3 surgical excision, 19 combination therapy. The structures involved were orbit (34 patients), conjunctiva (12), lids (5), lacrimal gland (8), lacrimal sac (1) and plica (1). The presentations were periocular swelling (32 patients), proptosis (16), follicular conjunctivitis (4), salmon patch (8) and dacrocystitis (1). Complete tumour regression without local recurrence was documented in 59 patients. 1 patient had recurrence and was re-treated with complete resolution. 1 patient was stable under regular observation. Radiation related adverse effects included dry eye (24 patients), cataract (1), keratopathy (4), cicatricial lid changes (4), radiation retinopathy (3), neovascular glaucoma (1) and nasolacrimal duct obstruction (1). Ten patients had cataract surgery, three had lid surgeries, one had macular laser and one had dacryocystorhinostomy.

The adverse effects of chemotherapy are infection (7 patients), vomiting, hypotension, paraesthesia and tiredness. Visual acuity was preserved in 58 patients. 3 patients had reduced vision due to radiation retinopathy. 27 patients had systemic involvement and 5 of them died of advanced diffuse lymphoma.

Conclusion Treatment of periocular lymphoma allows local resolution with excellent remission.

A New Technique for Demonstrating Dynamic Skin Tension Lines in the Periocular Region

WHILE B
MANCHESTER ROYAL EYE HOSPITAL, MANCHESTER

Purpose To outline a new technique for mapping periocular dynamic skin tension lines (DSTL). To observe the relationship of DSTL with relaxed skin tension lines (RSTL) and how this relationship changes with age.

Methods The periocular regions of 4 subjects from three generations of the same family aged 10months, 3years, 31years, and 62years were photographed. White water-based stage make-up was applied to the periocular regions of the older 3 subjects. This was done with the subject relaxed. Care was taken to cover the skin (including into all creases). The make-up was allowed to dry. The subjects then maximally contracted their periocular muscles of facial expression. Black make-up was dabbed on until all visible skin was covered. The make-up dried, the subjects relaxed, and photographs taken.

Results The photographs strikingly demonstrate DSTL in the periocular region. Comparison with plain photographs revealed a changing relationship between DSTL and RSTL with the age of the subject. The lower lid RSTL in the 10month old subject were confined to horizontal lid creases only. In addition to these, the 3year-old had developed perpendicular RSTL in line with DSTL. The 62year-old subject had many more RSTL than the younger subjects many of which followed DSTL.

Conclusion This technique provides an elegant tool for mapping DSTL in the periocular region. Possible academic applications include further study of skin tension lines. Clinical applications may include use as a pre-procedure tool for planning dermal filler injections. While it is known that periocular RSTL often follow DSTL due to the action of powerful underlying musculature, this study suggests that the orientation of periocular RSTL may change with age.
**Perioperative dynamic subtraction angiography dacrocystography in paediatric epiphora**

BAXTER JM (1), SAID D (1), TAYLOR T (2), DUNN M (3), TAMBE K (1)

(1) Ophthalmology, Nottingham
(2) Radiology, Nottingham
(3) Medical Physics & Clinical Engineering, Nottingham

**Purpose**
The predictability of repeat syringe and probe (S&P), and S&P in children over 2 years is less predictable due to the possibility of congenital abnormalities or proximal congenital nasolacrimal duct obstruction (CNLDO). Traditional computed radiography (CR) DCG can be cumbersome and slow the operative scenario. The aim is to assess the value of perioperative dynamic subtraction angiography dacrocystography (DSA DCG) in the diagnosis and management of complex CNLDO.

**Methods**
This retrospective review of perioperative DSA DCG was undertaken to assess the site of obstruction to guide management. The children underwent DCG under general anaesthesia using a mobile x-ray image intensifier with DSA capability. Positioning images were obtained using low dose pulsed fluoroscopy, followed by DSA DCG series during instillation of 1-2ml water-soluble iodinated contrast via a 30G intraductal catheter. The clinical diagnosis prior to DCG was compared to DCG findings.

**Results**
14 children underwent perioperative DSA DCG. The range of pre-DCG diagnoses was wide, including patients with several previous S&Ps. Three cases presented with apparent fistulae or accessory punctae. Following DCG there was a change in subsequent planned surgical management in 7/14 cases, based on additional information gained from DCG. Screening data was available for 10 cases (23 injections) with a mean age of 2.6 years. The average effective radiation dose from DSA DCG was 3.8 microSv per injection, compared to an average calculated dose of 14 microSv per injection using a standard CR technique.

**Conclusion**
Perioperative DSA DCG helps guide the management of complex CNLDO, with a significant reduction in radiation dose compared with standard CR DCG.

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**Permacol in eyelid reconstruction – a novel use**

PETER NM, KUMAR B
Milton Keynes Ophthalmology Dept., Milton Keynes

**Purpose**
To report the use of Permacol to replace tarsus in the reconstruction of a full-thickness lower eyelid defect.

**Methods**
Reconstruction of a full-thickness lower eyelid defect is not an uncommon procedure and requires repair of both anterior and posterior lamella. The modified Hughes procedure is commonly used for large defects, however this requires a second procedure and since the flap must be left in place for at least 3 weeks, it is not suitable for patients with only eyes. In such situations, a free tarsoconjunctival graft from the opposite upper eyelid or a mucoperiosteal graft from the hard palate is more appropriate. These have the advantage of being autologous tissue with excellent recipient tolerance, however, drawbacks include donor site scarring, limited availability and prolonged operating time. In order to avoid donor site morbidity, several substitutes on the market can be used to replace autologous grafts. Permacol is a relatively new biomaterial made from acellular cross-linked porcine dermal collagen with a structural architecture very similar to that of human dermis. It seems to be far superior to other commercially available tissue substitutes because of its increased tensile strength, rigidity, durability, predictability of structure and robust behaviour. We report its use as a tarsus replacement graft in the reconstruction of a large full thickness defect measuring approx. 80% of the lower lid, following excision biopsy of a basal cell carcinoma.

**Results**
This case demonstrates that Permacol serves as an excellent matrix for tissue ingrowth, is well incorporated by the body and achieves satisfactory functional and aesthetic results.

**Conclusion**
Permacol is a very good autologous graft substitute in eyelid reconstructive surgery.
Tissue sparing resection of eyelid lesions close to the lid margin

BEARE JDL, LARI S, SOLEBO L
Royal Eye Unit, Kingston Hospital, London

Purpose With well circumscribed superficial basal cell carcinomas close to the lid margin, a conventional pentagonal wedge resection may sacrifice a large amount of normal tarsus which may make later reconstruction more complex with perhaps a less satisfactory final cosmetic result. We suggest an alternative technique.

Methods A 2mm margin was carefully drawn around the lesion with a disposable marker pen. Proxymetacaine and Tetracaine eyedrops were instilled and then 2mls of 2% Lignocaine with adrenaline 1:200,000 was injected subconjunctivally. An Ellman Surgitron radiofrequency instrument was used to incise the skin around the lesion along the pre-marked line. The incision was then continued vertically down through the orbicularis muscle to the level of the tarsal plate. The anterior lamella was then dissected off the bared tarsus using Westcott scissors and the specimen was sent for histological examination. A 4mm pentagonal section of tarsus was now excised from the centre of the exposed tarsal plate using blade and scissors. The lid was then repaired with 6/0 and 7/0 vicryl sutures, the object being to tighten the posterior lamella to prevent ectropion of the lid. This excised tarsus was also sent for histological examination in a separate specimen pot. The orbicularis muscle was tightened across the repaired tarsus and the small remaining skin defect was left to heal by secondary intention after initial padding for 2 days.

Results 3 patients are presented in whom this technique was used in lower lid basal cell carcinomas. The cosmetic results were satisfactory.

Conclusion This technique can be useful in certain patients, particularly in the case of small anterior lamellar tumours which do not involve the lid margin or tarsus.

The Sliding Tarsal Flap Technique for Upper Eyelid Reconstruction: Outcomes and Complications.

MALIK A, SHAH-DESAI S
Ophthalmology, London

Purpose To describe the early outcomes using a sliding tarsal flap technique to reconstruct large upper eyelid defects.

Methods A retrospective case note review of three cases with lateral upper eyelid defects, reconstructed between February 2011 to February 2012. The defect measured 50% in two cases and >50% in one case. An appropriately sized flap is marked 4mm from the lid margin of the tarsal remnant. Levator aponeurosis and Mullers muscle are recessed from its superior border. Vertical incisions are made at the medial & lateral edge of the tarsus, and extended superiorly into the conjunctiva, to create a tarsoconjunctival flap. This flap is advanced inferiorly and obliquely to slide into the upper lid defect, ensuring there is no tissue tension. The flap is then sutured to the tarsus medially and fixated to periosteum laterally. This is followed by reconstruction of the anterior lamella by advancing or rotating a myocutaneous flap.

Results The mean follow up was 7 months (range 7-12 months). The functional outcome was good in 2 out of 3 cases, with no lagophthalmos, upper lid retraction or entropion. At last follow-up, the patient with >50% defect had post-operative lagophthalmos, with corneal exposure keratopathy, and a lateral peak in the lid contour.

Conclusion The sliding tarsal flap technique is a simple and effective method of restoring the posterior lamella in large upper eyelid defects. The technique is associated with preservation of eyelid function and satisfactory cosmesis.
**Functional and aesthetic outcomes of cicatricial upper lid ectropion repair.**

SINHA A (1), SHAH-DESAI S (2)
(1) Whipps Cross Hospital, London
(2) Queen’s Hospital, London

**Purpose** Eyelid trauma is associated with substantial disruption of eyelid anatomy, presenting a unique rehabilitative challenge. There is sparse information on the management of post traumatic cicatricial upper lid ectropion. We report the aesthetic and functional outcomes of three cases repaired using a technique of pretarsal skin grafting, levator recession and Pang sutures.

**Methods** This is an observational retrospective case series of three consecutive cases of upper eyelid cicatricial ectropion that were reviewed over a 5-year period. All patients underwent a pretarsal skin graft, with levator recession and Pang sutures.

**Results** Three cases of traumatic cicatricial upper lid ectropion with anterior and middle lamellar defects were repaired with full thickness skin grafts and followed up to 2 years (n=2) and 1 year (n=1). Main outcome measures were functional and aesthetic. Functional success was defined when the lid margin was restored to its normal position, with no lagophthalmos, upper lid ectropion or shrinkage of the skin graft. Aesthetic success was defined by symmetry of skin crease and upper lid show compared to the contralateral eyelid. All patients had successful functional and aesthetic outcomes.

**Conclusion** This small case series demonstrates that upper eyelid cicatricial ectropion when managed appropriately, can have excellent long term cosmetic & functional results. We recommend reconstructing the eyelid with respect to its functional units.

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**Post-Operative Photography of Trachomatous Trichiasis Surgery: POP TT Study**

(1) Ophthalmology, Worthing
(2) Carter Center, Bahir Dar, Ethiopia
(3) LSHTM, London
(4) Carter Center, Addis Abeba, Ethiopia
(5) Carter Center, Atlanta, USA
(6) ICEH, LSHTM, London

**Purpose** Trachomatous trichiasis (TT) affects eight million people worldwide. Lid rotation surgery is the standard treatment. However TT recurrence rates of 7-60% are reported. It is unknown what proportion of this is surgical failure: patients who leave the operating theatre without adequate TT correction. This cohort study assessed the immediate post-operative lid position after TT surgery and it relationship to recurrence at 4-6 months.

**Methods** Participants were recruited at TT surgery campaigns in Ethiopia. Examinations were conducted and digital photographs taken pre-operatively, immediately and at 4-6 months post-operatively, to look for TT, entropion and lid contour abnormalities.

**Results** TT surgery was performed on 824 lids of 564 participants. At 4-6 months TT recurrence was seen in 156/688 (22.7%) lids. Of 37 lids with marked entropion immediately post-operatively, 16 (43%) had TT at follow-up (OR:3.23, 95% C.I:1.17-8.91, p=0.023) and of 156 lids with TT immediately post-operatively TT was seen in 61 (39.1%) at follow-up (OR:3.18, 95% C.I:1.47-6.88, p=0.003). Individual surgeon recurrence rates ranged from 0% to 45%. A history of previous TT surgery was strongly associated with recurrence (OR 6.67, 95% C.I:2.53-17.55, p<0.001).

**Conclusion** It is widely assumed that recurrent TT develops over the months and years after surgery. This study shows that many patients have residual entropion/trichiasis at the end of the operation; these individuals are significantly more likely to have ‘recurrence’ and should be called surgical failures. Surgeons could be provided with photos of good and poor post-operative lid positions. Poorly corrected lids should have adjustments to the sutures or the incision before leaving theatre.
Use of oral methylprednisolone (OMP) in inflammatory thyroid disease: a case series

NGU MN (1), CHANG BYP (2), AJJAN R (3), BAGDONAITĖ L (4)
(1) 4th year medical student, Leeds
(2) Ophthalmology, Leeds
(3) Endocrinology, Leeds
(4) Ophthalmology, Leeds

**Purpose** To compare the efficiency and tolerability of OMP with intravenous methylprednisolone (IVMP) in thyroid eye disease within a selected cohort.

**Methods** A cohort of 3 patients who were put on OMP in the thyroid eye clinic at St James University Hospital, Leeds was selected. Data were obtained from patient's case notes. Risk factors of thyroid eye disease such as gender; smoking and age are also taken into account in order to analyze the effectiveness of treatment. Clinical activity score (CAS) is used to evaluate patients' inflammatory features and to assess the progression of thyroid eye disease. 2 patients who had failed treatment of oral prednisolone were put on IVMP and subsequently OMP. One had 4 pulses of 500mg IVMP and another had only 1 pulse of 500mg IVMP. There is another patient who started with an initial 2 pulses of 500mg IVMP and then converted to OMP.

**Results** Risk factors: MIDDLE-AGED GROUP: 66.67% (2/3) of patients are at their middle-aged. FEMALE GENDER: 100% (3/3) of them are females. SMOKING: 33.3% (1/3) of them smoked. CAS: All their scoring were initially 5/7 before any treatment and 0/7 after all treatment. Patients responded well to IV methylprednisolone and continued to improve and respond when converted to OMP. No significant side effects esp gastric side effects were recorded. This series suggests that converting pts from iv MP to Oral MP leads to continued control of active TED.

**Conclusion** It is reasonable to offer oral methylprednisolone as long as patients are being monitored regularly.

Lower eyelid suspension using polypropylene suture for the correction of punctal ectropion

GOEL RG (1), KAMAL SK (1), BODH SAB (1), KUMAR SK (1), MALIK KPS (2), KISHORE JK (3), BANSAL SB (1), SINGH MS (1), NAGPAL SN (1), ADITYA K A (1)
(1) Ophthalmology, Gurunanak Eye Center, Maulana Azad Medical College, New Delhi
(2) Ophthalmology, Subharti Medical College, Meerut
(3) Community Medicine, MAMC, New Delhi

**Purpose** To evaluate the efficacy and complications of lower eyelid suspension with modified safdarjung technique using 5-0 polypropylene suture for punctal ectropion.

**Methods** SETTING: Institutional STUDY POPULATION: Thirty one eyelids of 19 patients with mild and moderate ectropion with all types of laxity. Etiology included senile and paralytic form. INTERVENTION: All patients underwent lower eyelid suspension with modified safdarjung technique. A 5-0 polypropylene suture was passed in pre-tarsal plane between the attachments of lateral and medial canthal tendons near their insertion at orbital rim. MAIN OUTCOME MEASURES: The physiological restoration of apposition of punctum to the globe in upgaze (anatomical success) and relief of epiphora (functional success) were the main outcome measures. The recurrence of lid laxity, overall lid globe apposition and complications were also noted.

**Results** At one year follow up, the anatomical success was achieved in 28 (90%) patients and functional success noted in 27 (87%) patients. The undercorrection due to recurrence of lid laxity was noted in 2 patients. The suture exposure (1 case) and suture granuloma (1 case) occurred during follow up. The results were unrelated to the grade of ectropion and type of laxity.

**Conclusion** Lower eyelid suspension using 5-0 polypropylene suture is a useful procedure for the treatment of senile and paralytic punctal ectropion. It is simple and effective with minimal complications. However, the effect on scleral show and concern of suture biodegradation over many years needs to be further evaluated.
Ethmoidal Air Cell Schwannoma presented as a Fronto-ethmoidal Mucoscele

BASSILY R (1), BEIGI B (2), PRINSLEY P (3), WALLACE D (1)

(1) Eye Department, Norfolk and Norwich University Hospital, Norwich
(2) Eye Department, Norfolk and Norwich University Hospital, Norwich
(3) ENT Department, Norfolk and Norwich University Hospital, Norwich

Purpose To report a rare case of a fronto-ethmoidal mucocele secondary to an ethmoidal schwannoma. To our knowledge this is the first reported case of an ethmoidal schwannoma, a tumour of the peripheral nerve sheath originating from an area not believed to contain peripheral nerves that has presented with orbital symptoms.

Methods A 23 year old male presented with a one year history of progressive proptosis and vertical diplopia with restriction of up gaze. Orbital imaging demonstrated a mass in the right medial ethmoidal air cells extending to the frontal sinus and orbit, consistent with a mucocele. Patient underwent endonasal decompression of the right fronto-ethmoidal mucocele.

Results Histology confirmed a schwannoma and repeat imaging post operatively revealed residual mass originating from the ethmoidal air cells. Although the patient had improved, some degree of proptosis and vertical diplopia remained. A right upper eyelid skin crease approach anterior orbitotomy was performed to successfully excise the mass via the lamina papyracea. Post operatively the patient’s proptosis and diplopia resolved, with a full range of ocular movements. Post operative imagining at 3 months did not show any residual tumour.

Conclusion Mucocele formation may be secondary to an underlying schwannoma obstructing the fronto-ethmoidal foramen. In such cases we recommend an open-sky technique for full visualisation and improved chance of total removal.

Workforce Planning in Oculoplastics - Known Knowns, Known Unknowns and Unknown Unknowns

SMITH HB
Maidstone Hospital, Maidstone

Purpose To establish the number of consultant oculoplastic surgeons working in England, to estimate the current workload (outpatient and surgical episodes), and to predict future workforce requirements.

Methods Subspecialty interest data from the Royal College of Ophthalmologists, consultant numbers, Hospital Episode Statistics (HES) and population data from the Office for National Statistics.

Results There are 996 consultant ophthalmologists in England, or 925 full-time equivalents (FTE). Of these 115 have a subspecialty interest in oculoplastics, 68 as their principal interest. This equates to around 77 FTE, or 1 in 12 of the consultant ophthalmic workforce. Oculoplastics contributes 6% of new referrals to ophthalmic services, with a new to follow-up ratio of approximately 1:2. HES for England show there were 1.7M new and 4.44M follow-up visits in ophthalmology in 2010-11, and thus 100,000 new and 200,000 follow-ups in oculoplastics (1,300 new and 2,600 follow-ups per consultant). The total number of oculoplastic interventions and procedures for 2010-11 was 94,855 (1,186 per consultant). Over the last 11 years the population of England has risen by 6.1%, the number of oculoplastic consultants by 54% (from 50 to 77), the number of surgical procedures by 45% (from 65,250 to 94,855), and the number of outpatient attendances by 98% (from 155,000 to 307,000).

Conclusion Following current trends would require an extra 46 FTE oculoplastic consultants over the next 10 years (or 4.6 per year), in addition to the natural leaving rate of 6.5% (5 FTE per year), a total of 9.6 posts per year. To prevent further widening of the gap between consultant numbers and outpatient demand would require 55 FTE (or 10.5 posts per year).
Challenges in diagnosing and treating a congenital orbital tumour - a rare case of Massive orbital teratoma

AHMAD AZLI N (1), SYED OSMAN SIH (1), ALAGARAT-NAM JV (1), BUDIN H (2)
(1) Department of Ophthalmology, Hospital Kuala Lumpur, Kuala Lumpur, Malaysia
(2) Hospital Tawakal, Kuala Lumpur, Malaysia

Purpose To report a case of congenital orbital teratoma in an infant, the challenges in diagnosing and treating.

Methods A case report

Results A 3.72kg healthy male infant was born at 38 weeks of gestation via spontaneous vaginal delivery and referred for right eye proptosis at two weeks of life. Clinically, child presented with a unilateral right axial proptosis, a positive relative afferent pupillary defect and a pale disc. Magnetic resonance imaging of the orbit and brain revealed a heterogenous right intraconal mass with cystic component and increased vascularity, which was suggestive of orbital intraconal haemangioma. The aim of the treatment at that point of time was to preserve the globe and retain some vision. A trial of oral prednisolone and propranolol was commenced. Subsequently, right eye proptosis progressed further and was complicated by exposure keratitis. Arteriovenous malformation was ruled out by an angiogram. In the course of the disease, the infant had right corneal perforation secondary to exposure keratitis, for which a tectonic lamellar keratoplasty was done and he required a right corneal toilet & suturing and vitrectomy following a trauma at home. Finally, a right total exenteration was done in view of the massive advancing tumour. Histopathological examination revealed a mature teratoma of the right orbit.

Conclusion Massive congenital or infancy orbital tumour is not always a straight-forward case and can be complicated. In arriving to a diagnosis and the appropriate treatment, we have to be comprehensive in approach besides the essential clinical and radiological examinations.

PTOSIS AS AN INITIAL MANIFESTATION OF ORBITAL LYMPHOMA

ZIAEI M, THIYAGARAJAN A, LEE V
Ophthalmology department, Central middlesex hospital, London

Purpose Orbital lymphoma is the most common orbital malignancy and usually presents as a palpable mass with proptosis, diplopia and conjunctival swelling. We report an unusual case of orbital lymphoma with an initial presentation of solitary ptosis.

