



IMPT GLASGOW 2017



28th IMPT Scientific Congress 2017

GCU Glasgow Caledonian University

Programme and Abstracts

September 6-8th 2017



The Institute of Maxillofacial Prosthetists and Technologists 2017

President:

Mr. Kavin Andi FRCS (OMFS) FRCSEd FDSRCEng FHEA Pg Cert Med MBBS

President Elect:

Mr. Colin MacIver FRCS FRCS Ed FDS FRCS (OMFS)

Chairman:

Mr. Barry Edwards MSc MIMPT

Honorary Treasurer:

Mr. Richard Eggleton FIMPT

AIB Chairman:

Mr. Stephan Edmondson BSc (Hons) DPS MIMPT

Education Officer:

Mr. Jason Watson BMedSci CSci FIMPT

Assistant Educational Officer:

Mrs. Heidi Silk BSc (Hons) MIMPT

Student Representative:

Miss Lily Dewhurst BSc (Hons) AIMPT

Member Without Portfolio:

Dr. Anwar Bamber PhD FIMPT
Mr. Hitesh Koria DPS MIMPT

Co-opted Members:

Dr. Trevor Coward PhD FIMPT
Miss Sian Hayward MSc BSc (Hons) MIMPT

Honorary Secretary:

Mr. Fraser Walker MSc FIMPT

Honorary Registrar:

Mr. Mark Curler MBE FIMPT

Minute Secretary:

Mr. Edward Malton DPS MIMPT

Journal Editor:

Dr. Emma Worrell PhD MIM

Newsletter Editor:

Mrs. Pauline Paul MSc MIMPT

Website Co-ordinator:

Mr. James Dimond DPS MIMPT



IMPT Chairman's Welcome

Barry Edwards MSc MIMPT

Dear Delegates

As IMPT chairman my I take this opportunity to personally welcome you all to the 2017 IMPT conference in Glasgow.

Maxillofacial prosthetics is an exciting area to work/study and indeed play, and we will continue to offer meetings like this to bring IMPT members and non-members together to ensure our profession remains at the cutting edge.

To give you an idea of what to expect over the next few days, there will be the usual interesting and varied lecture programme spread over 3 days, several workshops, a civic reception on Wednesday evening, an informal reunion dinner Thursday evening and the Friday night award ceremony to conclude our conference.

I would particularly like to thank all the delegates presenting this year, especially first-time lecturers, as well as the conference organizing committee and also the trade stands who continue to support IMPT events.

Finally, I'd like to thank each and everyone of the delegates for bringing their expertise to our conference, please be engaged and join in the debates and discussions. The more we discuss the more we will learn.

Barry Edwards MIMPT MSc

Message from Organizing committee

Dear Delegate,

We the organising committee warmly welcome you to Glasgow to this the 28th Institute of Maxillofacial Prosthetists and Technologists Scientific Congress.

Glasgow's history dates back to the 6th century as a religious site established by St Mungo. The official status as a city dates back to the 12th century when the cathedral was the seat of the Bishops. In 1451 the University of Glasgow was established within the cathedral buildings so this building was the centre of all things religious and academic.

Glasgow's prosperity came from the river Clyde and in particular the tobacco trade many of the opulent buildings you will see in the city were built by the tobacco barons. In the Victorian era Glasgow's reputation as being the workshop of the empire earned it the title of "Second City of the Empire ". The ship building and heavy engineering came at a cost and Glasgow became a heavily polluted.

The regeneration of the city began in the mid 1980's and has continued since establishing the modern vibrant city it has become today. When walking around the trick is to look up! This is the best way to see the City's architecture in all its glory.

You will experience the financial influence of the tobacco barons when visiting the City Chambers and our banquet venue and that of the modern investors at the venue for the conference.

We sincerely hope you enjoy the stimulating programme of lectures and workshops arranged for the next three days not to mention a varied social programme.

The Organising Committee

2017 Congress Organising Committee

Mr. Fraser Walker MSc
FIMPT

Mrs. Pauline Paul MSc
MIMPT

Mr. Edward Malton DPS
MIMPT

Mr. Barry Edwards Msc
MIMPT

Mr. Richard Eggleston
FIMPT

Miss Kirsty Millar MIMPT

Miss Kirsty Barbour Dip
PS MIMPT

Miss Catherine Turner
MSc BSc MIMPT

IMPT Congress Awards

The Wim de Ruiter Delft Plate

Awarded for significant research contribution. Mr. Wim de Ruiter from Ridderkirk near Rotterdam provided a maxillofacial prosthetic service for the Rotterdam area and donated this award in 1985.

The Mount Vernon Award

Awarded for outstanding clinical or technical practice. Designed and fabricated by Chief Maxillofacial Prosthesis Mr. John Hayward at Mount Vernon Hospital, this award was first presented at the 1981 IMPT congress held at Brunel University London.