Methods Case report, including photographic documentation and investigation results of an otherwise asymptomatic 30 year old female patient presenting with a 6 month history of right sided ptosis.

Results Examination showed right sided ptosis with no evidence of diplopia, ocular dysmotility or proptosis. Magnetic resonance imaging revealed a 22x15mm soft tissue mass in the superior orbit in close proximity of the superior rectus-levator muscle complex. A biopsy through an anterior orbitotomy revealed a large diffuse B-cell, Non-Hodgkin's lymphoma (NHL) and the patient was started on the rituximab, cyclophosphamide, vincristine and prednisone (R-CVP) chemotherapy regimen.

Conclusion Orbital lymphoma should always be considered within the differential diagnosis of ptosis even without the presence of other signs such as proptosis or ocular motility problems. The ophthalmologist’s role is of upmost importance in recognising the clinical red flags associated with ocular manifestations of this malignancy and in ensuring a multidisciplinary approach towards patient investigation, management and follow-up.
Graves’ orbitopathy: an exploration of periocular thermal characteristics

Dickinson AJ (1), Allen J (2), Murray A (2), Perros P (3)
(1) Eye, Newcastle upon Tyne
(2) Medical Physics, Newcastle upon Tyne
(3) Endocrinology, Newcastle upon Tyne

**Purpose** Graves’ orbitopathy (GO) is a hugely debilitating condition with a UK prevalence of around 400,000. While medical interventions during its active inflammatory phase can be highly effective, identifying active GO can be difficult. The clinical activity score helps, but is subjective and hence liable to error and inconsistency. An objective way of identifying active GO could therefore be of value. This study explores the role of thermography in this respect.

**Methods** Fourteen patients with GO were recruited from the regional thyroid eye clinic and assessed using a standard protocol / atlas to determine Clinical Activity Scores (CAS). Thermography was performed during the following 24 hours. Eighteen healthy control subjects were also recruited and examined using the same protocol. Thermograms were collected supine in a temperature controlled thermal imaging facility under cooled conditions after careful pre-test preparation. The thermal imaging system comprised a FLIR SC300 camera allowing detailed assessment of the full periocular region. FLIR ThermaCAM image processing software was used to summarise thermal characteristics in selected periocular regions, and compare them with the CAS.

**Results** Although the thermograms exhibited a range of thermal characteristics, key features appear to separate patients with inactive GO from those with active disease. Other thermal characteristics were observed, including the blink reflex and lacrimation.

**Conclusion** Preliminary data suggest that thermographic measurements can detect areas of inflammation in patients with active GO. Thermograms in inactive GO can, however, be harder to interpret.

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Beware: the perils of surgery over the zygomatic arch

Fayers T (1), Saldana M (2), Wearne IMJ (3)
(1) Moorfields Eye Hospital, London
(2) East Sussex Healthcare Trust, Hastings
(3) East Sussex Healthcare Trust, Eastbourne

**Purpose** To highlight the potential for damaging the temporal branch of the facial nerve even when one stays superficial with the dissection. A novel graphic animation is used to demonstrate the pathway of the facial nerve.

**Methods** Case report of a 75-year old man with congenital ichthyosis who had a large (35x19mm) defect over his right lower lid/upper cheek following Mohs micrographic surgery for an incompletely-excised micronodular basal cell carcinoma, extending to the deep dermis with perineural infiltration. His cornificating skin condition limited reconstructive options, since there was little suitable skin for a skin graft.

**Results** A myocutaneous cheek advancement flap was performed. Whilst we were mindful of the anatomy of the facial nerve, staying superficial over the zygomatic arch, the patient developed lagophthalmos, difficulty blinking and mild inferior corneal epitheliopathy post-operatively. This took two years to fully settle. His lid position remains good with no cicatricial ectropion.

**Conclusion** Despite awareness of the pathway of the facial nerve and due diligence, it may be difficult to avoid damaging the temporal branch in surgery over the zygomatic arch. Patients should be consented pre-operatively about the risks and alternative reconstructive flaps that avoid this danger area should be used where possible.
A rare skin adnexal gland tumour of the Eyelid

RANA M (1), MCMULLAN TF (1), BARBIERI A (2)
(1) Dept of Ophthalmology, Northampton general Hospital, Northampton
(2) Dept of Pathology, Northampton general Hospital, Northampton

Purpose To present an unusual, atypical and rare case of eyelid tumour.

Methods Case report of a elderly lady who was referred for a large solitary lesion over her right lower lid. Due to atypical features an excision biopsy was carried out with a 2mm margin. Primary closure was done with mini-monoka stent insertion due to unavoidable damage to lower lid punctum.

Results Histological assessment was carried out and it showed a features of a rare atypical apocrine adenoma with atypical oncocytic features.

Conclusion This is a rare benign tumour of the eyelid margin and should be kept in mind when unusual appearing solitary lesions are seen close to the eyelid margin.

Autologous serum drops for promoting epithelialisation and preventing hydroxyapatite implant exposure

KAMAL S, KUMAR S, GOEL R, BODH SA
Department of Ophthalmology, Gurunanak Eye Centre, Maulana Azad Medical College, New Delhi, India

Purpose Orbital implants have been successfully used for replacing volume loss during eye removal. Various modifications in surgical technique for preventing implant exposure, migration and extrusion have been reported. We describe the use of autologous serum (AS) which has anti-apoptotic effects and various growth factors for preventing implant exposure.

Methods A case of phthisis bulbi with foreshortened conjunctival fornix was managed with enucleation with donor sclera wrap hydroxyapatite implant and surface reconstruction with buccal mucosa. At 1 week postoperative, ischemic necrosis and dehiscence of buccal mucosa (15 × 10 mm) with exposure of wrapped sclera was observed. As the buccal mucosa was placed over the Tenon's capsule, therefore much more vascularised posterior socket was unable to provide sufficient vascular supply. The conjunctival swab culture revealed no infection. After informed consent, the patient was administered 20% AS made under standard aseptic condition.

Results After five days of AS use, there was significant decrease in the area of necrosis and complete healing of mucosa occurred after 2 weeks of use of AS. This prevented the exposure of implant.

Conclusion AS may be utilized for promoting epithelialisation and preventing hydroxyapatite implant exposure in cases where early postoperative dehiscence due to ischemia is observed. This may obviate the need for surgical intervention. The role of AS in late exposure of implant which occurs due to constant abrasion of conjunctiva by irregular surface would require further reports.
**Subconjunctival 5-fluorouracil for impending recurrent contracted socket**

KAMAL S, KUMAR S, GOEL R, BODH SA  
Department of Ophthalmology, Gurunanak Eye Centre, Maulana Azad Medical College, New Delhi, India

**Purpose** To study the effects and side-effects of serial sub-conjunctival injections of 5-fluorouracil (5-FU) in early postoperative period for impending recurrent contracted socket.

**Methods** This is a retrospective non-comparative study. Five adult patients with features of recurrent socket contraction after buccal mucosal grafting were included. All cases showed progressive loss of fornices with difficulty in placing conformor in early postoperative period. Each patient was given 10 mg sub-conjunctival injection of 5-FU in the superior and inferior fornices at weekly interval with total of four injections. One patient required an additional injection in lateral fornix.

**Results** Following the treatment with 5-FU, there was marked improvement in depth of fornices and volume of socket in four patients. These lead to the placement of larger conformor and eventually prosthesis. The beneficial effects of 5-FU were observed when first injection was given within four weeks after socket reconstruction. One case which received 5-FU injection from fifth week onwards failed to show improvement. No local and systemic side effects were observed. All cases were observed for minimum of 6 months follow up with no evidence of recurrence (four cases) or complications.

**Conclusion** Weekly injections of 5-FU are effective for stopping the progression of impending recurrent contracted socket following reconstructive surgery in early postoperative period. It provides early rehabilitation and may avoid repetitive surgery.

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**Small periocular basal cell carcinomas: Is diagnostic biopsy necessary?**

MALIK S (1), SNEAD D (2), GHOSH Y (3), AHLUWALIA HS (1)  
(1) Department of Ophthalmology, University Hospital, Coventry  
(2) Department of Pathology, University Hospital, Coventry  
(3) Department of Ophthalmology, Birmingham Midland Eye Centre

**Purpose** We studied cases of biopsy proven basal cell carcinomas (BCC), who did not have residual tumour on histology at formal excision. We suggest a new pathway to benefit such patients and the service.

**Methods** Retrospective case note analysis of biopsy proven BCC over 7 years. Histological confirmation by biopsy was followed by excision with a 3mm aimed clearance margin and delayed reconstruction once clearance was confirmed. We present a series of 26 biopsy proven BCC patients, in whom no residual tumour was found on histology of the excised specimen.

**Results** 184 patients had biopsy proven periocular BCC from 2004 to 2011. 26 patients did not have residual tumour in the excised lesion. Size of the initial tumours ranged from 1.9mm to 8mm. 25 patients had lesions measuring less than 5mm and one was 7mm x 8mm. 21 patients had histological evidence of previous surgery, confirming location.

**Conclusion** Advantages of a diagnostic biopsy include confirmation of the diagnosis and histological subtype. We highlight a pitfall of a diagnostic biopsy in periocular BCC less than 5mm. We propose that in cases with a typical clinical appearance of nodular BCC less than 5mm, a primary excision biopsy with a 3mm margin is undertaken. This facilitates primary excision as small tumours may be difficult to localise after a biopsy. It has benefits of less hospital visits & demand on histology services. A disadvantage is the risk of histological surprises in clinically typical BCC. In more aggressive tumours, this is compensated by delayed closure. Patients with suspicious lesions reported as benign could have more morbidity due to delayed closure of a larger defect. This is unlikely, but possible and the patient should be properly counselled.
Management of primary periocular basal cell carcinomas: location, histological subtype and recurrence rate

SALAM T, BEACONSFIELD M, COLLIN J R, DANIEL C
Adnexal department, Moorfields Eye Hospital, London

Purpose To assess the relationship between the location, histological subtype and excision margins of periocular basal cell carcinomas (BCCs) with the yearly recurrence rate

Methods A retrospective series of patients undergoing excision of primary periocular BCC in a tertiary referral centre

Results 72 cases were identified in 2005 with 65% having a 5 year follow up (4% transfer of care, 8% deceased, 23% DNA after 2-4 years follow up). 76% had lower eyelid, 16% medial canthus and 8% had upper eyelid BCCs. Histological subtypes were 91% nodular, 4% morphoeic and 5% mixed nodular and morphoeic. 6% of the cases were treated by MOHS. 6% of patients had incomplete excision margins and 66 patients (92%) had between 1.0mm-3.5mm clear margins. There were 3 recurrences (4%); 2 cases of nodular BCC both in the lower lid (one with clear margins and one with incomplete margins), 1 case of mixed morphoeic and micronodular BCC with clear margins of >1mm at the medial canthus occurring within the first, second and sixth year after the initial treatment respectively.

Conclusion Histological clearance of tumour margins has always been the primary objective in the management of BCCs. Current guidelines suggest that patients should be reviewed for a maximum of 5 years with excisional margins dependent on the histological type. Our study shows that only a small percentage recur (4%) after surgical excision with an “attempted” 3mm margin at surgery and 2 out of 3 of these were within the first two years. We are currently reviewing all our BCC data to increase the strength of these statistics to see if a 5 year follow up is necessary, as this is often not adhered to and varies between units nationally and internationally.

Audit of Results of Lid Tumour Excision

SHAH P (1), SHAH B (2), FOX P (1)
(1) Ophthalmology, Worthing
(2) Ophthalmology, London

Purpose To audit the our results after lid tumour excision and to find out if our service is inferior because Moh’s micrographic surgery is not performed.

Methods 29 consecutive patients who underwent surgery for excision of lid tumours were reviewed. Waiting times, types of tumours primary vs secondary reconstruction, residual tumour and resurgery rates, whether prior biopsy was performed, and whether the preop plan was followed, cosmetic results and post op complications were the questions looked at.

Results 20% underwent repeat surgery due to incomplete clearance. The final rate of clearance after a second surgery was a 100% at the end of one year.

Conclusion Mohs Micrographic Surgery (MMS) is the gold standard to measure against for tumour clearance rates. But excellent rates of clearance can also be achieved even without MMS in case of small eyelid tumours and areas where excess tissue can be excised without complications. This study shows that eyelid tumour excision results can still be good even with limited resources without compromising patient care.
Repeat Dacryocystorhinostomy with Mitomycin C

JACKSON T E (1), BHATT R (2), SANDRAMOULI S (3)
(1) Ophthalmology, Birmingham
(2) Ophthalmology, Stafford
(3) Ophthalmology, Wolverhampton

**Purpose** Dacryocystorhinostomy (DCR) is the operation of choice for managing lacrimal drainage obstruction distal to the common canaliculus (CC). It may be external or endonasal with comparable success rates reported from 63% to 97%. Repeat DCR for recurrent lacrimal drainage obstruction is less effective than a primary operation with success rates between 68% to 85%. Mitomycin C (MMC) has a cytotoxic effect and has been used as an adjunct in both external and endonasal primary DCR with the aim of reducing postoperative scarring. The use of MMC in repeat DCR has been reported, however this involved a limited number of patients. MMC is used routinely in repeat external DCR operations in our department and we retrospectively reviewed these cases to present our surgical outcomes.

**Methods** All repeat DCR operations performed at Wolverhampton Eye Infirmary were identified. The notes were analysed retrospectively to gather the necessary data.

**Results** 22 repeat external DCR operations were performed between 2005 and 2011 by a single surgeon. All patients had 0.2mg of MMC applied for 5 minutes and underwent lacrimal intubation. Tubes were removed around 6 weeks. The mean age was 67 years with a male to female ratio of 3:7. 73% of patients reported an improvement in symptoms. Sub-group analysis involved small numbers of patients, but showed that success rates were higher in men (100%) than in women (63%) and higher in those aged over 65 years (86%) than those aged less than 65 years (50%). Patients found to have CC block during repeat DCR (n=14) had a lower success rate (57%) as compared to those without CC block (100%).

**Conclusion** MMC is a useful adjunct in repeat external DCR and appears to be particularly effective in those patients without CC block.

Histological Calcification in Periocular Basal Cell Carcinoma: A Clinical Correlation

PATWARY S N (1), PUREWAL J (1), SUNDARARAJEN S (2), SALMONS N (2), SANDRAMOULI S (1)
(1) Wolverhampton Eye Infirmary, Wolverhampton
(2) Pathology, New Cross Hospital, Wolverhampton

**Purpose** A previous study involving head and neck basal cell carcinoma (BCC) reported that calcifying neoplasms were more likely to be an aggressive histological subtype as compared to non-calcifying BCC. The incidence of histological calcification of periocular BCC and its clinical implications have not been previously described. The aim of this study is to describe the prevalence of calcium in periocular BCC and its clinicopathologic correlations.

**Methods** This is a prospective observational study of 65 consecutive cases of periocular BCC presenting to a regional eye centre. We obtained full ethical approval to conduct this study. We collated clinical data regarding the epidemiological details, site, size and clinical subtype of BCC and performed histological examination which included looking for the presence of calcium.

**Results** Of the 65 cases included in the study, we found calcium to be present in 27 cases (41%). BCC with calcium presence, had a higher proportion of clinically ulceronodular tumours (26%) as compared to the non-calcified group (10%). The cases with calcium presence tended to be larger in size with an average area of 90mm2 (16-375mm2) as compared to 42mm2 (4-144mm2). We did not identify any correlation between the histological classification of the tumour and the presence of calcium. In our study group, five cases were recurrences with two showing signs of calcium while three did not.

**Conclusion** Our study showed a higher proportion of calcification as compared to similar studies on BCC from non-periocular sites. Although BCC with calcium tended to be larger in size, we did not find any other clinicopathological correlation.
Conventional margin control for periocular non-melanoma skin cancer (NMSC) where Mohs’ micrographic surgery is readily available

DICKINSON AJ (1), CHAN K (2), LAWRENCE CM (3)
(1) Eye, Newcastle
(2) Eye, Newcastle
(3) Dermatology, Newcastle

**Purpose** Mohs’ micrographic surgery (MMS) can be considered optimal management for periocular NMSC, however it is expensive and not available in all centres. Hence conventional surgery with routine vertical section margin control remains widely used. In a multidisciplinary clinic with ready access to MMS, roughly half of our patients are still managed conventionally based on the risk of incomplete excision and the predicted impact of conventional surgery on cosmetic / functional outcomes. This prospective audit aimed to establish completeness of excision, cosmetic / functional outcomes and long-term recurrence of patients with peri-ocular tumours treated by non-Mohs’excision.

**Methods** Data collected prospectively from all patients treated conventionally between 1/6/04-30/5/2009 included site, size, histology, margins, recurrence, and cosmetic / functional outcomes scored by a predetermined scheme.

**Results** 170 tumours in 162 patients were identified. Tumour diameter ranged from 2-25mm (mean 8), and 24% involved the canthal regions. There were 137 nodular /common solid BCC (80%); 20 infiltrative BCC; 11 SCC and 2 others. With surgical margins of 2 (13%), 3 (27%) or 4mm (49%) no BCC was incompletely excised, however 1 SCC was incompletely excised with a 5mm margin. 52% patients achieved 3yr follow up and 36/98 5yr follow up; no recurrences were recorded. Nor have any recurrences been re-referred to this hospital trust. Cosmetic and functional outcomes were good or excellent in 87%; 3 required revision.

**Conclusion** This selection strategy appears effective; however it is too early to say that this model is optimal.

Inverted Papilloma of the nose and paranasal sinuses involving ocular/adnexal region

PETRARCA R, SALDANA M
Ophthalmology Department, Conquest Hospital, Hastings, UK, Hastings

**Purpose** To review the management of inverted papillomas presenting to oculoplastic surgeons at three institutions and the outcomes of treatment.

**Methods** A retrospective review of medical notes of patients presenting with inverted papillomas that invaded the orbit during a 7 year period.

**Results** In total, six Caucasian patients were identified (4 male, 2 female), the mean age at presentation was 63 years. The presenting features were proptosis, medial canthal mass, nasal blockage, epiphora. The sites of origin were the lateral wall of the nose, frontal sinus, ethmoidal sinus and lacrimal system. Radiological studies demonstrated homogenous tumours with variable degrees of nose, paranasal sinuses and orbital involvement. Histopathological studies showed four out of six had foci of malignant transformation (two had carcinoma in situ and two had invasive squamous cell carcinoma). All were treated with surgical excision and three with adjunctive radiotherapy. One patient needed orbital exenteration and subsequently died from complications of the tumour bleeding.

**Conclusion** Inverted papillomas that invade the orbit are likely to be malignant and locally aggressive tumours. The decision for surgical intervention is based on clinical and radiological evaluation. Surgical excision is extensive and technically difficult, however, early and wide excision provides the best chance of cure with radiotherapy as a useful adjunct. Clinical and radiographic follow up of this neoplasm is necessary to ensure tumour control.
Argon laser treatment for Xanthelasma-2 year experience in a district general hospital

MCGOWAN DM (1), MCGOWAN GM (2), TEJWANI DT (3)
(1) Surgical, Glasgow
(2) Ophthalmology, Glasgow
(3) Ophthalmology, Paisley

**Purpose** Xanthelasma is a cosmetically disabling condition. Cutbacks in NHS budgets have led to restrictions in “minor” cosmetic oculoplastic procedures in the UK. 2 year experience to determine the effectiveness of argon laser treatment for xanthelasma.

**Methods** Retrospective case note review of all patients with xanthelasma treated with argon laser over 2 year period. Phone call to patient, assessing recurrence/satisfaction. All patients treated in one session on outpatient basis using an argon green laser. Laser parameters: 500 micron spot size. Duration of laser pulse 3 seconds. Energy: 350mW (increased if required). Procedure performed after local infiltration with 2% Xylocaine + adrenaline 1:200,000

**Results** The therapy was well tolerated, and all lesions responded to the laser treatment. There were no complications and no functionally relevant scar developed.

**Conclusion** Argon laser photocoagulation represents an alternative treatment in selected cases. It is easy to perform and well tolerated by patients.

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Is there a significant non-ocular malignant co-morbidity that exists in Orbital extenteration patients? – A tertiary centre experience.

OBI E E (1), SAUNDERS D (2), CHUAH J L (1), BURNS J (1), SAMPATH R (1)
(1) Department of Ophthalmology, Leicester Royal Infirmary, Leicester
(2) Department of Medicine, Leicester Royal Infirmary, Leicester

**Purpose** To ascertain if any significant non-ocular malignant co-morbidity (NOMC) existed in patients that had orbital exenterations at a tertiary referral centre.

**Methods** A retrospective review of case records of patients who underwent orbital exenterations (OE) at our centre between the years 2000 and 2011. All patients were identified by a departmental computerised database.

**Results** 20 patients underwent exenterations. The mean age was 69.7 years (range 30-84 years). 9 patients (45%) had a history of a non-ocular malignancy. This included chronic lymphocytic leukaemia, cervical squamous carcinoma, malignant melanoma, renal carcinoma, colon carcinoma, rectal carcinoma, polycythemia rubra vera and lymphoma. Out of the 9 patients, two required an exenteration for sebaceous gland carcinoma, five for basal cell carcinomas, one for a squamous cell carcinoma and one for a malignant melanoma. Only one out of the nine patients had a primary non ocular malignancy which metastasised to the orbit. This was a patient with a primary malignant melanoma arising from the skin of the chest wall. 7 patients are deceased, of which 4 had NOMC.

**Conclusion** Our study reveals a significant high proportion of OE patients, with a history of NOMC. While post-operative survival is directly related to primary ocular metastatic disease, it is worth noting that long term post-operative survival may also be linked to other NOMC. Patients facing OE, who have a previous history of a non-ocular malignancy, may require additional psychological counselling in view of undergoing cancer treatment for the second time, but this time having to cope with an obvious external disfigurement.
Intraoperative use of Polydioxanone (PDS) foil to reduce the incidence of sino-orbital fistulas following orbital exenteration.

GREGORY ME, AL-HITY A, KEMP EG
Tennent Institute of Ophthalmology, Glasgow

Purpose Orbital exenteration is a disfiguring surgery, usually reserved for treatment of life-threatening orbital malignancy when less radical treatment is deemed inadequate or has failed. Sino-orbital fistula (SOF) formation is a common complication. This study assesses the impact of the use of polydioxanone (PDS) foil placed on the medial orbital wall following orbital exenterations aiming to reduce this complication.

Methods Retrospective case note review of all cases of orbital exenteration performed at the Scottish Ocular Oncology Service since 1993. The use of PDS was introduced in 2010. MAIN OUTCOME MEASURES: Incidence of sino-orbital fistulas.

Results 28 patients underwent orbital exenteration for BCC (7%), SCC (14%), Melanoma (54%), non-malignancy (4%) and other malignancies (11%). Exenteration was eyelid sparing in 15 (54%), and total in 13 (46%). In 8 patients (29%) PDS foil was cut out and positioned to cover the anterior half of the medial orbital wall and was held in place with socket packing. Sockets were lined with eyelid skin (6/28), split skin (thigh) (9/28) or healed secondarily (13/28). PDS foil was inserted in 8 sockets, 7 of which were left to heal secondarily. SOFs involving the ethmoidal sinus, were observed in 8/20 (40%) orbits without PDS plate compared to 0/8 (0%) of orbits with PDS plates (p: 0.0223, Fisher Exact Test). Mean time to fistula formation was 5.5 months (range 1-9)

Conclusion The PDS is completely resorbed within 5 months, excluding long-term complications of other artificial implants. Use of PDS foil appears to be a useful addition in orbital exenteration surgery leading to a reduction in occurrence of SOFs.

Visual outcomes following orbital biopsies

GREGORY ME (1), JAMISON A (2), KEMP EG (1)
(1) Tennent Institute of Ophthalmology, Glasgow
(2) Tennent Institute of Ophthahtlmology, Glasgow

Purpose The risks of orbital biopsies depend mainly on the lesion’s location within the orbit and relationship with orbital structures. Reduced vision or blindness is a possible complication. Visual outcomes following orbital biopsies are not widely reported. We assessed the visual outcomes following orbital biopsies in the Gartnavel General Hospital Oculoplastic and Oncology Service.

Methods We retrospectively reviewed the casenotes of 50 consecutive patients who had orbital biopsies, en-bloc excision or debulking of orbital tumour between January 2006 and December 2010. Preoperative clinical examinations, radiological features and data regarding postoperative visual acuity and complications were collected. The main outcome measure was change in visual acuity. Mean follow-up time was 1.32 years (range:0.03-5.13)

Results Indications for orbital biopsy included malignancy (30%), presumed orbital inflammatory disease (18%), mucocoele (8%), vascular lesion (6%), benign lesions (20%). Of the radiologically defined orbital lesions, 13.3% where intraconal and 86.7% extraconal. Extraconal lesions were anterior in 59% and posterior in 41%. Median pre-operative visual acuity of 6/6 was maintained. Visual acuity deteriorated (>2 Snellen lines) in 1 patient at first follow-up and 1 patient at final follow-up. Complications included transient optic disc swelling in 1 patient and supracochlear neuropraxia in 1 patient. No cases of retrobulbar haemorrhage, optic nerve compression or optic atrophy were encountered.

Conclusion Although this is a relatively small and retrospective series, our findings suggest that significant visual loss is a rare complication.
Use of fluorescein to aid Dacryocystorhinostomy (DCR) surgery

BADDELEY P A, IDREES F, CONDON L
Ophthalmology, Worthing

Purpose The lacrimal sac may be inadvertently incised during DCR surgery especially if a mucocele is present. Use of fluorescein pre-operatively may facilitate easier identification the lacrimal sac and nasolacrimal duct.

Methods 2% Fluorescein was placed in the fornix approximately 30 minutes prior to general anaesthesia for a DCR surgery.

Results This enables satisfactory visualisation of the lacrimal sac and nasolacrimal duct during external DCR surgery especially in patients who have a mucocele.

Conclusion The simple use of preoperative 2% Fluorescein may help the junior oculoplastic surgeon identify lacrimal sac and duct and avoid inadvertent trauma during DCR surgery.

Is body mass index (BMI) a prognostic factor in the success of Optic nerve sheath fenestration (ONSF) for idiopathic intracranial hypertension (IIH)?

OBI E E (1), LAKHANI B K (2), CHUAH J L (1), BURNS J (1), SAMPATH R (1)
(1) Department of Ophthalmology, Leicester Royal Infirmary, Leicester
(2) Department of Medicine, Leicester Royal Infirmary, Leicester

Purpose To determine whether BMI, is a prognostic factor for improved visual function after (ONSF), in patients with declining visual function refractory to maximal medical therapy.

Methods A retrospective study of ONSF patients from 2004 to 2011. Patients' symptoms, BMI, CSF opening pressure, and visual outcomes were analysed.

Results ONSF’s were carried out on 31 eyes of 14 patients. 64% were female and 36% were male. Predominant symptoms were headache (93%), diplopia (43%) and transient visual obscurations (43%). 71% of patients had a BMI >30. The average CSF opening pressure was 36 mmHg (range 22 to 64). Surgery was uncomplicated in all patients. Post ONSF, visual acuity improved in 23% (BMI range <25 to >40), remained stable in 58% (BMI range >25 to <40) and worsened in 13% (BMI >30 to <40) of operated eyes. 6% were lost to follow up. Visual fields were reliable in 48% of operated eyes. Of these 33.4% improved (average mean deviation (MD) 7.7dB, range 4 to 16dB). 53.3% remained the same and 13.3% worsened (average MD -13dB, range -2 to -23dB). Colour vision improved in 29%, remained stable in 58%, and worsened in 13% of operated eyes. 3 patients had tertiary procedures (LP or VP shunts) and 2 patients were registered blind.

Conclusion ONSF is a safe procedure in experienced hands. It predominantly stabilises visual function in majority of maximally medicated patients but also offers improved visual function to some patients. From our results all patients with a BMI <25 improved, however patients with a BMI >25 also improved, hence BMI may not be a prognostic factor in the success of ONSF.
Success rate of external versus endonasal dacryocystorrhinostomy and causes of failure: A 7 year experience

Kalantzis G, Jeeva I, El-Hindy N, Bagdonaitė L, Chang B
St James University Hospital, Ophthalmology, Leeds

Purpose The gold standard treatment for long term control of epiphora is dacryocystorrhinostomy (DCR). The functional success rate of primary external and endonasal DCR are more than 90% according to various studies. The purpose of our study was to determine the success rate of these two techniques in our unit and also determine the causes of failure.

Methods Our study is a retrospective review of patients' notes who underwent primary DCR from Jan 2004 to December 2010 in Leeds Teaching Hospitals. The possible reasons for DCR failure were identified from the documented operative notes based on perioperative findings. Patients with previous lacrimal surgery in other units were excluded from our study.

Results 401 patients were included in our study of which 243 were females and 158 males. The average age at surgery was 64 years (range 3–95 years old). 335 external DCRs were performed (77.2%) and 99 endonasal DCRs (22.8%). 38 patients (8.8%) underwent revision lacrimal surgery. Intraoperative findings showed that 30% of the cases had insufficient rhinostomy, 38% soft tissue blockage of the common opening and 32% a combination of both. The success rate of the revision DCR was 85%.

Conclusion The failure rate of primary DCR is similar to previously published studies. The causes of failure are also amongst the commonest described in literature. Our success rate of 85% for revision DCR is higher compared to most published data.

Ligneous conjunctivitis masquerading as an eyelid dermoid

Saunders D (1), Obi E (2), Brown L (3), Anwar S (2), Burns J (2), Sampath R (2)
(1) Department of Medicine, Leicester Royal Infirmary, Leicester
(2) Department of Ophthalmology, Leicester Royal Infirmary, Leicester
(3) Department of Histopathology, Leicester Royal Infirmary, Leicester

Purpose To describe a case of ligneous conjunctivitis with an additional unusual clinical finding.

Methods A case report of a 2-year old girl with an 18 month history of a recurring upper lid mass. At the first episode she presented with severe mucopurulent pseudomembranous conjunctivitis, preseptal erythema and oedema. During the second and third episodes, she had a right upper lid pseudomembranous mass and mild mechanical ptosis. Eye swab cultures revealed Haemophilus species. The above episodes resolved with topical levofloxacin, prednisolone 0.5% and oral co-amoxiclav. At the fourth, fifth and sixth episodes, she presented with a larger pseudomembranous mass, moderate ptosis and early ambylopia. During the fifth and sixth episodes a strand of hair was found protruding through the surface of the mass. A differential diagnosis at this stage was a ruptured eyelid dermoid cyst. Excision biopsies were taken at the fourth, fifth and sixth episodes. This was done for diagnostic purposes to ascertain aetiology and therapeutic reasons to prevent amblyopia.

Results Histological analysis revealed organising granulation tissue (1st biopsy), a pyogenic granuloma (2nd biopsy) and finally ligneous conjunctivitis (3rd biopsy). Plasminogen analysis revealed type 1 congenital plasminogen deficiency, the most common cause of ligneous conjunctivitis.

Conclusion Hair in a ligneous conjunctival pseudomembrane is rare. Hair shafts have been found histologically in other ligneous pseudomembranes, but this is the first case where hair has been seen macroscopically. We wish to highlight that such a lesion can mimic an eyelid dermoid. Treatment modality differs vastly with ligneous conjunctivitis and requires a multidisciplinary systemic approach.
Case report of upper lacrimal canaliculocele

SIDDIQUE M, BOWYER J
University Hospital of North Staffordshire, Stoke on Trent

Purpose A Case report of upper lacrimal canaliculocele

Methods case report

Results A 56 years old caucasion male presented to our out patient with watering and upper lid medial swelling. He was operated for DCR with mini monika tube through lower canaliculus. Upper canaliculus had a lump which was removed and sent for histology which confirmed the clinical diagnosis of canaliculocele.

Conclusion Lacrimal canaliculocele is a rare presentation of lid lump. very few cases has been reported in literiture. We are going to present the poster of this rare presentation.

Glomus jugulare: a rare cause of facial nerve palsy

KOVAČOVA A., GHAZI-NOURI S.
Department of Ophthalmology, Broomfield Hospital, Chelmsford

Purpose To present a case of a patient with a rare brain tumour who presented with unilateral proptosis and subsequent facial palsy.

Methods Case report including clinical photographs and MRI images.

Results The diagnosis of glomus jugulare was not obvious as it usually presents with tinnitus, hearing loss, dysphagia and hoarseness. However, this otherwise healthy 53 year old woman presented with proptosis and facial nerve palsy. Her positive family history of glomus jugulare prompted the MRI imaging that proved to be diagnostic.

Conclusion Occasionally, the diagnosis of rare tumours with atypical presentations can lie in the subtiles of the clinical history.
A case series of the results of alcohol delamination for recurrent corneal erosion syndrome

LAGNADO R (1), ALAGHBAND P (2)
(1) Calderdale and Huddersfield
(2) Calderdale and Huddersfield

**Purpose** To report the efficacy of alcohol delamination (ALD) in the management of recurrent corneal erosions (RCE)

**Methods** Fourteen consecutive patients who were diagnosed with recurrent corneal erosions were reviewed prospectively. A pain score was generated based on a visual analog scale of pain intensity. The duration of pain and intensity were recorded. The affected area of epithelium was removed after an application of 20% alcohol for 40 seconds under topical anaesthesia. A bandage contact lens was inserted until epithelial healing was complete.

**Results** Thirteen patients responded to ALD with dramatic improvement in their symptoms over the follow-up period, ranging from 4 months–5 years. ALD has been used to treat 2 patients who previously had been treated with phototherapeutic keratectomy (PTK) and both patients had a successful outcome. One patient had an initial improvement but at 4 months post treatment again became symptomatic, was referred for PTK but continued to be symptomatic after first treatment with PTK. No patients had an adverse response to treatment. None had deterioration in vision or required up-to-date refraction to improve vision. One patient with macrocysts in visual axis had an improvement in vision.

**Conclusion** Alcohol delamination appears to be a simple and inexpensive treatment for RCE. Moreover, ALD is a safe and effective alternative for RCE not responding to conservative medical treatment or even after failure of PTK. This is the first report to show the application of ALD after failure of PTK with satisfactory outcome. Success rate from this series for first treatment is 93% which is comparable to reported 85% first treatment success rate for PTK.

Likely IgG4-related disease in a 5 year old girl

KALAPESI FB (1), RAMANAN A (2), GARROTT H (1), HERBERT HM (1)
(1) Oculoplastic and Orbital Unit, Bristol
(2) Paediatric Rheumatology, Bristol

**Purpose** IgG4-related disease (IgG4-RD) is a newly recognised fibrosing inflammatory process of unknown aetiology which can affect virtually every organ system including the orbit. Diagnosis is reliant on histological confirmation of a prominent lymphoplasmacytic infiltrate with notable eosinophils, obliterative phlebitis and the absence of granulomas typical of Sarcoid or Wegener's. Additionally positive immunohistochemical staining for IgG4 is required for the diagnosis. Elevated serum and tissue IgG4 is not key to the diagnosis.

**Methods** We present the case history of a 5 year old girl with a 9 month history of progressive left periocular swelling, non-axial left proptosis and limitation of vertical gaze.

**Results** A non-enhancing left orbital floor mass was identified on MRI scan with prominent ipsilateral sinus disease. Intraoperatively, a firm white orbital floor mass was found and an incisional biopsy was performed. Histology revealed prominent fibrocollagenous tissue with a polyclonal cellular infiltrate. No granulomas or features of necrotising vasculitis were evident. Immunohistochemistry confirmed a polyclonal nature of the cellular infiltrate and also revealed plasma cells with positive immunostaining for IgG4. She has had a good clinical response to systemic corticosteroids and mycophenolate mofetil.

**Conclusion** Biopsy was imperative to both exclude malignancy and confirm the diagnosis. Whilst inflammatory disorders such as Wegener's and IgG4-RD are unusual in children, it is essential that the clinician and pathologist consider these so that salient features to allow diagnosis can be sought allowing appropriate treatment to be initiated. We will discuss options for the treatment of this new, complex disease in children.
The blinding risk of peri-orbital aesthetic Poly-L-Lactic Acid

HULL S (1), KHAN Y (2), REICH E (3), GEORGE SM (2), OLVER JM (3)
(1) Ophthalmology Department, Chelsea & Westminster Hospital and the Western Eye Hospital, London
(2) Medical Retina Department, Western Eye Hospital, London
(3) Orbital and Oculoplastic Service, Western Eye and Charing Cross Hospitals, London

Purpose To describe the potential complications of peri-orbital injection of fillers and discuss techniques to avoid them illustrated by a rare case of loss of vision.

Methods The complications of peri-orbital aesthetic fillers and proposed pathogenic mechanisms are discussed, illustrated by a case. Techniques to safeguard against this severe complication are suggested.

Results A 58 year old female presented with acute onset loss of vision in the left eye that occurred during a deep subcutaneous injection of aesthetic filler Poly-L-Lactic Acid (Sculptra®) in the left temple. Presenting vision was no perception to light with a relative afferent pupillary defect, generalised ophthalmoplegia and extensive emboli visible in the retinal circulation. Fundus fluorescein angiography demonstrated lack of filling of both choroidal and retinal circulations. There was no visual recovery. The ophthalmoplegia was temporary and there was no evidence of ocular ischaemic syndrome or cerebral ischaemia. The mechanism of visual loss is thought to have arisen by inadvertent cannulation of the superficial temporal artery with retrograde flow of filler particles into collateral internal carotid branches which embolised to central retinal and short posterior ciliary arteries. Suggested techniques to prevent this complication include avoiding excessive force, using cannulas not sharp needles and checking for arterial cannulation prior to injection. Consideration should be given to including this serious risk on the informed consent.

Conclusion Permanent visual loss is a rare but devastating risk of deep subcutaneous facial fillers. All practitioners should be aware of this complication and employ techniques to safeguard against it.

Bilateral orbital panmyositis in a child

TAN SZ (1), THAMPY R (2), COOK A (2), SAMPAT K (3), RASOOL S (1), NOLAN D (1)
(1) Royal Oldham Hospital, Oldham
(2) Manchester Royal Eye Hospital, Manchester
(3) Royal Oldham Hospital, Oldham

Purpose We report a rare case of bilateral orbital panmyositis presenting in a child.

Methods Retrospective interventional case review

Results A previously fit and well 11-year old boy presented with a 3 week history of pain on eye movement and worsening diplopia, preceded by headache, diarrhoea and vomiting. Examination revealed bilateral complete external ophthalmoplegia, with bilateral ptosis and lid oedema. He was otherwise systemically well. Inflammatory markers including CRP and ESR were raised but creatinine kinase, thyroid function tests/ thyroid autoantibodies, autoimmune tests, serology testings were all negative. MRI orbits showed diffuse thickening of all extraocular muscles, levator complexes and tendons bilaterally. A tentative diagnosis of postviral orbital myositis was made and under co-management with the Paediatric Department he was commenced on intravenous steroid. Response to treatment was poor initially and the case rediscussed at a multidisciplinary team meeting. Further investigations undertaken were negative and orbital biopsy considered by which time (day 10 after commencing steroids) symptoms had significantly improved and so was not undertaken. He continued to make slow but steady improvement and made complete recovery over 6 weeks after commencement of treatment. There were no signs of recurrence 2 months after steroid was stopped.

Conclusion This rare presentation highlights the importance of documenting prodromal illness when assessing inflammatory orbital disease. Specific and timely investigations are vital. Orbital myositis is considered to be exquisitely sensitive to steroid treatment and failure to respond should always trigger re-evaluation of the presumed diagnosis. Orbital biopsy merits consideration in atypical cases.
Congenital Metastatic Melanoma in a Newborn

KALAPESI FB (1), GARROTT H (1), LOWIS S (2), HERBERT HM (1)

(1) Oculoplastic and Orbital Unit, Bristol
(2) Paediatric and Adolescent Oncology, Bristol

Purpose We describe a case of melanoma diagnosed at birth.

Methods We present an unusual case of a Polish baby, born after an obstructed labour requiring forceps assistance. Prenatal scans, the pregnancy and the mother's health were all normal. At birth an extensive left periocular tumour was found. Radical resection was performed necessitating removal of both the left upper and lower lids. The globe was not sacrificed. The periorbital skin was reconstructed using a cranial bilobed flap. Adjuvant chemotherapy was commenced preoperatively and completed postoperatively. The family relocated to the UK, where on first review a generalised skin rash typical of molluscum contagiosum was noted, and felt to be secondary to immunosuppression induced by chemotherapy. The mother had been advised in Poland that the histology was uncertain, but that resection was 'likely complete'.

Results The periorbital bilobed flap was found to have contracted towards the orbital rim leaving the globe exposed. This was being managed with frequent topical lubricants and a moisture chamber. The original orbital block was sourced from Poland and reviewed by local pathologists. Melanoma was diagnosed from the orbital block both histologically and immunochemically. Metastatic disease was diagnosed following positive confirmation from both the cutaneous biopsy (of presumed molluscum lesions) and bone marrow trephine. Hepatosplenomegaly present was probably also attributable to tumour infiltration.

Conclusion Managing international patients can be difficult but histological diagnosis is critical to appropriate diagnosis and management. Advanced malignancy is uncommon at birth and raises important questions regarding aetiology and transplacental transfer (in both directions).

Cave Canem : Beware of the Dog

THAMPY R S, COOK A E

Department of Oculoplastic Surgery, Manchester Royal Eye Hospital, Manchester

Purpose To highlight the child protection responsibilities of the Oculoplastic surgeon when managing children presenting with oculofacial injuries from dog-bites.

Methods Retrospective overview of some aspects of recent cases of dog-bites in children presenting to our department. We review the evidence linking dog-bite injuries in young children to potentially harmful domestic circumstances.

Results Dog-bite injuries to the head and neck in young children may cause lifelong disfigurement, psychological damage, blindness and death. In each of our cases no-one else in the multidisciplinary team including triage nurses in A&E, paediatric casualty officers, plastic surgeons, and ward staff considered referral to the Trust’s Safeguarding team, though in retrospect all agreed with this in principle. All had assumed “someone else” would have taken the responsibility. Our Oculoplastics department has led the way in raising awareness and in the development of Trust and national policy to improve good reporting practices.

Conclusion The Children Act 2004 and the Green Paper ‘Every Child Matters’ place a duty on all professionals to safeguard and promote the welfare of children. There is clear evidence linking dog-bite injuries with domestic abuse and neglect in young children. The statutes of the Dangerous Dogs Act are limited, and would not have covered any of the injuries in our series. We would encourage all Oculoplastic surgeons to remain vigilant to their responsibilities to protect children from further harm and seek the advice of their Safeguarding teams for support. Where no Trust policy exists, we would encourage the formulation of guidelines to ensure the safety of this very vulnerable group of young patients.
Social and Ethnic Determinants of Disease Severity in Thyroid-Associated Ophthalmopathy

EDMUNDS M R, HUNTBACK J, HALE J, DURRANI O M
Birmingham & Midland Eye Centre, Birmingham, UK

Purpose A number of factors have been previously investigated as possible determinants of the likely course of Thyroid-Associated Ophthalmopathy (TAO). However, as yet, there appears to have been no consideration of ethnicity or socioeconomic position. Birmingham is known to comprise an ethnically diverse population, making this city the ideal setting for such a study.

Methods Retrospective medical case note review of all patients seen for TAO at Birmingham and Midland Eye Centre (BMEC) between January 1998 and March 2012. Note was taken of documented ethnicity and post code at original presentation was used to determine social grade using the National Readership Survey classification.

Results Three hundred and eight patients (74% female) of mean age 50 years (range 17–87 years) were seen during the study period. Of these, 246 (80%) were Caucasian, 24 (7.8%) of Black-African or Black-Caribbean origin and 23 (7.5%) of Asian (Pakistani, Indian or Bangladeshi) background. In terms of social grade, 54 (18%) were classified A (higher managers, administrators, professionals), 53 (17%) B (intermediate managers, administrators, professionals), 74 (24%) C (supervisory, clerical or junior staff), 37 (12%) D (semi-skilled or unskilled manual workers), and 69 (22%) E (state pensioners, low grade workers, unemployed). Multi-parametric analyses are currently being undertaken to determine whether ethnicity and social status are independent factors influencing aspects of TAO, with confounding factors such as smoking taken into account.

Conclusion This large cohort of TAO patients, of diverse ethnic and social background, will provide novel, robust data on the influence of ethnicity and socioeconomic position on the course of TAO.

Rhinotillexomania: a rare cause of medial orbital wall erosion

RATHORE D (1), AHMED SK (2), AHLUWALIA HS (1), MEHTA P (1)
(1) Department of Ophthalmology, University Hospital Coventry and Warwickshire, Coventry
(2) Department of ENT, University Hospital Coventry and Warwickshire, Coventry

Purpose To report a rare cause of medial orbital wall erosion due to repeated nose picking.

Methods Clinical, radiological, histological findings and management is presented.

Results A 67-year-old Caucasian male complained of watering in his right eye. He had a nasal septal defect since childhood and a history of repeated nose picking (rhinotillexomania) but no other significant past history. Ocular examination was normal except for blocked right lower canaliculus. Nasal endoscopy showed a large nasal septal defect with significant crusting and areas of bleeding. Blood investigations were normal except for mildly raised ESR and CRP. CT scan revealed a large 4cm nasal septal and right medial orbital wall defect with an adjacent soft tissue mass in the medial orbit and generalized opacification of sinuses. A presumptive diagnosis of Wegner’s Granulomatosis was made. Following biopsy of medial orbital mass and sinonasal mucosa, histopathology revealed reactive inflammatory infiltrate with surface gram-positive cocci. Microbiology showed profuse growth of Staphylococcus aureus. Patient was advised a course of systemic antibiotics, nasal douching and to stop nose picking. Post-operatively he had significant improvement in his nasal symptoms.

Conclusion This patient enlarged an existing congenital nasal septal defect with repetitive nose picking and passing his finger through the nasal septal defect. This resulted in infection and chronic inflammation of sinuses which may have resulted in erosion of the nasal septum and medial orbital wall. Wegner’s Granulomatosis was excluded due to lack of histological and immunological evidence. To our knowledge, rhinotillexomania causing medial orbital wall erosion has not been previously reported.
“Simply Bell's palsy?”

SPITERI A V (1), WEARNE IMJ (2)

(1) Ophthalmology Eastbourne DGH, Eastbourne
(2) Ophthalmology Eastbourne DGH, Eastbourne

Purpose A 49 year old woman with known and otherwise controlled Thyroid Eye Disease and Myasthenia Gravis for the previous 15 years, presented with a one month history of left-sided facial weakness which was diagnosed as Bell's palsy. Three months later she developed right upper lid swelling and increased prominence of this eye with diplopia. Clinical examination showed lower motor neuron facial weakness on the left side and marked right hypoglobus with mild proptosis. The need for the investigation of cases of unresolving lower motor neuron facial weakness is highlighted.

Methods Retrospective case note analysis of clinical progression, blood investigations, imaging and histology reports. Significant haematological tests included a normal ANCA and slightly elevated SACE. Gadolinium enhanced MRI showed a fairly well defined mass in the right lacrimal gland with some calcification. The left side showed enhancement of the labyrinthine and tympanic facial nerve. Right lacrimal gland biopsy was reported as demonstrating granulomatous inflammation.

Results Based on clinical presentation, neurological and rheumatological opinion and investigations, a diagnosis of acute sarcoidosis was made presenting in both left facial nerve as well as right lacrimal gland. Oral steroid treatment was commenced with dramatic functional and cosmetic improvement. The implications of commencing systemic steroids in a patient with controlled myasthenia will be discussed. Later development of aberrant regeneration, a rare occurrence in Bell's palsy, may require Botulinum Toxin Type A treatment.

Conclusion Bell's palsy should be regarded as a diagnosis of exclusion. Atypical or unresolving cases require investigation for other causes of lower motor neuron facial weakness.

Indications for orbital decompression for patients undergoing keratoprosthesis surgery

NORRIS JH (1), CARPENTER D (2), AL RAQQAD N (3), BRIT-TAIN P (3), DAYA S (1), LIU C (3), MALHOTRA R (1)

(1) Corneo-Plastic Unit, Queen Victoria Hospital NHS Foundation Trust, East Grinstead
(2) Ocular Prosthetics Department, Moorfields Eye Hospital, London
(3) Ophthalmology Department, Sussex Eye Hospital, Brighton and Sussex University Hospitals NHS Trust, Brighton

Purpose To highlight a novel indication for orbital decompression surgery for patients, who are usually one-eyed, undergoing Keratoprosthesis (KPro) surgery. We illustrate the importance of globe position to either optimize the ocular surface or allow a cosmetic shell to be worn. To our knowledge, such indications for orbital decompression have not been reported to date.

Methods We present two patients with KPros undergoing orbital decompression surgery. Outcomes in terms of cosmesis, visual acuity, globe position and ocular surface integrity were assessed.

Results Two-wall and intra-conal fat orbital decompression surgery achieved globe retro-placement of 6mm and 7mm, allowing fitting of a cosmetic shell over the OOKP (case 1) and reducing lagophthalmos and corneal exposure (cases 1 and 2). In case 2 visual acuity improved from perception of light to 6/48+2.

Conclusion Indications for orbital decompression exist in patients undergoing OOKP or KPro to reduce pseudo-proptosis or exposure.
Results of Microbial growth on the surfaces of silicone tubes removed from Transcanalicular Laser assisted dacryocystorhinostomy and correlation with anatomical patency

GOEL RG, NAGPAL SN, KAMAL SK, BODH SAB, KUMAR SK, ADITYA KA, BANSAL SB
Ophthalmology, Gurunanak Eye Center, Maulana Azad Medical College, New Delhi

Purpose
To study the microbial infection and drug susceptibility of extubated silicon tubes and final anatomical patency in patients undergoing Transcanalicular Laser assisted dacryocystorhinostomy (TCLADCR).

Methods
In this interventional case series, 20 eyes of consecutive patients undergoing primary TCLADCR with bicanalicular silicon intubation were followed up for 12 months. The silicone tubes were removed at 2 months and culture sensitivity was performed followed by administration of appropriate antimicrobial agents.

Success was defined as anatomical patency 12 months postoperatively.

Results
The average age was 30.6 years with the male female ratio of 1:9. A positive culture was obtained in 100% cases comprising of normal commensals and pathogenic organisms. Of the total 24 isolates, 16 (66.6%) gram positive, 8 (33.3%) gram negative and 0 (0%) fungi were found with 4 patients having more than one isolate. Amongst the gram positive, 75% were Staphylococcus aureus and 25% were Enterococcus. The gram negative bacteria comprised of Pseudomonas aeruginosa 1 (12.5%), E. coli 5 (62.5%) and Enterobacter cloacae 2 (25%). Two patients showed canalicular stenosis at the end of 12 months. Both these patients had gram negative isolates and had failed to take the prescribed antibiotics following sensitivity. There was no correlation between multiple infections and success rate. However, by using the Fisher’s exact test, we get a positive correlation between appropriate antibiotic and the final anatomical patency, with p<0.05.

Conclusion
Silicone intubation predisposes to microbial growth which if neglected can lead to failure of TCLADCR.

Accuracy of Oculoplastic Surgery Coding

THAMPY R S, SAHA K, COOK A E, LEATHERBARROW B, ATAULLAH S M
Department of Oculoplastic Surgery, Manchester Royal Eye Hospital, Manchester

Purpose
To assess the accuracy of the clinical coding of oculoplastic procedures as defined by the current coding system by comparing interpretation by surgeons against the clinical coding team

Methods
Retrospective casenote analysis (n=40) using ICD-10 and OPCS codes by two surgeons blinded to the codes assigned by the clinical coders

Results
The positive predictive value of the coders interpretation was 75%. Of the 25% miscoded reasons include: Misinterpretation of the procedure (eponymous flaps & grafts in particular) Misinterpretation of the indication Lack of appropriate codes Discussion with the coding team revealed: Coders did not understand the implications of some procedures A need for better education and communication with the surgical team If notes are unavailable discharge summaries are used for coding The level of inaccuracy did not result in loss of revenue. We suspect selection bias in that all cases in the series were coded by a very experienced coder, which may overestimate overall accuracy.

Conclusion
Oculoplastic surgery encompasses a variety of procedures that may not be understood by clinical coders, even those familiar with ophthalmology. Accurate interpretation is vital for clinical governance. Tariffs attracted by codes affect financial flow. Codes may be used as proxy measures of theatre utilisation and hence performance. Accurate codes facilitate audit and could provide a valid source of data for revalidation. As pressure mounts to code rapidly, each note and discharge summary must be legible, with the indication and clear description of surgery recorded consistently. When new or complex procedures are undertaken the coders should be involved to find the appropriate code in collaboration with the surgeon to optimise accuracy.
Management outcome of Squamous cell carcinoma of the eyelids and periocular areas.

RAHIM A N (1), LAKHANI B K (2), KUMAR P (1), BURNS J (1), SAMPATH R (1)
(1) Ophthalmology, University hospital of Leicester, Leicester
(2) Department of medicine, University hospital of Leicester, Leicester

Purpose To review the clinical and histopathological features, treatment and outcomes of the eyelid and periocular squamous cell carcinoma (SCC).

Methods A retrospective review of all eyelid and periocular SCCs treated between 2000 and 2011.

Results During this interval, a total of 64 patients with histopathologically confirmed eyelid and periocular SCC were included in this study with mean follow up of 18 months. Patient ages ranged from 35 to 94 years, with a mean age of 76 years. 35 patients were male (54.6%) and 29 were female (45.3%). The lesion was found on the lower lid in 25 (39%), upper lid in 12 (18.7%), medial canthus in 2 (3.1%) and periocular area in 25 (39%). Perineural invasion was found in 12 (18.7%) and orbital invasion in 3 (4.6%). None of the patients had recurrence, but one eyelid patient developed SCC in the periocular area. Treatment was by complete excision with histological confirmation of clear margins. Exenteration was required in 3 patients (4.6%), Radiotherapy was needed in 3 (4.6%) patients. No patients developed lymph node or distant metastases.

Conclusion Eyelid SCC is a relatively uncommon, but potentially fatal disease. However, if detected early and treated aggressively, the prognosis is generally excellent. Treatment by complete excision with histological confirmation of tumour clearance is recommended before reconstruction. Perineural spread is an adverse prognostic sign, which may require postoperative radiotherapy. Orbital invasion is a rare complication but, if recognised early, can be treated effectively with exenteration. We present this large series from a tertiary referral centre with very acceptable results.

Atypical fibroxanthoma of the medial canthus: a rare presentation

RATHORE D, MOHYUDIN MN, MEHTA P, AHLUWALIA HS
Department of Ophthalmology, University Hospital Coventry and Warwickshire, Coventry

Purpose Atypical fibroxanthoma (AFX) is an uncommon skin tumour occurring primarily in the head and neck. It has rarely been reported in the periocular region. We report a rare case of atypical fibroxanthoma of the medial canthus.

Methods Clinical and histological findings and management of this case are presented.

Results A 90-year-old Caucasian female had primary excision of a medial canthal mass, which was clinically suspected as basal cell carcinoma by the Plastic surgeons. Histology revealed an atypical fibroxanthoma with incomplete excision, as the tumour was abutting the deep and peripheral margins. Within a few weeks she developed a recurrent mass, which was clinically fixed to deep tissues. She was referred to the Oculoplastics service where she underwent a two-stage excision and reconstruction of the right medial canthus. Paraffin sections were used to ensure margin clearance.

Conclusion This case emphasizes the importance of diagnostic biopsy. A panel of immunohistochemical markers is essential to make the correct diagnosis of AFX and distinguish it from malignant fibrohistiocytoma and non keratin expressing squamous cell carcinoma. It usually follows a benign course, but can occasionally demonstrate aggressive local recurrence as well as distant metastasis. Invasion beyond the dermis and a rapid rate of recurrence are suggestive of a more aggressive clinical course. Paraffin fixed sections are preferred over frozen section techniques for this tumour.
Lid Margin Lessons - Management of Upperlid conjunctival squamous cell carcinoma in situ

LIN PF (1), MORLEY AMS (2)
(1) Eye Department, St. Thomas' Hospital, London
(2) Eye Department, St Thomas' Hospital, London

Purpose Case Report

Methods Gentleman presented with 2 year history of unilateral right eye conjunctivitis, upper lid entropion, mild ptosis, papillary injection and upper lid margin lesion, non responsive to common treatment. Lid was everted during biopsy of lid margin lesion, and additional tarsal and bulbar abnormality were found; additional biopsy was taken subsequently.

Results Biopsy showed conjunctival intraepithelial neoplasia and squamous carcinoma in situ involving entire upper lid tarsal conjunctiva, lid margin and skin edge. There was no bulbar conjunctiva, inferior fornix or corneal involvement. Routine blood tests were normal, with normal liver ultrasound and normal CT brain and chest showed no distance metastasis. Patient was unwilling to undergo surgical clearance of the tumour, therefore was initially treated with topical interferon Alpha 2b. However due to lack of clinical response, surgical excision and subsequent lid reconstruction was undertaken. Initial reconstruction produced good functional and aesthetic result, however subsequent entropion and lanugo hairs prompted anterior lamellar reposition and graft.

Conclusion Conjunctival squamous cell carcinoma accounts for 5-10% of lid tumours; it can range from conjunctival intraepithelia neoplasia to invasive and metastatic squamous cell carcinoma. Our case demonstrates its diagnostic difficulty as it varies in clinical presentation and has no pathognomonic characteristics; which highlights the importance of investigating any unilateral presentation of a common lid complaint that has not responded to conventional treatment. The case also showed the difficulties involved in upper lid reconstruction.

Full thickness skin grafts in periocular reconstruction: long term outcomes

RATHORE D, SWAROOP CK, MEHTA P, AHLUWALIA HS
Department of Ophthalmology, University Hospital Coventry and Warwickshire, Coventry

Purpose To evaluate the outcomes of eyelid reconstruction in patients who underwent full thickness skin grafts.

Methods A retrospective case note analysis of all patients who underwent eyelid reconstruction with full thickness skin grafts between 2005 and 2011. Various donor sites were used depending on the extent and location of the lid defect. Rehabilitation included scar massage with steroid cream and silicone gel.

Results 76 patients were included in the study, 32 females and 24 males. Mean follow-up was 18 months. Indications for skin grafts were excision of eyelid tumours (97%) and cicatricial ectropion. (3%). Site of lid defects were, lower lid (55%), medial canthus (42%) and cheek (3%). The skin graft donor sites were, supraclavicular (55%), arm (16%) upper lid (16%) and post auricular (13%).Early postoperative complications included punctal ectropion (5%), graft necrosis (3%) and wound dehiscence (3%). Late sequelae included hypertrophic scarring (7%), lower lid ectropion (10%) with a third having visible graft-host junctions. 75% of this subgroup of patients achieved good outcomes on their last follow up following massage with silicone gel and steroid cream. 94% of all patients achieved good final lid position with none requiring repeat surgery. Good Colour match was seen in 85%, hypopigmentation in 10% and graft hyperemia in 5%.

Conclusion Most patients achieved good lid position and colour match. Majority of the early postoperative cicatricial sequelae can be reversed by massage, steroid creams and silicone gel application. Full thickness skin grafts have minimal donor site morbidity with excellent graft survival rates with postoperative pressure dressing, but no bolsters.
Late Propranolol Treatment of Infantile Periocular Capillary Hemangioma beyond the Proliferative Stage:

REICH RE (1), SNIR SM (2), ZVULONOV ZA (3), SIEGEL SR (1), FRILING FR (2), GOLDENBERG-COHEN GCN (2), RONY (2), BEN-AMITAI BAD (3)

(1) Department of Ophthalmology, Rabin Medical Center, Petah Tiqwa, Israel
(2) Pediatric Ophthalmology Schneider Children's Medical Center of Israel, Petah Tiqwa, Israel
(3) Pediatric Dermatology Schneider Children's Medical Center of Israel, Petah Tiqwa, Israel

**Purpose** Late Propranolol Treatment of Infantile Periocular Capillary Hemangioma beyond the Proliferative Stage: Functional and Structural Changes.

**Methods** retrospective multidisciplinary evaluation of a pediatrician, a pediatric ophthalmologist, orthoptist, dermatologist, and radiologist.

**Results** Fourteen children aged ≥12 months with IPCH treated with oral propranolol. Mean age was 24.9±11.4 months at treatment initiation and 37.9±12.7 months at the end of treatment. The lesion was preseptal in 78.6%. A fixed treatment dosage of 2 mg/kg/day was started and continued in 12 patients (86%). Side effects occurred in 3 patients (21.4%). The following findings were statistically significant comparing before and after treatment: mean change in diseased area (p=0.03); change in absolute mean spherical power in the involved eye (p=0.03); difference in percentage of spherical power and in absolute power between the eyes (p=0.05, p=0.03); difference in mean cylinder power and absolute cylinder power between the eyes before treatment (p=0.034 for both) (but not after treatment); change in percentage of cylinder power between the eyes (p=0.05); change in percentage of spherical equivalent between the eyes and in absolute difference in percentage (p=0.051, p=0.021).

**Conclusion** Initiation of systemic oral propranolol treatment for IPCH after the proliferative phase is associated with a significant reduction in the diseased periocular area, spherical power, astigmatism, and spherical equivalent, with minimal side effects. It also prevents amblyopia and ocular/facial deformation without rebound. Propranolol is recommended as the preferred therapy for IPCH, even in the late stages.

The use of Nasonex nasal spray and Prednisolone 0.5% preservative free eye drops in the management of partially blocked nasolacrimal ducts—The Glasgow experience.

LIM L T (1), OBI E (2), CROFTS K P (3)

(1) Eye Department, Gartnavel General Hospital, Glasgow, Glasgow, UK
(2) Eye Department, Leicester, Leicester, UK
(3) Eye Department, Gartnavel General Hospital, Glasgow, Glasgow, UK.

**Purpose** To study the use of Nasonex nasal spray and Prednisolone 0.5% preservative free (PF) eye drops and its effects in the management of partially blocked nasolacrimal ducts.

**Methods** Retrospective review of case notes of 37 consecutive patients presenting with partially blocked nasolacrimal ducts resulting in symptomatic uncomfortable epiphora, who were started on Nasonex nasal spray and Prednisolone 0.5% PF eye drops as the initial management. The effects of the treatment were noted, at least one month after being started on the medications.

**Results** There were 39 partially blocked nasolacrimal ducts in 37 patients. Out of those, 29 (74.35%) had a favourable outcome with resolved epiphora; 3 (7.69%) had a partial relieve of epiphora symptoms and 7 (17.95%) had no relieve of epiphora symptoms, after at least one month on the medications.

**Conclusion** Nasonex nasal spray and Prednisolone 0.5% PF eye drops can be initially tried in patients with partial nasolacrimal duct blockage complaining of symptomatic epiphora, as more than half the patients having symptomatic relieve with this medication, in our experience. This will save the patient from undergoing dacryocystorhinostomy (DCR) surgery if the treatment worked.
**Periocular scleromyxoedema**

QURESHI F, PETER N, PARK D, LEATHERBARROW B

Oculoplastic surgery, Manchester Royal Eye Hospital, Manchester

**Purpose** Scleromyxoedema is a predominantly dermatological condition characterised by excessive mucin deposition. It is an very rare condition with the largest cohort published consisting of 17 biopsy proven cases, only 4 of whom had eyelid skin involvement.

**Methods** We present a short case series of two patients with scleromyxoedema.

**Results**

Patient AB, a 51 year old male already diagnosed with scleromyxoedema, presented with moderately thickened upper eyelid skin for which he requested a blepharoplasty. Patient CD, a 50 year old male, presented with chest pain and dyspnoea. He then developed a mononeuropathy and grossly thickened eyelid skin. He had multiple skin nodules which were biopsied. This confirmed the diagnosis of scleromyxoedema. He was treated with intravenous prednisolone and immunoglobulin with a marked improvement in his symptoms and clinical signs.

**Conclusion** Scleromyxoedema is a very rare condition which can be effectively managed medically. Care is required not to proceed to surgery before full investigation and medical management is instituted.

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**A multidisciplinary team approach to complex orbital fibrous dysplasia**

QURESHI F (1), PARK D (1), ATAULLAH S (2)

(1) Oculoplastic surgery, Manchester Royal Eye Hospital, Manchester

(2) Oculoplastic surgery, Manchester Royal Eye Hospital, Manchester

**Purpose** Fibrous dysplasia is a rare benign tumour of bone. It is of unknown aetiology and can involve a single or multiple bones. Diagnosis is usually made based on radiological findings. Fibrous dysplasia frequently causes deformity and dysfunction that can be debilitating requiring surgical excision.

**Methods** Single case report

**Results** We report a case of 31 year old male who presented with 11 year history of left forehead and peri-orbital swelling gradually increasing in size. He had previous frontal sinusitis. CT revealed extensive bi-frontal fibrous dysplasia with a large projection of bone extending into superior half of the left orbit with consequent orbital displacement laterally and inferiorly. The patient underwent a bi-frontal craniotomies and excision of the fibrous dysplastic complex. A custom built orbital roof prosthesis and bifrontal titanium cranioplasty was inserted. This was performed with a neurosurgeon, oculoplastic surgeon and ENT surgeon in attendance. Histopathology confirmed the diagnosis. The patient made a good post-operative recovery with only 3 mm of proptosis and mild hypoglobus and without any diplopia.

**Conclusion** A planned multi-disciplinary team approach is vital to ensure as safe surgical intervention as possible and to obtain an optimal outcome in cases of complex fibrous dysplasia.
A systematic review of orbital radiotherapy use in active thyroid eye disease

RAJENDRAM R (1), BUNCE C (2), LEE RWJ (3), MORLEY AMS (4)

(1) Adnexal department, Moorfields Eye Hospital, London
(2) Research & Development department, Moorfields Eye Hospital, London
(3) School of clinical sciences, University of Bristol, Bristol
(4) Oculoplastic department, St Thomas’ Hospital, London

Purpose To review results of randomised controlled trials on the use of radiotherapy in thyroid eye disease to assess the current evidence for its use. We present the findings of recently completed Cochrane review.

Methods Cochrane review literature search of all randomised controlled trials using orbital radiotherapy in thyroid eye disease versus sham radiotherapy or other intervention. The trials had to have a minimum of three months follow up.

Results 15 abstracts were on radiotherapy in thyroid eye disease. Of these one was a comment and five were duplicate reports. Of the 9 papers left 2 were not prospective randomised controlled trials on review of the full paper. The methodology of 2 further trials led to their exclusion. The 5 remaining trials were assessed. The 5 trials randomised 244 participants in total. Of these 2 compared radiotherapy to sham radiotherapy and 3 were versus glucocorticoids (2 as a dual therapy with glucocorticoids). This Cochrane review showed that patients who underwent radiotherapy had a relative risk of pre-defined ‘success’ of 1.92 compared to those who received sham radiotherapy. Individual studies suggested an improvement in outcomes where radiotherapy was used in combination with glucocorticoids versus glucocorticoids alone.

Conclusion Although the NICE guidelines reserve the use of radiotherapy in thyroid eye disease as a second line treatment or where other treatments are contraindicated the results of our review support the use of radiotherapy in a primary management plan.

A Novel “Superior Lateral Brow Flap”

WEARNE MJ, Saldana M
East Sussex Healthcare Trust, Eastbourne

Purpose To describe an elegant option for repairing a large lower eyelid defect with a superior lateral brow forehead flap.

Methods Case note review of an 87yr old lady who presented with a ten year history of a lesion involving the left lower eyelid. Clinically the abnormality represented a large basal cell carcinoma which was confirmed following an incisional biopsy.

Results The patient proceeded to a wide excisional biopsy resulting in an extensive lower eyelid defect. An involutional brow ptosis and dermatochalasis allowed successful functional and cosmetic reconstruction using a large superior lateral brow flap. Histology reported clearance of a nodular tumour with foci of superficial multifocal basal cell carcinoma. Surgical details, including planning of the flap, will be discussed and demonstrated using unique animation.

Conclusion A superior lateral brow flap is a useful surgical technique to include in the reconstructive options when faced with a large anterior lamellar or full thickness lower lid defect. It is especially useful when the patient has a pre-existing brow ptosis and can avoid the use of a full thickness skin graft.
**TRAINING IN OCULOPLASTICS: PAST, PRESENT AND FUTURE**

ATHANASIADIS I (1), SALEH GM (1), COLLIN JRO (2)

(1) MOORFIELDS AT BEDFORD, BEDFORD
(2) MOORFIELDS EYE HOSPITAL, LONDON

**Purpose**

To describe the evolution of Ophthalmic Plastic Surgical training since the establishment of an Oculoplastic subspecialty.

**Methods**

A systematic search and consultation has been undertaken involving various oculoplastic societies and selected members to better define the previous and currently evolving training paradigms in oculoplastics.

**Results**

Oculoplastics emerged as a distillation of expertise from other specialties following World War 2 where a high rate of ophthalmic and oculoplastic trauma had occurred. Following this, learned individuals began aggregating on a regular basis resulting in the formation of dedicated oculoplastic forums, initially in the United States and then emerging in the UK, Europe and the rest of the world. These original pioneers went on to form more structured and specialist training programmes which were dedicated to clinical and surgical management of adnexal disorders. We shall expand on the details and events along with describing variances that exist in programs across the world today.

**Conclusion**

Oculoplastic surgery has evolved as a highly specific and rapidly growing sub-specialty dedicated to eyelid, lacrimal and orbital care. Its ever increasing popularity has been mirrored by progressively more structured and recognised training programmes globally.

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**Hot ptosis audit**

LEWIS G D (1), VUSIRIKALA B (2), LANE C (1), MORRIS D (1)

(1) University Hospital of Wales, Cardiff
(2) Singleton Hospital, Swansea

**Purpose**

To analyse the subjective and objective surgical results for all ptosis surgery performed in two adjacent hospitals using high temperature cautery dissection (Bovie) from Jan 2010 to July 2011 and compare these results against the British Oculoplastic Surgery Society national ptosis survey.

**Methods**

A retrospective surgical audit of all 105 consecutive cases of levator advancement ptosis surgery was undertaken. Cases were identified using the surgical theatre logs. All case notes and surgical notes were retrieved.

**Results**

A total of 105 cases were identified. The age range was 11 – 96 (mean age 66.6 yrs), 56.6% female. Follow up ranged from 6 months to 2 years (mean 14.7 months). 18 patients (34%) had bilateral simultaneous surgery. Surgery was performed by consultants in 48.5% (51 out of 105) of cases, fellows (45.5%), SPRs (6%). Subjectively 90.5% were completely satisfied with their surgery. Using objective surgical assessment, the surgery was a complete success in 73.5% of cases, and a partial success in 18% of cases. 8.5% (9 cases out of 105) of cases had an unsatisfactory surgical results. All underwent successful repeat surgery on a single repeat occasion. 87% (92 out of 105) cases were performed using a double armed prolene suture with a long horizontal pass through tarsus then up to the levator aponeurosis. The previous use of prolene allowed easy location of the original suture if further surgery was required.

**Conclusion**

The high temperature cautery dissection technique allows very good anatomical exposure and haemostasis during ptosis surgery. Coupled with use of a single double armed prolene suture technique this allows a high surgical success rate.
**Lacrimal sac cutdown for irreparable canalicular damage**

SAMPATH K, TAN S Z, THAMPY R, RASOOL S, NOLAN D  
Ophthalmology - Royal Oldham Hospital, Oldham

**Purpose**  
We report a case of complex canalicular injury in a child to demonstrate innovative management of significant and irreparable canalicular damage.

**Methods**  
Retrospective interventional case review

**Results**  
A six year old boy suffered extensive lower lid injuries following an attack by his grandmother’s pitbull terrier. The lower lid was avulsed medially with extensive damage to the canalculus. Whilst the proximal remnant was found, and a second dislocated midsection located and probed, the distal canaliculus was macerated and irretrievable despite prolonged search with the operating microscope, including air bubble and fluorescein dye injection techniques. We hence passed a Crawford’s stent through the upper undamaged canaliculus, into the lacrimal sac, and cut directly down onto this, before passing the lower limb of the Crawford’s stent through the two retrieved sections of canaliculus, and then through the small sac incision into the sac. The stents were then retrieved in the nose and tied. No epiphora was noted post-operatively. The stents were removed after one year, with fluorescein passing freely into the nose through the lower punctum, and the child was discharged one year subsequently free of epiphora.

**Conclusion**  
We feel that whilst technically challenging, this technique should be considered in such circumstances.

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**An unusual cause of haemolacria**

UNG T, MAUDGIL A, MIRZA S, SALVI SM  
Eye Department, Royal Hallamshire Hospital, Sheffield

**Purpose**  
To report an unusual case of bloody tears (haemolacria) in a child and its management.

**Methods**  
A 10 month old baby presented with haemolacria. He had a previous history of acute dacryocystitis.

**Results**  
He was systemically well with normal blood results. Imaging revealed an enlarged lacrimal sac with no other signs. Examination under anaesthesia showed a thick membrane at the nasolacrimal duct (NLD) distally. This required an incision before tubing with Crawford tube which successfully resolved his symptoms.

**Conclusion**  
This case highlights an unusual cause of haemolacria which was successfully treated with distal opening of NLD and tubing. This relatively minor procedure negates the need of traditional dacryocystorhinostomy.
**Conjunctival Approach Entropion Repair Surgery – A British Perspective**

**SHAHI F, MEHAT M, MADGE SN**

Ophthalmology - The County Hospital, Hereford

**Purpose** The transconjunctival approach to entropion repair is uncommonly performed but has the advantages of speed and scarless surgery. We present our experience of this technique, which is quick to learn and also provides anatomical restitution of eyelid anatomy.

**Methods** Retrospective consecutive single surgeon case series. All cases had conjunctival approach involutional entropion repair under the senior author's care. An edited video will be shown of the technique. Using battery-operated high temperature cautery, the lower eyelid retractors were quickly identified through a subtarsal transconjunctival incision and either plicated or advanced to the lower external tarsus (and adjacent orbicularis oculi), secured using interrupted 6/0 polyglycolic acid sutures. Lid shortening was then performed using a lateral tarsal strip. At follow-up, patients were assessed for relief of symptoms, absence of entropion and correct anatomical position of the eyelid.

**Results** 11 eyes of 9 patients were identified, one of which had previous ipsilateral surgery for involutional entropion. Procedure time varied from 25-40 minutes. At last follow-up (mean 7.5, range 4-10 months) 9 cases had complete resolution of entropion with satisfactory eyelid position. 2 patients required further Jones' retractor plication. No complications were identified.

**Conclusion** Internal plication of the lower eyelid retractors to the lower external tarsus and adjacent orbicularis oculi, combined with lid shortening, provides a swift anatomical correction of involutional entropion with no external lower lid scarring. The technique is quick to learn and is also applicable to recurrent entrophia. Further study is necessary to establish the long-term success of this technique.

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**Orbital Foreign bodies**

**MALLAOJYULA M.S.**

Orbits and Ophthalmic plastics, Sankar Foundation Eye Hospital and Institute of Ophthalmology, Visakhapatnam, INDIA

**Purpose** To study the types and causes of orbital foreign bodies (FBs) and share the experiences in managing them.

**Methods** Retrospective, interventional case series of 16 cases of orbital foreign bodies treated between Jan 1990 to Dec 2011. All the patients underwent a detailed clinical evaluation and imaging. The foreign bodies were removed in all cases.

**Results** The most common type of FB was wood (13 cases) followed by metal, bangle and the tip of a pencil. 6 cases had multiple FBs and one went into brain. The incident occurred at home in 2, school 4, work place 5, and in road accidents 5. The duration between the incident and removal of FB varied from hours to 6 months. Wooden FBs were often associated with infection and formation of fistula when delayed.

**Conclusion** Wooden pieces were the most common orbital foreign bodies. CT was very useful imaging modality for wooden foreign bodies. Fistula with the history of trauma is highly suspicious of wooden foreign body.
**Congenital ptosis : A large case series**

MALLAJOSYULA M S
Orbits and Ophthalmic Plastics, Sankar Foundation
Eye Hospital and Institute of Ophthalmology,
Visakhapatnam, INDIA

**Purpose**
To study and share my experiences of treating 2194 cases of congenital ptosis over the past 3 decades.

**Methods**
Retrospective case series of all the cases of congenital ptosis examined and treated from March 1981 to Dec. 2011. All the patients underwent a detailed clinical evaluation and managed with surgery when indicated or had medical/conservative management.

**Results**
Congenital simple ptosis (1568) was the most common type followed by monocular elevation defect (224), Marcuss-Gunn ptosis (157), MG ptosis associated with elevation defect (146), Blepharophimosis syndrome (84) and Cong. 3rd nerve palsy (15). Nearly 40% had amblyopia. In most of the cases dystrophic changes were seen in LPS on histology. Genetical predisposition was very common in Blepharophimosis syndrome. The commonly performed surgeries include Levator resection, Bilateral brow suspension, Fasanella-Servat’s procedure. Most of the patients with monocular elevation defect needed both Knapp’s procedure and inferior rectus recession.

**Conclusion**
Congenital simple dystrophic ptosis is the most common type of congenital ptosis. Significant association is found between Congenital ptosis and amblyopia. Between Marcuss Gunn Prosis and monocular elevator palsy, Blepharophimosis syndrome is mostly autosomal dominant. Bilateral brow suspension is better than unilateral brow suspension.

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**Skin contracture following upper eyelid orbiculectomy: is primary skin excision advisable?**

SAGILI S, MALHOTRA R
Corneoplastic Unit, Queen Victoria Hospital, East Grinstead

**Purpose**
To report the incidence and consequences of skin contracture following upper eyelid orbiculectomy.

**Methods**
A retrospective case note review identified 8 consecutive patients undergoing skin sparing upper eyelid limited orbiculectomy for essential blepharospasm associated with apraxia of eyelid opening. Clinical data collected from this review included age, gender, type of surgery performed, surgical complications, the need for additional surgeries, botulinum toxin treatment after surgery, dry eyes and Blepharospasm-dystonia functional disability assessment score.

**Results**
The average Blepharospasm-dystonia functional disability score was 17 (range 11–24) preoperatively and improved to 7 (range 1–13) postoperatively. One patient needed botulinum toxin injections postoperatively in the reported follow-up period. Intraoperative complications included haemorrhage in one case and haematoma in another case. Restrictive lagophthalmos on forced closure of eyelids was noted in 3 cases (who had orbiculectomy alone) which required skin grafting and/or levator recession.

**Conclusion**
Upper eyelid limited orbiculectomy with meticulous attention to pre-tarsal and pre-septal orbicularis only is effective in improving apraxia of eyelid opening and blepharospasm. Although we did not excise excess skin in any of our cases, we noted skin contracture postoperatively in three cases that needed skin grafting and scar release (Figure 1). In our experience, skin contracture and orbital septal scarring appears to be relatively common following upper eyelid orbiculectomy, particularly if pre-tarsal and septal orbicularis is meticulously excised. In such a scenario we suggest avoiding initial excision of any excess skin.
Eyelid complications of orbital floor fracture repair; a case series

ABDULKARIM H, TAN JH, CURRIE ZI, SALVI SM
Ophthalmology, Sheffield

**Purpose** Orbital floor fracture (OFF) is a common complication of blunt force trauma to the face and orbit. Surgery is usually performed by maxillofacial colleagues with access to the orbital floor achieved via the lower lid. This poster aims to highlight the secondary lid problems which can occur following maxillofacial OFF repair.

**Methods** A database of patients attending the joint orbital trauma clinic run by oculoplastic and maxillofacial surgeons at Sheffield is maintained. Patients who had lid complications noted in 2011 following OFF repair were identified. Case notes were reviewed with respect to demographic data, causative trauma, timing and approach of surgery, and lid complication and management.

**Results** Three patients were identified as fitting the criteria. Two had isolated orbital injuries following blunt force trauma through falls and one had multiple pan-facial fractures and globe rupture through an industrial accident. Patients were referred to the joint orbital trauma clinic within 4 months of the fracture repair in two cases, and one presented some 20 years following the injury – though he had lid problems from the immediate post-operative period. The secondary lid sequelae included two cicatricial entropions and an ectropion. Repair involved scar revision and ectropion/entropion repair. All achieved satisfactory results.

**Conclusion** Maxillofacial surgeons repair the majority of OFF at our trust. The vast majority of patients have an excellent result and do not need further surgical input. In a small minority of patients the fracture repair leads to secondary lid problems necessitating oculoplastic intervention. These cases highlight this and the possible surgical techniques which can be employed to resolve them.

Eyelid lymphoedema following radical neck dissection and radiotherapy

SAGILI S (1), SELVA D (2), MALHOTRA R (1)
(1) Corneoplasti Unit, Queen Victoria Hospital, East Grinstead
(2) Department of Ophthalmology & Visual Sciences, University of Adelaide, Adelaide

**Purpose** We report two cases and review the literature on chronic eyelid lymphoedema following radical neck dissection and radiotherapy.

**Methods** Two patients presented with eyelid and facial lymphoedema following modified radical neck dissection and radiotherapy for metastatic squamous cell carcinoma.

**Results** One patient underwent surgical debulking of lymphoedema with significant improvement in symptoms. Second patient declined surgical intervention and the lymphoedema remained unchanged.

**Conclusion** Eyelid lymphoedema following radical neck dissection and radiotherapy is a rarely described entity. Surgical debulking can significantly improve cosmesis and function in severe cases.
Expanding indications for orbital decompression surgery

Qureshi F, Leatherbarrow B
Oculoplastic surgery, Manchester Royal Eye Hospital, Manchester

Purpose As orbital decompression surgery has become increasingly successful in the management of patients with thyroid eye disease, the indications to perform such surgery have expanded. We would like to illustrate potential additional indications for this surgery.

Methods Three case series.

Results The first is a 30 year old male patient who had sustained a left orbital floor blow out fracture and had enophthalmos without diplopia or hypoglobus. He was happy with the appearance of his left eye but was unhappy the resultant asymmetry of his right eye which had a negative vector. He was offered a right lateral orbital wall decompression to improve the symmetry of his appearance. The second patient was a 63 year old male who had previously undergone a bilateral lower lid transcutaneous blepharoplasty with a post blepharoplasty syndrome and 2 mm of lower lid retraction with a poor aesthetic result and exposure keratopathy. Both eyes showed a negative vector. As an alternative to eyelid surgery he underwent a bilateral medial and lateral orbital wall decompression. The third patient was a 63 year old male patient who had a facial palsy and exposure keratopathy and had undergone lower lid tightening surgery by to address lid laxity and epiphora. Due to a significant negative vector, his lower lid remained in a poor position. He was offered an orbital decompression combined with a lateral suture canthopexy. All patients had uncomplicated surgery with an excellent cosmetic and functional results.

Conclusion These cases illustrate that the indications for orbital decompression can be further expanded beyond the management of patients with thyroid eye disease.

Small margin excision for BCC excision

Jeeva I, Chang BYP, Bagdonaite L, Kalantzis G
Leeds Teaching Hospitals, Leeds

Purpose To present our results of 2 mm clear margin excision for basal cell carcinoma on the lid.

Methods This is a prospective study from 2008 to 2011. Clinically nodular lesion, less than 20 mm in size with clear edges and not on medial canthus were included. 35 lesions underwent excision biopsy that was analysed by paraffin embedded vertical sections. The patient later had wound repair by direct surgical closure or secondary healing or referred for Moh's micrographic surgery if required.

Results 32 out of 35 patients had histological clearance, followed by direct closure of the wound. 3 out of 35 patients had infiltrative BCC on histology and referred for Moh's micrographic surgery.

Conclusion In carefully selected BCC lesions, a small margin excision can result in high histological clearance rate. This has implications in preserving normal tissue, wound repair and cosmesis.
Lacrimal imaging in the management of functional epiphora: The Coventry management algorithm.

YEUNG AM (1), ELAROUD I (1), ADESANYA O (2), MEHTA P (1), AHLUWALIA HS (1)

(1) Ophthalmology, University Hospital Coventry, Coventry
(2) Radiology, University Hospital Coventry, Coventry

Purpose We investigated the efficacy of Dacryoscintigraphy in predicting the likely site of physiological tear drainage delay in patients with functional epiphora. CT DCG was performed in selected patients as an adjuvant in the Post-sac delaysubgroup considering DCR’s surgery. We also describe its value in helping with the choice of surgery and propose a management algorithm.

Methods A retrospective case note & lacrimal imaging analysis of patients with functional epiphora patent on syringing between 2006 and 2011.

Results A total of 138 patients (276 eyes) were included (from 2006 -2011). 56.5% were female and 43.5% were male. Following Dacryoscintigraphy, patient eyes were classified according to the level of delayed drainage: 25.7% Pre-Sac, 33.7% Post-Sac, 10.9% Slow drainage, 23% Patent and 8.7% Unclassified. 28.9% of patients declined surgery and 34.9% elected to be treated conservatively. 35.2% of eyes with Pre-Sac delay went onto have eyelid or punctal surgery. Of those, 92% gained symptomatic relief. Only 8% of eyes with Post-Sac delay went on to have DCR. Of those, 62.5% gained symptomatic relief.

Conclusion Dacryoscintigraphy is a useful diagnostic tool that may assist clinicians in treatment of functional epiphora. The location of delay may indicate the optimal management plan for these patients. We propose a management algorithm for this group of patients corroborating clinical findings and the results of lacrimal imaging.

Orbital Decompression Surgery for Thyroid Eye Disease Outcomes: The Sheffield Experience

AGRAVAL U, TAN JH, CURRIE ZI, SALVI SM
Ophthalmology, Royal Hallamshire Hospital, Sheffield

Purpose Orbital decompression surgery is a well-established treatment for patients with thyroid eye disease (TED) either with sight-threatening, hydraulic or burnt out TED with stable proptosis. The purpose of this study was to measure the outcomes of orbital decompression surgery in TED patients at Royal Hallamshire Hospital, Sheffield.

Methods Prospective study of patients who had orbital decompression surgery for TED between Jan 2011-Dec 2011. The procedure undertaken, visual acuity (VA), clinical activity score, proptosis reduction and post operative complications data was collected.

Results Data of 33 eyes of 22 patients was collected. Of the 22 pts (18 right, 15 left eyes), orbital decompression surgery was undertaken for sight threatening TED in 3, hydraulic TED in 9 and burnt out TED with stable proptosis in 10 patients. Of the sight threatening TED pts VA was improved in 2/3 pts. In the hydraulic TED pts activity was controlled in 8/9 pts with one requiring further orbital decompression surgery. In burnt out TED pts there was mean reduction post op proptosis of 5.45mm at 6 weeks and 6.93mm at 6 months. The overall mean reduction in proptosis all patients at 6 months was 5.85mm; lateral wall decompression (18 eyes) 5.05mm; medial wall decompression (8 eyes) 5.3mm; lateral and medial wall decompression (7 eyes) 7.6mm. Post op complications included change from pre-op diplopia (27%), numbness (36%) which resolved within 3 months and gustatory oscillopsia (5%).

Conclusion The outcomes of orbital decompression surgery for TED in this study have highlighted successful improvement in VA in sight threatening TED, control of activity in hydraulic TED and a significant reduction in proptosis in burnt out TED.
Primary Presentation in Orbits of Systemic Tumour

CHUAH JL, OBI EE, BURNS J, SAMPATH RG
Eye Department, University Hospital of Leicester, Leicester LE1 5WW, Leicester

Purpose To report the primary sites, clinical features, treatment and outcome of 8 patients with primary presentation in orbits of metastatic carcinomas at a tertiary referral centre

Methods Retrospective interventional case series of 8 patients with primary presentation in orbits of metastatic cancers at a tertiary referral centre.

Results This is a case series of 8 patients with age range of 8-89. Follow-up period ranges from one month to eight years. The primary cancers were lung carcinoma (2), scirrhous breast carcinoma (1), prostate adenocarcinoma (1), sino-nasal squamous cell carcinoma (1), acute myeloid leukaemia (1), sclerosing sweat gland duct carcinoma (1) and unknown (1). The clinical features were periocular swelling (5), proptosis (5), periocular ache (2), blurred vision (2), diplopia (4), limited oculomotility (4), firm retropulsion (3), choroidal folds (1), weight loss (2), chest pain (1), paraesthesia (2) and bloody rhinorrhea (1). The primary treatments were hormone therapy (1) and chemotherapy (1). The local treatments were orbital radiotherapy (5) and exenteration (1) with complete resolution. 2 patients (breast carcinoma and lung carcinoma) died within a month following diagnosis of orbital metastasis while two others (lung carcinoma and prostate adenocarcinoma) died more than a year later. 2 patients still survive after being diagnosed with acute myeloid leukaemia 4 years ago and periocular sweat gland duct carcinoma 8 years ago respectively. The remaining 2 patients were newly diagnosed sino-nasal squamous cell carcinoma and unknown primary site.

Conclusion Local treatment outcome of orbital metastasis is encouraging but the long term prognosis depends on the type of primary tumour.

Atypical thyroid eye disease with massive extraocular muscle enlargement – is a muscle biopsy really necessary?

KAMPIK K (1), ROSE GE (2), UDDIN JM (2), LUTHERT P (2), VERITY DH (2)
(1) Moorfield Eye Hospital, London
(2) Moorfields Eye Hospital, London

Purpose Thyroid eye disease (TED) is a clinical diagnosis, and histology is not required either to diagnose or treat disease. However, atypical TED and orbital malignancies can both present with massive enlargement of a single extraocular muscle and, in such cases, a muscle biopsy can be required to exclude more sinister pathology. We reviewed the histology of muscle biopsies from patients with presumed 'atypical' TED to determine the frequency of non-thyroid disease.

Methods Retrospective case review using Moorfields Eye Hospital pathology database, 2000-2011. Criteria for atypical TED were: unilateral disease with muscle enlargement, or former active TED with re-onset of activity.

Results We identified 15 patients with atypical TED with current or previous thyroid dysfunction, these including 9 female and 6 male patients, with a median age of 52 years (29-74 years). Average TED history was 4.5 years (0-30, median 2); thyroid dysfunction prior to first presentation was present for 8 years on average (2-30, median 5). On CT imaging, all showed single muscle enlargement. Biopsy results in 13 patients were compatible with TED, but in 2 patients MAL T lymphoma was diagnosed. Both had developed unilateral muscle enlargement during a 6- and 8-year history of thyroid dysfunction respectively but were euthyroid at first presentation to our department.

Conclusion Active TED is frequently treated with immunosuppression, but in atypical TED with single muscle involvement other pathology can not only be overlooked, but even masked by such medical treatment. This study confirms the importance of muscle biopsy to exclude such disease in patients with atypical TED and single massive muscle enlargement.
A survey of preferred practice pattern of lacrimal plugs among BOPSS members

BOURKIZA R (1), LEE V (2)
(1) Queen’s Hospital, Romford, London
(2) Central Middlesex Hospital, London

Purpose To survey UK Oculoplastic & Lacrimal surgeons about their preferred practice of punctal and canalicular plugs use, their concern over and management of associated complications.

Methods A postal survey was sent to members of the British Oculoplastic society (BOPSS, n=98) between March and April 2011 about surgery performed for punctal/canalicular plug complications in the preceding 12 months, and the indications (granuloma, canalicularitis, stenosis, migration), their preferred type of plug and the sizing method; and overall concern about the risk of lacrimal complications.

Results The response rate was 51% (50/98). Lacrimal plugs of choice: Smartplug 30%, Softplug (temporary) 26%, Parasol 18%, Formfit 16%, Ultraplug 10%, Eagleplug 6%, superflex 4%, FCI 4%. 2 members do not use plugs. 4% use a gauging system while 86% rely on visual inspection to size the plug. 20% (10/50) reported having performed surgery for plug complications in the preceding year (n=17: 12 canalicularitis, 2 granulomas, 3 distal migration with dacryocystitis). All canalicularitis and migration cases were treated with canaliculotomy, and granulomas with excision. The plug type was known in 9 cases (2 punctal: 1 Parasol, 1 FCI; and 7 canalicular: 2 Smartplug, 2 Formfit, 3 manufacturer unknown). 34% of members were moderately to very concerned (specifically about canalicular plugs). 24% were somewhat concerned, and the remainder were neutral or not concerned at all about lacrimal plugs.

Conclusion A third of BOPSS members reported concerns regarding the safety profile of canalicular plugs. However a similar proportion nominated Smartplugs as their preferred plug despite a significant history of lacrimal complications in the published literature.

Role of transdermal androgen patches in evaporative dry eye syndrome: case series

NANAVATY M.A. (1), LONG M (2), MALHOTRA R (1)
(1) Corneoplastic Unit, Queen Victoria Hospital, East Grinstead
(2) Queen Victoria Hospital, East Grinstead

Purpose To report the effect of transdermal androgen patch (Intrinsa®, Procter & Gamble, UK) therapy as an adjunct to conventional therapy in patients with evaporative dry eye (EDE) and low androgen levels.

Methods This is a retrospective case series of 14 consecutive females with EDE and low serum testosterone treated with Intrinsa®. The ocular surface disease index (OSDI) questionnaire, tear film break-up-time (TFBUT), a slit-lamp ocular surface examination, Schirmer’s test with anesthesia, serum testosterone, sex-hormone binding globulin (SHBG) and oestrogen was assessed at baseline and post Intrinsa® patching. Patients were prescribed cycles of 3-week patch therapy with a 3-week patch-free interval between cycles. OSDI questionnaires were also completed at the beginning and end of cycles.

Results In all 14 patients, baseline TFBUT and Schirmer’s testing with anesthesia improved significantly after 3 weeks of androgen patching (p<0.03). Although post-patching serum SHBG was lower (Pre-patch 85.02±49.17 nmol/l Vs Post-patch 62.3±52.3 nmol/l, p=0.76) and serum testosterone (Pre-patch: 0.64±0.69 nmol/l Vs post-patch: 1.56±1.0 nmol/l, p=0.07) was higher, the difference was not statistically significant. The total OSDI scores were significantly lower post-patching in comparison to baseline scores (p<0.01) and increased after patch-free interval (p<0.05). There was a consistent and significant improvement in the symptom of ‘painful or sore eyes’ after patch-therapy (p<0.05).

Conclusion In patients with androgen deficiency, transdermal androgen patches appears to be effective in subjective and objective improvement of evaporative dry eye syndrome as an adjunct to conventional therapy.
Management of skin retraction associated with Boston Type II Keratoprosthesis

NANAVATY M.A., AVISAR I, LAKE D.B., DAYA S.M., MALHOTRA R
Corneoplastic Unit, Queen Victoria Hospital, East Grinstead

**Purpose** Skin retraction around the stem of a Boston Type-II keratoprosthesis is a common complication, which can be refractory to management with skin flaps. We describe a surgical technique to manage these skin retractions using a forehead pericranial flap.

**Methods** Two cases of Boston Type-II keratoprosthesis with recurrent skin retraction around the keratoprosthesis stem. A pericranial flap was the final procedure to correct skin retraction following multiple skin flap procedures.

**Results** Both patients achieved successful closure of the skin defect around the stem of keratoprosthesis following pericranial flap surgery. During early follow-up, overcorrection with recurrent migration of skin over the keratoprosthesis occurred. This was repeatedly trimmed, but only resolved after excision of a 3mm rim of skin.

**Conclusion** Pericranial flaps appear safe and effective in treating recurrent skin retraction around Boston type-II keratoprosthesis. They usually result in overcorrection and skin migration over the optic requiring a 3mm wide skin excision.

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Do periocular fenestrations avoid the need for radical surgical debridment in the treatment of severe Periorbital Necrotising Fasciitis?

PATEL T C, TAN J H, CURRIE Z I, SALVI S M
Ophthalmology, The Royal Hallamshire Hospital, Sheffield

**Purpose** Necrotising fasciitis of the periorbita is a rare but devastating infection. It can lead to severe disfigurement and loss of the eye but also, and more importantly, the disease carries a risk of death if not acted upon promptly. Treatment involves intensive intravenous antibiotics with additional aggressive and sometimes extensive surgical debridement of the affected tissue. The authors describe a case of severe periorcular necrotising fasciitis and toxic shock syndrome caused by group A streptococci. We describe how multiple periocular stab incisions through the tense ischaemic skin avoided the need for more extensive surgical debridement. We propose that this novel surgical approach has a role in hastening recovery and reducing morbidity in these patients.

**Methods** This study is a retrospective review of the patient's case notes.

**Results** This patient, with rapidly progressing necrotising fasciitis, required urgent surgery within hours of admission. Frankly necrotic tissue involving the left upper eyelid was debrided. Fenestrations were performed in the other involved non-necrotic but tense ischaemic periocular sites. The fenestrated skin recovered promptly and did not need further debridement. Postoperatively there was significant improvement in the patient's clinical condition. The patient continued on intravenous antibiotics for a further ten days and oral antibiotics for seven days. The debrided area on the left upper lid healed spontaneously by lasses faire.

**Conclusion** Fenestrations of non-necrotic, tense affected tissue provides a method of decompressing the area and can avoid the need of extensive debridement in selective cases of necrotising fasciitis.
Eyelid Colobomas and their Association with other Ocular Abnormalities

SMITH HB, WONG K, VERITY DH, COLLIN JRO
Moorfields Eye Hospital, London

**Purpose** Eyelid coloboma is a rare, congenital, full-thickness defect of the eyelid. It may be unilateral or bilateral, involve the upper and/or lower lids, and vary in extent from a small notch to absence of the entire lid. Poor lid function risks exposure keratopathy, and eyelid coloboma is associated with an increased incidence of other congenital ocular abnormalities, including; microphthalmia, ocular choristoma and symblepharon. We quantify and characterise this association.

**Methods** A case series of 55 patients treated at Moorfields Eye Hospital and Great Ormond Street Hospital between 1985 and 2005 by a single surgeon (JROC).

**Results** Eyelid coloboma was an isolated finding (no other associated craniofacial or ocular abnormalities) in 21 patients (37.5%). 19 patients (33.9%) had symblepharon (conjunctival traction bands), 16 (28.6%) had choristomas (limbal dermoids and dermolipomas), and 8 (14.3%) had an abnormal globe. Individual cases of iris coloboma, macular coloboma and sectoral cataract were also noted. The likelihood of finding such ocular abnormalities was significantly higher in patients with other craniofacial abnormalities (79.3%) compared with those without (44.0%), although no statistically-significant association was noted with the severity of coloboma (size or number of lids involved).

**Conclusion** Eyelid coloboma is commonly associated with other ocular abnormalities. Some, such as microphthalmos, have profound implications for vision, others, such as dermolipomas, may be relatively innocuous. The presence of conjunctival traction bands, however, is a particularly important clinical finding due its association with vertical strabismus and consequent risk of amblyopia, and the opportunity for surgical intervention.

Rate of secondary intention healing for facial tumours


(1) Department of Medicine, Leicester Royal Infirmary, Leicester
(2) Department of Ophthalmology, Leicester Royal Infirmary, Leicester
(3) University of Leicester, Leicester
(4) Department of Ophthalmology, Leicester Royal Infirmary, Leicester

**Purpose** To determine the rate of healing of the facial tumour excision by secondary intention

**Methods** A retrospective audit between 2005-2011 of 67 patients following facial tumour excision were allowed to heal with secondary intention based on patient choice. Site of lesion involved; 38 lower lid, 2 upper lid, 11 medial canthus, 5 temple, 4 forehead, 1 cheek, 2 scalp, 2 external nasal, 1 preauricular, 1 postauricular

**Results** Age ranged from 39-99 years with mean age of 75.5 years in 34 male and 33 female patients. The wound size showed average vertical dimension of 8.5 mm (range 2-25 mm), average horizontal dimension of 14.47 mm (range 4-25 mm) and average surface area of 121.29 sq mm (range 6-575 sq mm). Post operatively, the rate of healing during the average 6.79 days (range 2-9 days) for an average surface area of 86.31 sq mm (15-500 sq mm) was 4.09 sq mm/day, subsequently for an average 30.42 days (range 12-50 days) for an average surface area of 31.69 sq mm the rate of healing was 1.04 sq mm/day. Average rate of healing varied depending on the site and ranged between 0.95 to 8.58 sq mm/day

**Conclusion** The rate of healing varied more for women than for men although the median time was not significantly different; 0.96 for men and 0.90 for women (Mann-Whitney, p=0.8). The rate of healing during the initial post-operative period was 4 times faster than the subsequent period and did not vary significantly with age (linear regression, coefficient 0.05, p=0.11 and 95% CI -0.01 to 0.11). The rate of healing and the area of the wound correlated because the rate was calculated based on the area. We were not able to compare the rate of healing based on the site of the lesion as we did not have equal number of patients in each group.
Improving consent for oculoplastic procedures

CHAK M (1), KHOOSHABEH R (2)
(1) Ophthalmology, Reading
(2) Ophthalmology, Stoke Mandeville

Purpose To investigate understanding of information provided whilst consenting for oculoplastic procedures. An increase in information presented in an alternative format (information leaflets) and consent as a ‘process’ was assessed.

Methods Consent was initially obtained by: 1. Patients onto the waiting list in clinic; possible discussion of risks and benefits (R&B). 2. Oculoplastic NP telephone call. 3. R&B discussed and consent on day of surgery. Obtaining consent was then changed with leaflets and made more of a ‘process’. 1. R&B discussion at listing in outpatients. 2. Information leaflet given. 3. Information leaflet again by post. 4. R&B discussed with Oculoplastic NP telephone call. 5. Confirmation the leaflet read with signed top copy. 6. R&B discussed and consent on day of surgery.

Results 19 patients in initial study, Mean age 71.91 years, 56% were women. 42.11% thought surgery was risk free; 52.63% thought there was no possibility of reoperation. Consent was then changed into a process with information leaflets. 34 patients with mean age of 71.32 years, 53% were women. 61.76% of patients thought surgery was risk free and 55.88% thought there was no possibility of reoperation. There was no significant difference in the proportions of patients answering any of the questions correctly in either study.

Conclusion This study aimed to maximise patient understanding prior to oculoplastic surgery. The introduction of a process of consent and information leaflets did not increase understanding. Consent is complex and increasing the amount of information doesn’t appear to improve comprehension and illustrates how in some patients true understanding of all facts is not achievable. However, 3 patients declined surgery after reading information leaflets.

Recurrent dacyolithiasis: an interventional case report with review of evidence base for management

SHAFI A, ATKINSON P.L.
Ophthalmology, Bradford Royal Infirmary, Bradford

Purpose Dacyroliths have been described as a cause of dacryocystitis where the stones have been found during imaging or at the time of a dacyrocystorhinostomy. We present a rare case of recurrent dacyolithiasis where the patient could produce the stone repeatedly clinically after spontaneous passage down the nasolacrimal duct.

Methods A prospective, interventional case report of a 32 year old woman with a 14 year history of bilateral, recurrent dacryocystitis, with spontaneous resolution of each episode by passage of a dacryolith into her throat/mouth. During the course of her follow up, the patient could produce the stone repeatedly for us whenever it happened to land on her tongue.

Results Histological examination of the passed concretion confirmed a dacryolith. Patient’s nasolacrimal ducts were patent to syringing and imaging in between episodes did not reveal any structural abnormalities. Despite the patency, however, a dacryocystorhinostomy was considered the treatment of choice in this patient, as by preventing stagnation of tears in the sac, it would prevent dacryolith formation. The patient elected to have it done endoscopically.

Conclusion Previous reports have described dacryoliths as a cause of one off dacryocystitis, either as a cause or result of structural nasolacrimal duct obstruction. Our patient not only was patent to syringing, but also had no epiphora. Possible putative mechanisms and varied presentations of dacyolithiasis are described along with a review of current best evidence as to management of this condition.
Orbital haemorrhage following endoscopic sinus surgery – A case report of a multidisciplinary approach

SOOD V (1), REJALI D (2), PAGLIARINI S (1), STOCKER J (2), AHLUWALIA H (1), MEHTA P (1)

(1) Ophthalmology Department, University Hospitals of Coventry and Warwick, Coventry
(2) Ear, Nose & Throat Department, University Hospitals of Coventry and Warwick, Coventry

Purpose Orbital haemorrhage is a rare but devastating complication of endoscopic sinus surgery (ESS). Few cases of good visual recovery following severe visual loss due to this complication are reported. We describe a rare case of peri-operative orbital hemorrhage during ESS resulting in complete loss of vision and later had significant visual recovery as a result of prompt surgical intervention.

Methods Clinical and radiological findings and the management of this case are presented.

Results A 48-year-old male, developed sudden onset left eye proptosis, during elective ESS. On examination the orbit was tense and a left relative afferent pupillary defect noted. A clinical diagnosis of orbital haemorrhage was made and emergency lateral canthotomy and cantholysis performed which aided reduction of orbital pressure. Following recovery from general anaesthesia the patient complained of pain his vision was no perception of light in the left eye. Further emergency orbital medial wall and floor decompression was performed, within 90 minutes of the development of proptosis. Magnetic resonance imaging of the orbits following surgery, demonstrated residual orbital collection of blood, but no associated optic nerve compression. Day 1 post operatively vision was no perception of light, however this improved to 20/40 on day 3 and 20/32 at 8 weeks

Conclusion Orbital haemorrhage during ESS can result in significant visual morbidity. Early diagnosis is paramount and immediate lateral canthotomy and cantholysis recommended. Urgent orbital decompression should be considered in cases where no recovery of optic nerve function after canthotomy/cantholysis occurs, as this can be associated with good visual recovery.

Patient Benefit from One-Snip Punctoplasty and Mono-Canalicular Stenting

SMITH HB, HAWKES ED, LEE R, KHANDWALA MA
Maidstone Hospital, Maidstone

Purpose To measure patient-reported benefit from one-snip punctoplasty and mono-canalicular stenting (Mini Monoka) for the treatment of epiphora with punctal and canalicular (or common canalicular) stenosis, to record the degree of epiphora before and after surgery, and to assess rates of premature stent loss.

Methods A cross-sectional study of 30 consecutive patients. Patient benefit was recorded using the Glasgow Benefit Inventory (GBI) a questionnaire-based, post-interventional, quality-of-life scale generating a score from -100 (maximal detriment) through zero (no change) to +100 (maximal benefit). Epiphora symptoms were recorded using the Munk scale from 0 (no watering) to 5 (continuous watering). Stents were electively removed 6 weeks after surgery, though some fell out prematurely.

Results The survey was completed for 23 out of 30 patients. The mean GBI score was +17.15 (95% CI = 10.19-24.11, p<0.001). The mean Munk score was 3.9 before surgery and 1.9 after surgery, an improvement of 2.0 (95% CI = 1.4-2.7, p<0.001), with 61% reporting significantly improved watering, 22% somewhat improved, 11% no change and 6% worse. 59% of stents fell out prematurely. Premature stent loss was not associated with a statistically-significant worsening of outcome either in GBI score or Munk score.

Conclusion The majority of patients reported a significant symptomatic improvement, and derived quality-of-life benefits comparable to other commonly performed ocularplastic procedures using the GBI scale (e.g. +25.25 for entropion repair, +24.89 for ptosis repair, +17.68 for ectropion repair). Rates of premature stent loss were significant, and have prompted a further study into alternative surgical techniques for the management of this condition.
Ocular Adnexal IgG4 disease

BERRY-BRINCAT A, RAJENDRAM R, VERITY DH, ROSE GE
Moorfields Eye Hospital, London

Purpose The aim of this study is to describe our experience with the presentation, diagnosis, treatment and long-term outcome of Ocular Adnexal IgG4 disease.

Methods A retrospective case notes review of patients with a diagnosis of Ocular Adnexal IgG4 disease.

Results Seven patients met the inclusion criteria, the majority of whom were Caucasian females (57%). All patients presented in the 5th and 8th decade (range: 40 – 74 years). The most common presenting symptoms were lacrimal gland enlargement (71%), periocular swelling (57%), concomitant systemic disease (43%) and proptosis (29%). Histological diagnosis was made by orbital/lacrimal gland biopsy in 71% of patients. In the remainder the diagnosis was confirmed through their systemic investigations. Three patients responded to oral steroids alone, whilst 2 patients required additional azothioprine or methotrexate therapy, 1 patient settled on Non-Steroidals Anti-inflammatories and 1 patient had spontaneous resolution of symptoms. The mean follow-up is 8.7 months (range 3-24 months) with most patients are still under review. None of our patients have developed subsequent lymphoma.

Conclusion Ocular Adnexal IgG4 related disease is still a poorly understood condition. Careful evaluation of the patient history for prior systemic disease, a thorough search for clinical signs together with appropriate investigations is paramount to consider the diagnosis. Ophthalmologists and clinicians should be aware of this clinicopathological entity as it can affect multiple organ systems.

National Survey of Neck & Back Pain amongst Consultant Ophthalmologists in the UK

HYER J N, LEE R M, CHOWDHURY H, DHITAL A, SMITH H B, KHANDWALA M
Ophthalmology, Maidstone

Purpose To determine the prevalence of neck and back pain amongst Consultant Ophthalmologists in the UK, and to compare rates in oculoplastics with other sub-specialties.

Methods A postal survey was conducted between November 2011 and March 2012 using addresses supplied by the Royal College of Ophthalmologists. T tests were used to compare groups.

Results 518 out of 1029 questionnaires were returned completed (a 50.3% response rate). Oculoplastics (91 respondents, 17.6% of cohort) was compared with other sub-specialties; mean age 46.5 vs. 49.1 years (p=0.004), mean duration since entering speciality training 19.9 vs. 22.3 years (p=0.006). Mean time per week in theatre 10.9 vs. 8.3 hours (p<0.001), mean time per week in clinic 17.4 vs. 19.7 hours (p=0.004). Overall 62.4% of ophthalmologists reported some degree of neck or back pain (67.0% oculoplastics, 61.4% other sub-specialties), with neck pain significantly more prevalent in oculoplastics (40.7% vs. 30.0%, p=0.04). There was no statistically significant difference in rates of upper body or lower back pain, or in pain severity. Pain whilst operating was also more prevalent amongst oculoplastic surgeons (45.0% vs. 31.1%, p=0.01), and they found operating exacerbated their pain more frequently (37.3% vs 24.1%, p=0.009).

Conclusion Neck and back pain were commonly reported by ophthalmologists. Oculoplastics Consultants had a higher prevalence of neck pain compared with other sub-specialties, and reported more pain whilst operating. They also developed pain at a younger age and earlier in their careers. This may relate to increased time spent operating, awkward posture or use of surgical loupes. Future studies will explore preventative measures including postural training.
Antibiotic use in delayed eyelid reconstruction post Mohs Micrographic Surgery for periocular cancers

HO J, SHAH-DESAI S
Ophthalmology, Queen's Hospital, Romford, London

**Purpose** To assess surgical site infection (SSI) rates in patients undergoing delayed primary lid reconstruction after Mohs Micrographic Surgery (MMS). Antibiotic prophylaxis is recommended for patients at high risk of infection based on surgical site or technique, but no literature addresses this practice in periocular tumours.

**Methods** Retrospective case-note review of patients treated between Oct 2010 and Feb 2012. Patients had off-site MMS followed by reconstructive surgery within one week in our unit. All patients received prophylactic oral antibiotics post MMS. We evaluated tumour type, location, defect size, reconstruction method, antibiotic type, dose and duration and incidence of post-operative infections.

**Results** N=24 (16 Female, 8 Male) with a median age of 77.5 years. There were 21 Basal cell carcinomas, 1 Basosquamous carcinoma, 1 Squamous cell carcinoma and 1 Lentigo maligna. Tumour location involved the lower lid (7), upper lid (1), medial canthus (7), lateral canthus (2), brow (2), nasojugal fold (1). 3 cases involved lower lid and one canthus and 1 involved upper, lower eyelid & brow. Post-MMS defect sizes ranged from 10 to 51mm. 21 cases underwent skin flap repair, 4 had Hughes flap with skin flap or graft, 1 had skin flaps, tarsal transposition flap and buccal mucous membrane graft and 1 had direct closure. Mean duration of antibiotic prophylaxis was 6 days. No adverse drug reactions and no SSI occurred at 2-weeks and 1-month post-operative follow-up.

**Conclusion** No SSI occurred for delayed eyelid reconstruction post MMS for periocular tumours. A randomised controlled trial of antibiotic prophylaxis vs no treatment would address the merits of the current practice.

Nodular fasciitis presenting as a rapidly growing medial canthal mass

SCAWN R, RAJENDRAM R, THUANG C, UDDIN J, BERRY-BRINCAT A
Moorfields NHS Trust, London

**Purpose** Nodular fasciitis is a benign reactive hyperproliferative condition thought to occur after inflammation or trauma. It is rare in the periorbital area. In view of its presentation as a rapidly growing solid mass it can clinically mimic a neoplastic process. Awareness of the condition and recognition of its presenting features are therefore important.

**Methods** We present the case of a 35-year old lady who presented with a painless right medial canthal mass which had been increasing in size for 6 weeks. The mass was firm, attached to underlying structures and extended superiorly from the medial canthal tendon. The patient recalled only a mild trauma to the area some months prior to the lesion developing. An urgent excision biopsy was performed.

**Results** Macroscopically the lesion was approximately 2cm in length, adherent to the canthal tendon and encapsulated. Histology revealed proliferation of spindle fibroblast cells which were strongly positive for vimentin and smooth muscle actin, and negative for desmin and S100. This was consistent with a diagnosis of nodular fasciitis.

**Conclusion** Clinically and histologically nodular fasciitis can be misdiagnosed as a sarcoma. We discuss this case and review the literature of this uncommon condition. Nodular fasciitis should be included in the differential diagnosis of a rapidly enlarging periorbital mass and patients must be asked to report any injury prior to the lesion developing, no matter how trivial, as it may be relevant.
Methylprednisolone pulse therapy for patients with active Graves' orbitopathy

GOAWALLA A, BRITTAIN G P
Sussex Eye Hospital, Brighton

**Purpose** To assess whether methylprednisolone (MP) pulse therapy is efficacious in the treatment of moderately severe Graves' orbitopathy (GO).

**Methods** Retrospective observational case series. The case notes of twelve previously untreated patients with active, moderately severe GO who had received MP were reviewed. Moderately severe disease was defined using the NOSPECS classification of clinical signs of GO. Activity was measured with the clinical activity score (CAS). A dose of 500 mg MP had been administered intravenously, over three consecutive days and repeated within 6 weeks if disease activity remained high. Qualitatively, a successful treatment outcome was defined as an improvement in one major and/or two minor criteria in the worst eye at 1 week. The major criteria were: improvement in eye movement; a decrease in CAS of three points. The minor criteria were: decrease of eyelid retraction; decrease of proptosis; improvement in grade of soft tissue swelling; a decrease in CAS of two points.

**Results** The qualitative treatment outcome was successful at the end of the trial in five out of six (83%) patients receiving MP. The treatment was well tolerated. However, 3 of the 12 patients went on to have orbital decompressions during the active phase.

**Conclusion** This outcome compares well with previous studies and therefore supports the notion that the use of repeated pulsed IV methylprednisolone in patients with active, moderately severe GO is both efficacious and usually well tolerated. It also highlights the speed with which patients show a response to this form of steroid treatment, thus adding to the body of evidence supporting IV over oral steroid treatment in the active phase of GO.

Eye care in Intensive Care Units: a survey across England and protocol

PAPAMICHAEL E (1), KAM K Y (2), HALDAR S (3), PEARCE K (4), NARESH J (5)
(1) Hillingdon Hospital, Department of Ophthalmology, Uxbridge
(2) Imperial College London, Magill Department of Anaesthetics, Intensive Care and Pain Management, London
(3) Charing Cross Hospital, Intensive Care Department, London
(4) University Hospital of South Manchester NHS Foundation Trust, Wythenshawe Hospital, Manchester
(5) Chelsea and Westminster Hospital, Department of Ophthalmology, London

**Purpose** Ventilated patients in Intensive Care Units (ICUs) are prone to getting exposure keratopathy and microbial keratitis due to suboptimal lid closure. Simple preventative measures can protect from exposure, however no unifying ICU eye care protocol exists. Our study aimed to establish the methods that ICUs across England use to prevent keratopathy. It also aimed to determine the effectiveness of existing protocols in recognising patients at risk of exposure. Lastly it examined the perceived incidence and type of eye complications.

**Methods** All general and specialist ICUs in England were telephoned. The researchers interviewed the supervising nurse using a questionnaire piloted in London. Units unable to participate on the first phone call were phoned again at least once.

**Results** We identified 267 general and specialist ICUs of which 217 (81%) participated. One hundred and thirty (60%) units use an eye care protocol. Of these 66% assess eyelid closure compared to 65% of units with no eye care protocol. The most popular protective method is Geliperm (106 units, 49%), followed by Lacrilube (76 units, 35%) but most units use a combination of methods. The median time of eyelid position assessment and protective therapy application was four hours. The perceived incidence of any eye complication in all participating ICUs was 502 cases in one year (2010), the most common being corneal defect/ulceration (24 cases).

**Conclusion** This large-scale survey of eye care in ICUs demonstrates that practice is variable across England. Based on our data we formulated an easy to follow guideline for eyelid position assessment, therapy administration and referral where necessary.
Switch flaps without lower lid reconstruction

MAUDGIL A (1), ABDULKARIM H (1), SALVI SM (2), CURRIE ZI (1), TAN JHY (1)

(1) Eye Department, Royal Hallamshire Hospital, Sheffield
(2) Eye Department, Royal Hallamshire Hospital, Sheffield

**Purpose** To describe two cases of large upper lid defects reconstructed with switch flaps from the lower lid, without subsequent lower lid reconstruction.

**Methods** Two patients with biopsy proven sebaceous gland carcinoma of the upper eyelid underwent staged excision and once margins were clear, subsequent reconstruction. Both were left with large defects in the upper eyelid, which were reconstructed with switch flaps from the ipsilateral lower eyelid. Switch flaps were divided 4-6 weeks later, leaving defects in the lower lid that were that were secured by oversewing the skin and conjunctiva with 7-0 vicryl. No formal reconstruction of the lower lid was performed.

**Results** Both patients have achieved good results from switch flap without lower lid reconstruction with good corneal coverage and good cosmesis. No further surgery was required. Photographs will be shown.

**Conclusion** Traditionally switch flaps have been described with reconstruction of the lower lid from which tissue is borrowed to close large upper lid defects. These cases demonstrate good functional and cosmetic outcome from switch flaps without lower lid reconstruction, and also leave potential for this to be done at a later date if deemed necessary.

The ‘UP and Down’ Hughes Flap

RAZAQ R, DRONEY T, O’REILLY P
Mid Western Regional Hospital, Limerick

**Purpose** The aim of eyelid reconstruction is to provide corneal protection along with reasonable functionality and cosmesis. Where there is a large upper eyelid defect, these issues are more pressing and more difficult to achieve. In this case report we describe the oculoplastic techniques employed in the reconstruction of a sub-total upper eyelid defect with complete loss of the medial canthal tendon, following wide excision of an extensive squamous cell carcinoma.

**Methods** A novel combination of flaps were used, including a sliding tarso-conjunctival flap from the upper eyelid together with an inverse Hughes flap from the lower eyelid. The residual medial defect was repaired with the aid of a medial perosteal flap. Blood supply to the overlying supraclavicular skin graft was enhanced by an orbicularis muscle flap. The flap was opened at four weeks.

**Results** The patient achieved good cosmesis with excellent functionality. There was good levator function and good eyelid closure with secondary corneal protection. Furthermore, there was no compromise to the donor lower eyelid.

**Conclusion** The ‘up and down’ Hughes flap is a viable method of reconstructing large upper eyelid defects where there is some residual tarsus remaining. Combining the use of an upper eyelid sliding tarso-conjunctival flap with the inverse Hughes flap can help distribute and improve levator function, and concomitant mobilization of the orbicularis muscle can improve the blood supply and aid with eyelid closure.
When not to remove an eye: A case of severe bilateral ocular blunt trauma in a 15 year old

PATEL T C, TAN J H,
Ophthalmology, The Royal Hallamshire Hospital, Sheffield

Purpose Primary evisceration is sometimes a daunting prospect for an ophthalmic surgeon particularly when faced with severe ocular trauma to both eyes. Future sympathetic ophthalmia and endophthalmitis are naturally a worrying sequelae in such cases. The authors describe a case of a 15 year old patient who presented following a road traffic accident. Unusually she sustained severe and blinding blunt trauma to both eyes but not other injuries.

Methods This study is a retrospective review of the patient’s case notes.

Results This patient, a front side passenger, presented to the accident and emergency department with no light perception in each eye. She underwent urgent examination under anaesthesia. During surgery a severely ruptured right globe was identified with uveal prolapse through the extensive corneo-scleral wound. The fellow eye unfortunately sustained a devastating closed globe injury with complete disorganisation on the intraocular anatomy due to severe concussion effect. The right eye underwent primary repair of the globe, a decision taken in consultation with the family during surgery.

Conclusion Sympathetic ophthalmia is a rare phenomenon following severe ocular trauma. It is now considered a treatable eye condition with a good visual prognosis. Severe open globe injuries should not mean immediate evisceration of the globe. Patients with blinding injuries to both eyes will need extensive support following such injuries particularly as they are dealing with sudden blindness but the realisation of losing one or both eyes in the process can be an avoidable burden.

Transcaruncular Medial Canthal Tendon Plication with Lower Eyelid Suture Sling in Facial Nerve Palsy

SIRA M (1), NORRIS J (2), NDUKA C (3), MALHOTRA R (1),
(1) Corneoplastic unit, Queen Victoria Hospital, East Grinstead
(2) Oxford Eye Hospital, Oxford
(3) Department of Plastic Surgery, Queen Victoria Hospital, East Grinstead

Purpose Transcaruncular medial canthal tendon (MCT) plication avoids late rounding of the medial canthal angle (caused by traditional approaches such as medial canthoplasty) restoring the medial lower eyelid to an acceptable position by directing the lower eyelid to the posterior lacrimal crest. To minimise point-fixation-‘cheese-wiring’, we modified medial fixation to extend as a suture sling along the pre-tarsal lower eyelid.

Methods A single centre, retrospective review of patients with facial nerve palsy undergoing transcaruncular MCT suture sling between 2004-2010. Outcomes measures included pre and post-operative inferior marginal reflex distance, inferior scleral show, and improvement in ectropion.

Results 174 patients with facial nerve palsy undergoing eyelid surgery, 33 (mean age 59, mean duration of palsy of 17 years) underwent MCT suture sling. Lower eyelid ectropion was present in 63% pre-operatively and in 29% at last follow up. Punctal ectropion improved from 67% to 11%. Medial eyelid height was deemed to improve in 67%, lower eyelid contour was adjudged to be natural in 52% and inferior scleral show improved by mean 0.5mm at last follow-up. Six (18%) patients required repeat MCT suture sling a mean of 10 months after original surgery.

Conclusion The MCT suture sling is a safe, repeatable procedure, whilst avoiding late rounding of the medial canthal angle which occurs with medial canthoplasty. Given that the principles of this procedure are based upon minimally invasive suture-support, non-excisional, repeatable surgery and recognising that surgery for facial palsy will likely require revision at some point, these outcomes support such a paradigm.
Outcomes of Periocular skin cancer excision and reconstruction

KHURRUM KFK, KHAN M, SHAH-DESAI SSD
Ophthalmology, Queens Hospital Essex

Purpose To audit outcomes periocular skin cancer excision and reconstruction

Methods Retrospective consecutive case-note review of surgically treated cases of periocular skin cancer, between May 2010 and Feb 2012. Factors evaluated include patient demographics, tumour type and location, method of excision and reconstruction, tumour clearance and post-operative complications.

Results There were 89 Patients, (52 female, 37 male) with a median age of 78 years. Tumour types included basal cell carcinoma (83%), basosquamous carcinoma (1%), squamous cell carcinoma (6%), lentigo maligna (4.5%), lentigo maligna melanoma (2%) and Bowens (4%). The tumour involved the upper or lower eyelids in 44 cases, medial canthus in 22, lateral canthus in 4, temple/brow/forehead in 14 and nasojugal area in 5 cases. 61 patients underwent 3-4 mm local excision and primary repair and 28 patients underwent Mohs Micrographic Surgery (MMS) with delayed repair. All local excisions were complete, but 3 had < 1mm clearance. One case of MMS had incomplete clearance and orbital invasion in 44 cases, medial canthus in 22, lateral canthus in 4, temple/brow/forehead in 14 and nasojugal area in 5 cases. 61 patients underwent 3-4 mm local excision and primary repair and 28 patients underwent Mohs Micrographic Surgery (MMS) with delayed repair. All local excisions were complete, but 3 had < 1mm clearance. One case of MMS had incomplete clearance and orbital invasion. Reconstructive surgery included direct closure (6), Laissez Faire (1), for anterior lamellar repair rhomboid, transposition, advancement flaps (71) and skin grafts (11). Posterior lamellar repairs included Hughes, Hewes, tarsal transposition, periosteal flaps (15) and buccal mucous membrane graft (1). Complications included 6 prominent scars, 3 ectropion, 2 lid margin conjunctival hyperplasia and 1 case of lagophthalmos, 1 wound infection and 1 flap haematoma.

Conclusion Our results of local excision margin clearance are comparable to published literature. This audit improves patient counselling, with risk of common complications, based on personal experience.

The Post Partum Red Eye

JOGANATHAN V (1), CATES C (2)
(1) Eye Treatment Centre, West Suffolk Hospital., Bury St Edmuds, SUFFOLK.
(2) Eye Treatment Centre, West Suffolk Hospital., Bury St Edmuds, SUFFOLK.

Purpose Spontaneous occurrence of carotico-cavernous fistula (CCF) in the peri-partum period is uncommon. The infrequency with which it is encountered can result in a delay in diagnosis, further management and may put vision at risk.

Methods A case report and review of literature

Results A 31 year old lady with an unremarkable medical history presented 2 months post partum with a unilateral red eye. This was initially managed as episcleritis but on review she had dull ocular pain and tortuous dilated conjunctival vessels. She had no bruit or change in visual acuity. Subsequently, the patient developed subtle proptosis of her right eye. Emergency CT angiography revealed a low flow carotico-cavernous fistula. She underwent a digital subtraction angiogram (DSA), which was found to be normal. The patient’s ocular symptoms have remained stable over the past 7 years. She remains under close observation during her second pregnancy.

Conclusion This case illustrates the need to consider carotico-cavernous fistula in the differential diagnosis of the red eye. Current pregnancy or a recent history of childbirth should increase alertness to this possibility. Patients with dural fistulae often present with subtle signs which may be mistaken for chronic conjunctivitis or other conditions. Prompt investigation with an angiogram is mandatory but not all fistulae require surgical intervention. A low flow CCF is not always demonstrable on DSA and is less likely to lead to complications resulting from high venous tension. Nonetheless, visual loss may occur with progressive ocular complications. Surgical management for cosmetic symptoms needs to be balanced against the inherent risks. Stable, low flow CCF is not a contra-indication to future pregnancy, however close observation is required.
A Joint National Survey with the English Lacrosse Association on Ocular Injuries amongst Players

ZIELICKA Z (1), SARANGAPANI S (2), JOSHI N (3), KOIZIA LJ (4), AL-KHATEEB M (5)
(1) Chelsea and Westminster Hospital, London
(2) The Western Eye, London
(3) Chelsea and Westminster Hospital
(4) Watford General Hospital
(5) Imperial College

Purpose
The compulsory use of goggles in US women’s lacrosse has reduced eye injuries. To determine the prevalence and consequences of eye injuries, and the opinion on the use of goggles amongst female lacrosse players, and coaches in England.

Methods
Surveys were devised with questions on prevalence, consequences and management of eye injuries, as well as their opinion on the use of goggles. 85 coaches were surveyed via an anonymous online survey, whilst 648 players were surveyed during national tournaments.

Results
74% of coaches and 24% of players reported witnessing or sustaining an eye injury. 54% of coaches reported witnessing on average 2-5 injuries and 64% of players had sustained at least one eye injury during their careers. High velocity injuries, specifically involving being hit by the ball, as the main mechanism of injury. 46% of coaches and 24% of players reported the ocular injuries involving doctor based care, including specialist units. Long-term consequences included orbital fractures, disfigurements, and 2 cases of associated visual loss. The majority of coaches and players recommend the implementation of protective eyewear. However, the majority of coaches and players do not implement/use goggles, the main reason cited was ‘discomfort.’

Conclusion
Serious eye injuries amongst female lacrosse players appear to be infrequent but preventable eye injuries occur more frequently than previously perceived. The majority of coaches and players would recommend the implementation of protective eyewear. This study highlights the high incidence of preventable ocular injuries. The use of goggles in the UK may decrease the prevalence of all types of ocular injuries, minor or significant.

Cost comparison of managing patients by traditional means versus Mohs micrographic surgery

LITWIN AS (1), HARIDAS A (2), GHAZI-NOURI S (1)
(1) Broomfield Hospital, Chelmsford
(2) Addenbrookes, Cambridge

Purpose
A National Health Service (NHS) costing analysis of treating periocular basal cell carcinoma (BCC) by staged excision, fast paraffin section and reconstruction versus Mohs micrographic surgery (MMS).

Methods
Clinical coding associated with 20 consecutive patients who had periocular BCC treated by staged excision with 3mm margin, standard histological processing and reconstruction over a 2 year period (01/2009-01/2011) was obtained. Notes were reviewed where necessary. Similar details were obtained for 20 consecutive patients treated with MMS for periocular BCC. All cases had histological confirmation of BCC. All visits from the initial referral, covering the first 6 months of treatment were included. Billable coding costs were obtained for the outpatient, biopsy, excision, reconstruction and follow-up events, and a costing was calculated based upon the associated tariffs.

Results
Of the 20 consecutive patients treated by staged excision, 2 (10%) had incomplete tumour removal at the first attempt. Of these, one had further excision and one patient was observed for evidence of recurrence. None of the MMS group required re-excision. No tumour recurrence occurred in either group during the follow-up period.

Conclusion
Direct cost comparison was difficult, but it appears there was little difference in average cost billed by the two groups. Whether this corresponds to costs incurred by the treating hospital are more difficult to ascertain.
Eyelid Colobomas and their Association with other Craniofacial Abnormalities
WONG K, SMITH HB, VERITY DH, COLLIN JRO
Moorfields Eye Hospital, London

Purpose Eyelid coloboma is a rare, congenital, full-thickness defect of the eyelid. It may be unilateral or bilateral, involve the upper and/or lower lids, and vary in extent from a small notch to absence of the entire lid. Eyelid colobomas may be isolated or associated with other craniofacial abnormalities. These typically fall into two categories; the '1st arch syndromes' (such as Goldenhar, Treacher Collins and Fraser), or the facial clefting disorders.

Methods A case series of 55 patients treated at Moorfields Eye Hospital and Great Ormond Street Hospital between 1985 and 2005 by a single surgeon (JROC).

Results Based on the horizontal defect in the eyelid, 21 patients (38.2%) had small colobomas, 19 (34.5%) medium colobomas, and 15 (27.3%) large colobomas. 29 patients (52.7%) had other craniofacial abnormalities, including: Goldenhar Syndrome in 13 (44.8%), clefting disorders in 10 (34.5%), and Fraser syndrome in 3 (10.3%). Of the patients with small colobomas 33.3% had associated craniofacial abnormalities, compared with 52.6% with medium colobomas, and 80.0% with large colobomas. Conjunctival bands were also more common in patients with large colobomas than small (46.7% vs. 19.0%), although the incidence was unrelated to the presence of other craniofacial abnormalities. Goldenhar Syndrome was typically associated with smaller colobomas than other 1st arch or clefting disorders.

Conclusion Approximately half of all eyelid colobomas are isolated or associated only with localised abnormalities of the orbital adnexae, and these tend to be smaller than those associated with other craniofacial abnormalities. These data provide important clues as to the embryology of colobomas, which we will explore in greater detail.

Cheek lift for anterior lamellar reconstruction of the tarsconjunctival flap
HALE JE, DURRANI OM
Birmingham & Midland Eye Centre, Birmingham

Purpose To describe a new modification to the Hughes tarsconjunctival flap

Methods Following BCC excision our patient had a defect of >75% of the left lower eyelid length. A modified Hughes tarsconjunctival flap was formed in conjunction with a lateral cantholysis. In lieu of a skin graft or rotation flap a cheek lift was performed. The cheek was dissected anterior to the periosteum below the inferior orbital rim. 4.0 vicryl sutures were used to elevate and anchor the deep tissues to the inferior orbital rim, removing any tension from the lower lid. At the lid margin the tissues were thinned to reduce bulk.

Results The postoperative lid position was very good with high patient satisfaction with the outcome.

Conclusion This technique is an alternative to more traditional methods of lower lid repair with reduced scar formation and a rejuvenated post-operative appearance.
Peri-orbital complications of dermal fillers - treatment strategies

HALE JE, DURRANI OM
Birmingham & Midland Eye Centre, Birmingham

Purpose To present complications due to the dermal filler Novabel and to describe two treatment strategies.

Methods Two patients presented with complications secondary to injection of Novabel. Novabel is a colourless dermal filler made of cross-linked alginate. It is marketed as being of low risk and as the ideal dermal filler for use in the periorbital area and ‘tear troughs’. Both patients presented with unsightly lumps in the periorbital region. One patient had a giant foreign body cell granuloma confirmed on histology and the lesions were excised. The second patient was treated with four cycles of intra-lesional 5 Fluoro-uracil.

Results Both treatment methods resulted in resolution of the visible lesions.

Conclusion All injectable fillers have been associated with complications. The frequency is higher with semi-permanent or permanent substances. Novabel was withdrawn from the market in August 2010 secondary to reactions such as those described above. By July 2010, 70 adverse reactions were reported from 24,000 vials sold. The MHRA recommends that granulomatous lesions be treated with minocycline or intra-lesional steroids. 5 Fluoro-uracil was effective in our patient. Non-responsive lesions may be excised.

A Case of Angiolymphoid Hyperplasia with Eosinophilia (ALHE).

SONDE MS (1), FERNANDO BSF (2), AL-DAWOUD AAFA (3), LEY RWL (4)
(1) East Lancashire Hospitals, Blackburn
(2) Ophthalmology, East Lancashire Hospitals, Burnley
(3) Pathology, East Lancashire Hospitals, Burnley
(4) Rheumatology, East Lancashire Hospitals, Blackburn

Purpose To report a rare case of right orbital angiolymphoid hyperplasia with eosinophilia.

Methods Case report with histological confirmation of diagnosis.

Results Case: A 52-year-old female presented with a 12-month history of right eye (RE) proptosis with mild pain and occasional diplopia. Medical history included previous episodes of episcleritis and renal cysts. Examination revealed upper lid fullness and congestion, inferior palpable orbital lesions and extraocular movements were restricted in all directions of gaze. Exophthalmometry measured 21mm on the right and 15mm on the left. Colour vision was normal and there was no RAPD. Visual acuity was 6/9 in the right eye and 6/5 in the left. MRI confirmed a right-sided orbital mass and blood results showed a positive c-ANCA (PR3>600). Wegener’s granulomatosis was suspected but a right orbital biopsy showed a vascular lesion accompanied by clusters of plasma cells, neutrophils, eosinophils and organized lymphoid tissue with reactive germinal centres. A diagnosis of angiolymphoid hyperplasia with eosinophilia was made. Current management includes immunosuppression therapy, with surgery having been excluded due to the diffuse nature of the lesion and risk of damage to local structures. Visual acuity remains unchanged. Although the right-sided proptosis has increased, she has no corneal exposure.

Conclusion ALHE is a rare idiopathic condition with orbital involvement being extremely uncommon. There is marked proliferation of blood vessels accompanied by characteristic inflammatory infiltrate including eosinophils. Treatment is challenging with corticosteroids proving largely ineffective and surgical excision being excluded in this case.
Ocular features of patients presenting with orbital fractures

SYRIMI M (1), NAGENDRAN S (2), KALANTZIS G (3), UDDIN J (4), BERRY-BRINCAT A (4), MANISALI M (5)

(1) Moorfield’s eye hospital, St George’s outreach, London
(2) Moorfield’s eye hospital at St George’s, London
(3) Moorfield’s eye hospital at St George’s, London
(4) Moorfield’s eye hospital at St George’s, London
(5) Moorfield’s eye hospital, London

Purpose Trauma resulting in orbital fractures is often associated with ocular and periocular injuries. The aim of our study is to determine the mode of injury and the associated ocular features in cases of orbital fractures presenting to our unit.

Methods This is a retrospective case notes review of patients with orbital fractures. The variables reviewed included patients’ age, gender, mechanism of injury, visual acuity, extraocular motility, diplopia, ocular and orbital findings.

Results Twenty one patients (13 males and 8 females) were included in our study. The average age at presentation was 35.9 years (range 16 - 73). Assault was the commonest etiology of trauma accounting for 9 out of the 21 orbital injuries. Non assault related trauma included falls, sport related injuries and road traffic accidents. The majority of the patients were seen within one week from the injury. Extraocular movement abnormality was the commonest feature presenting in 57.1% of the patients followed by enophthalmos (23.8% of patients). Only 3 out of the 21 patients had reduced visual acuity at presentation. Two of them had traumatic optic neuropathy and one had peripapillary haemorrhage. In our patients with traumatic optic neuropathy, this was associated with combined floor and medial wall fractures.

Conclusion Our study shows that assault is the commonest cause of orbital fractures and extraocular movement restriction is the most common clinical feature in these patients. Reduction in the visual acuity is most likely to be associated with severe ocular injury and multiple orbital fractures.
COSMETIC ORBITAL SURGERY
SENTHILNATHAN C
Ophthalmology, CHENNAI, INDIA

**Purpose** To demonstrate the surgical techniques of the lateral and medial orbitotomy for orbital tumour removal with special emphasis on incision planning to achieve cosmetically pleasing outcomes.

**Methods** Two surgical procedures, one a lateral orbitotomy performed via an extended lid crease approach for an intraconal cavernous hemangioma and a medial orbitotomy performed via an upper lid crease incision for removal of an extraconal dermoid cyst is demonstrated with special emphasis on incision planning. The intraoperative steps are vividly demonstrated in a “step by step” manner to facilitate easy understanding of various anatomical structures.

**Results** Preoperative and two month post operative appearances were compared which demonstrated cosmetically pleasing outcomes with minimal scarring.

**Conclusion** Proper preoperative surgical planning with special emphasis on incision placement can give cosmetically pleasing outcomes even with removal of large orbital tumours.

“LIFTING THE VEIL”- APONEUROTIC PTOSIS SURGERY DEMYSTIFIED!
SENTHILNATHAN C
OPHTHALMOLOGY, CHENNAI, INDIA

**Purpose** To demonstrate the surgical technique of the levator aponeurosis reattachment in two cases with acquired ptosis secondary to levator aponeurosis dehiscence. The purpose of this video is to demonstrate the actual intraoperative findings and to help the surgical trainees in identifying the various surgical landmarks which will enable them to obtain satisfactory postoperative outcomes.

**Methods** Two patients with acquired ptosis secondary to levator aponeurosis dehiscence were chosen to undergo the levator aponeurosis reattachment surgery under local anesthesia and the whole surgery was videotaped under high magnification so as to allow identification of the various anatomical structures in great detail. The whole surgery was demonstrated in a “STEP BY STEP” approach so as to facilitate easy understanding.

**Results** Both patients obtained satisfactory outcomes with good cosmesis by the end of two weeks.

**Conclusion** Acquired ptosis secondary to levator aponeurosis dehiscence can be successfully managed by performing the levator aponeurosis reattachment surgery provided the surgeon is familiar with the various anatomical landmarks.
Brow lift with Silhouette suture

ATTAWAN A (1), GOEL S (2)

(1) DOPW Hospital, Grimsby
(2) DPOW Hospital, Grimsby

**Purpose** There are many options available to correct brow ptosis including direct, indirect and endoscopic methods. We present a technique - Silhouette suture assisted brow lift through a minimal forehead incision, and demonstrate its advantages in simplicity and effectiveness with minimal risks, side effects and minimal scarring.

**Methods** Video demonstrating Silhouette suture feather lift cable suspension technique in one patient for simultaneous bilateral Brow Ptosis performed under local anaesthesia.

**Results** The procedure was simple, Scarless, and gave immediate brow lift post operatively with excellent patient satisfaction.

**Conclusion** Brow lift with Silhouette sutures is a simple, effective technique with immediate results and minimal side effects.

Posterior medial canthal resection

THALLER V T

Plymouth Royal Eye Infirmary, Plymouth

**Purpose** Medial canthal tendon (MCT) laxity is common. The laxity is often in the sub-canalicular portion of the tendon between the caruncle and tarsal plate. Medial to this the tendon remains firm, suggesting a possible dehiscence. The gold standard repair: medial canthal full thickness resection sacrifices the canaliculus. MCT plication risks concertina distortion of the canaliculus and suffers the problem of all plications: late failure when sutures migrate or dissolve due to inadequate fibrosis (scarring).

**Methods** The operation demonstrated in this video spares the canaliculus which protected by stretching it on a Bowman probe. A base up triangle of conjunctiva and underlying palpebral MCT between the medial canthus and the punctum is marked, heavily diathermied to create a firm scar and scraped. Two double armed 6/0 absorbable sutures are then passed through the medial edge of the triangle, immediately posterior to the caruncle, trans-conjunctivally to engage underlying firm MCT medially and emerge on it’s cut surface. The needles are then inserted through medial tarsal plate just lateral to the punctum at the raw lateral edge of the triangle to emerge anteriorly through the skin close to the lashes. The upper suture must emerge high up, just lateral to the lacrimal punctum. Here the suture ends are tied together under tension.

**Results** Early concertina deformation of the canaliculus and punctal ectropion occur. By two months when the suture has absorbed the lid appearance and position have returned to normal and the MCT is firmly reattached.

**Conclusion** This technique is quick and easy. It stabilizes the MCT but does not significantly shorten the lid. In not doing so it does not concertina the canaliculus, possibly preserving its function.
Lateral Canthopexy for functional epiphora, in a lid with minimal/moderate laxity – a video demonstration

OBI EE, BURNS J, SAMPATH R
Dept of Ophthalmology, Leicester Royal Infirmary, Leicester

Purpose To describe a simple operative technique to alleviate functional epiphora in an anatomically normal lid with minimal/moderate laxity.

Methods A prospective interventional case series of patients undergoing a lateral Canthopexy for epiphora from April 2011 to date. A gray line incision is made in the lateral lower lid and canthal angle. An upper lid lateral skin crease incision is made. The supero-lateral orbital rim is revealed through the incision. At the lateral border of the skin crease incision, a tunnel is made subcutaneously at the lateral Canthus. A double ended 5.0 Vicryl suture is passed through the gray line incision and tarsal plate, then through the lateral canthal structures in the subcutaneous tunnel and is emerged through the lateral border of the upper lid skin crease incision. The 5.0 Vicryl sutures are then anchored to the periosteum of the supero-lateral orbital rim. A brief video demonstrates this procedure.

Results 22 lids of 11 patients met the inclusion criteria. The mean follow up period was 6 weeks (range 1-3 months). Success was determined by improvement of symptoms and need for further surgery. All 11 patients reported significant improvement of symptomatic epiphora. No patient required further surgery. There was no post-operative infection and all patients have been discharged.

Conclusion Functional epiphora can be very disabling for patients and challenging to manage. This procedure is beneficial in symptomatic patients with minimal/moderate laxity. We surmise that the success of this procedure underlies a greater contractile force, produced by the orbicularis pump on blinking post operatively, based on a scientific principle utilising Starling’s law.

Tele-Oculoplastics; Joining the age of telemedicine

OBI E E, PRADEEP A, BURNS J, SAMPATH R
Department of Ophthalmology, Leicester Royal Infirmary, Leicester

Purpose Ophthalmology is at the forefront of telemedicine. Pathology can be monitored electronically however most of these are related to retinal pathology. This includes diabetic retinopathy, age related macular degeneration and retinopathy of prematurity. Peri-ocular skin tumours constitutes a vast majority of what is routinely seen in an oculoplastic clinic. We describe a digital microscopic device that can be used to refer, monitor and follow up patients with skin lesions and tumours.

Methods A USB digital microscope, with a x 400 magnification which is commercially available, was used to take several images of lesions. It was also used to monitor the progress of healing wounds and scars.

Results Several high quality images of magnified views of common benign and malignant lesions routinely seen in the oculoplastic clinic are presented. A short high quality video illustrates this device, and illustrates the difference between this device and macro photography.

Conclusion This device is a very simple cheap device that is easy to use. It can be used by anyone who can use a computer. Being a microscopic device, it preserves patient anonymity 100%, at all times. Images can be dated, stored, and magnification recorded. These images can be e-mailed with referral details, enabling the oculoplastic surgeon to correctly designate a procedure as a minor operation or not as in cases of cutaneous carcinomas. It can also be used to follow-up patients in remote locations, who have had local resection of tumours, to check for recurrences. This device is a useful tool widely available to all, and can improve efficiency. The authors have no financial interests in this device.
Flexor Carpi Radialis tendon as suspension material

ATTAWAN A (1), COAPES C (2), GOEL S (3)
(1) Ophthalmology - Diana Princess of Wales Hospital, Grimsby
(2) Orthopeadics, JCUH - Middlesbrough
(3) Ophthalmology - DPOW Hospital, Grimsby

Purpose There are various materials available to us for sling or suspension procedures including silicon tubes, Fascia Lata or Palmaris Longus muscle tendon. In a patient who had severe Facial nerve palsy with lower lid ectropion and exposure keratopathy, in the absence of Palmaris Longus tendon and patient refusal to have the thigh operated on, an alternative - Flexor Digitorum Superficialis Tendon was considered as a suspension sling material.

Methods The patient had absent Palmaris Longus tendon from both forearms. Fascia Lata was not possible to obtain due to patients refusal. Flexor Digitorum Superficialis Tendon was obtained and used as a lower lid sling using the technique demonstrated in Video.

Results The Flexor Digitatorum Tendon was harvested and used effectively with no side effects.

Conclusion Flexor Digitorum Tendon has a similar function to Palmaris Longus and Fascia Lata and is obtainable with the help of hand surgeons as an alternative sling material.

Resolution of Oculo-Oral Synkinesis post Botulinum A treatment

BRADY J (1), MANNERS R (1), CLAPHAM L (2), SHARMA S (3)
(1) Southampton Eye Unit, Southampton
(2) Wessex Neurological unit, Southampton
(3) Department of MaxilloFacial Surgery, Southampton

Purpose Aberrant reinnervation following facial nerve palsy may result in facial synkinesis of any facial muscle. This can affect patient’s daily activities, social functioning and cosmetic appearance. Ophthalmologists most commonly see synkinesis of eyelid closure on voluntary contraction of the muscles of mastication. We present a patient with the much rarer oculo-oral synkinesis – midface movements on blinking – and chart resolution of symptoms post Botulinum therapy.

Methods Patient A was followed by a multidisciplinary team post Left Facial Palsy. After three months she presented with prominent masseter contractions associated with blinking. This interfered with eating, talking and smiling and was extremely upsetting for the patient. She was treated with bilateral botulinum A to both masseters to ensure preservation of facial muscular symmetry.

Results The patient reported good resolution of synkinesis as demonstrated by pre and post treatment videos.

Conclusion This video presentation provides pictorial evidence of oculo-oral synkinesis and the real difference botulinum toxin treatment has made to the patient’s daily life.
Upper eyelid medial imbrication recognition and treatment

MCMULLAN TFW, ABBASI M, BANDARA MRCK, WAKEFIELD MJ
Northampton General Hospital, Northampton

Purpose
To report and highlight a case of acquired bilateral medial upper lid imbrication and its surgical management.

Methods
Lid dynamics and punctal position were examined and video recorded. Correction of the lid abnormality was performed using a surgical procedure described below.

Results
An 81 year old gentleman presented with bilateral epiphora with spilling of tears medially. His past medical history was significant for a Right lower lid entropion correction with Right lower lid shortening with wedge excision in 2004 with a subsequent revisional Right sided Jones procedure with lateral tarsal strip in 2009; he also had a concurrent Left lower lid lateral tarsal strip procedure to correct an involutional ectropion in 2009. All four eyelids and puncta were found to be in normal position with his eyes open. With eyelid closure, both upper puncta overrode the lower lids: upper eyelid medial imbrication. Bilateral upper lid medial spindle procedures were performed to achieve normal punctal positioning during lid closure and thus medial lid imbrication was corrected. This was associated with resolution of his symptoms.

Conclusion
A case of acquired bilateral upper lid medial imbrication is reported for the first time. Lid imbrication has rarely been previously been reported. The condition can be recognised by careful observation of eyelid blink dynamics. Upper eyelid medial spindle procedure is an effective surgical option for the management of upper eyelid imbrication with resolution of epiphora. The causes and consequences of imbrications are discussed more widely with particular reference to lacrimal pump failure due to altered punctal physiology.

Modified evisceration with rotation of inner scleral flaps

KAMAL S, KUMAR S, BODH SA, GOEL R
Department of Ophthalmology, Gurunanak Eye Centre, Maulana Azad Medical College, New Delhi, India

Purpose
To describe a new technique of evisceration with rotation of inner scleral flaps.

Methods
This is a prospective consecutive case series involving 13 eyes of patients requiring evisceration with primary implant. All patients underwent evisceration by modified technique. After conjunctival peritomy and removal of ocular contents, four rectangular scleral flaps are made in each quadrant between the recti muscles. These flaps are made by making incision on inner side of scleral cavity with base near limbus and then rotated to bring them over the implant. This makes outer side of sclera in direct contact with implant and inner surface faces anteriorly. The flaps from opposite quadrant are sutured together and conjunctiva-Tenon’s are closed in usual manner.

Results
All patients had excellent implant motility with no complications over follow up period (3-6 months).

Conclusion
Evisceration with rotation of inner sclera minimizes orbital dissection, preserves functional pulleys of extraocular muscles and allows adequate fibrovascular growth. An implant is covered with two layers of sclera and in cases of larger globe size, flaps can be over-lapped to provide four layers of sclera anteriorly. This provides effective barrier and minimizes late exposure.
Endonasal endoscopic retrieval of lodged silicone punctal plugs

BASHEER K, OLVER J
Ophthalmology, London

Purpose To demonstrate the retrieval of silicone punctal plugs during endonasal dacrocystorhinostomy and to highlight the potential complications of punctal plugs.

Methods We present the case of a 59 year old woman who had multiple punctal plug insertions for dry eyes following Laser Assisted In Situ Keratomileusis. On presentation to us she had severe watering of the eyes and lacrimal scintigraphy confirmed overspill and lack of drainage from the right eye secondary to a pre-lacrimal sac obstruction.

Results The plugs were removed from the lacrimal sac during endoscopic endonasal dacrocystorhinostomy and is illustrated by endoscopic photographs and videos taken at the time of surgery.

Conclusion Although punctal plug insertion is a simple and effective treatment for dry eyes there are many complications that can occur following their insertion, the more severe of which require surgical intervention as in this case where the plugs were retrieved endonasally during dacrocystorhinostomy. When deciding to use punctal plugs the practitioner should be aware of their possible complications from improper insertion and then determine which punctal plug to select, correct plug size and finally insert the plug correctly.
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