The President's Award

Awarded for the best poster display. This award was inaugurated in 1983 at the IMPT congress; held at the Royal College of Surgeons, London.

The Kidd Award

Awarded for innovation. This award was donated by Mr. Norman Kidd, who began making subperiosteal implants in 1956 and upon his retirement, instigated the Kidd Award plaque in 1977.

The Ian MacLeod Alumno Award

Awarded to the most outstanding contribution from a student or junior/associate IMPT member. This award has been dedicated in honor of Ian MacLeod; a member of the IMPT who had a positive influence on many young MfP's.

Technovent Best First Time Lecturer Award

Materialise Best Journal Article Award

This award goes to the individual with the best journal article chosen from the Journal of Maxillofacial Prosthetics and Technology

The IMPT Travel Fellowship

£1000 is awarded to the successful applicant to provide the means for study and research. This award is assessed and awarded by the fellows of the IMPT. It must be applied for prior to the IMPT Congress by contacting the chairman.

The Brian Conroy Award

Awarded for outstanding services to maxillofacial prosthetics. Donated by Brian Conroy MBE FIMPT (Hon) in 1969, the award was commissioned – "For those who have given significant service for advancement in technology, prosthetics, surgery and other activities that related to maxillofacial prosthetics and technology."

2017 Congress Assessors –

Mr. Peter Bowman MIMPT, Miss Kirsty Millar MIMPT, Miss Sian Hayward MSc BSc MIMPT

IMPT 28th Scientific Congress, Glasgow

Lecture Programme

Wednesday 6th September

11.30	Registration Opens	Poster and Exhibition Set-Up
12.00 - 13.30	Lunch	
14.00	Congress Opens	
14.00 – 15.15	Barry Edwards	Chairman's Welcome
14.00 – 15.15	Mr. Kavin Andi	Formal Handover of Presidential Office
14.00 – 15.15		Inauguration of the new IMPT President
14.00 – 15.15	Mr. Colin MacIver	New President's Lecture
15.15 – 15.30	Coffee	
15.30 – 17.30	Trade Stands and Workshops	
18.30	Depart for drinks and Civic Reception at Glasgow City Chambers	

*

Please note there will not be food at the reception, there are numerous restaurants nearby which will cater for all tastes

Thursday 7th September

09.00	Free Paper Session 1 - Session Chair - Pauline Paul	
09.00 – 09.15	Charlotte Heath (STP)	Pharyngeal airway space analysis
9.15 – 9.30	Catherine Turner	Reliability of three conventional MSP techniques
9.30 – 9.50	Fraser Walker	3D or not 3D that is the question
9.50 – 10.05	Amy Davy	Titanium Cranioplasty Manufacture
10.05 – 10.20	Steven Hollissey-McLean	Utilising Digital Technologies for Burns Mask Provision
10.20 – 10.25	Questions	
10.25 – 10.30	Caroline Reed & Heidi Silk	Patient Leaflets
10.30 – 11.00	Coffee, Trade Stands	

11.00

Free Paper Session 2 – Session Chair - Fraser Walker/Barry Edwards

11.00 – 11.50

Miss Victoria Cook

BOAMS Lecture - Is Virtual a reality?

11.50 – 12.05

Kirsty Barbour

Location, Location, Location

12.05 – 12.20

Heidi Silk

Partial Auricular Prosthesis – Alternative retention

12.20 – 12.35

Susan Insole

Principles of Facial form - An Artists Viewpoint

12.35 – 12.55

Sameera Patel

Effect of UV radiation on pigmented silicone with incorporated UV opacifiers.

12.55 – 13.00

Questions

13.00 – 14.00

Lunch, Trade stands

14.00

Free Paper Session 3 – Session Chair – Edward Malton

14.00 – 14.20

Charles Fraser-McNamara

Use of 3D modelling in Obtaining Informed Consent

14.20 – 14.35

Elaine Baird

3D Technology for Orthognathic repositioning splints

14.35 – 14.50

Oliver Burley

Implementing 3D Printing into your hospital – Why, How and What Now?

14.50 – 15.05

Amy Davy

The (not so) intimidating applications of 3D planning and Printing

15.05 – 15.10

Questions

15.10 – 15.30

Coffee Break, Trade stands

15.30

Free Paper Session 4 – Session Chair – Michael O’Niel

15.30 – 15.50

Sophia Tetteh

Prioritised Design Guidelines for Resource limited countries

15.50 – 16.05

Vaughan Jones

Easter Egg Ocular Prosthesis

16.05 – 16.20

Kuldeep Raizada

Volume Displacement Technique: Lower Lid Laxity in Anophthalmic Sockets

16.20 – 16.40

Keith Pine

Clinical Ocular Prosthetics

16.40 – 16.50

Jörn Brom

TBC

16.50 – 17.00

Questions

17.00

Close of lectures, Wine Tasting at invitation of Charles Fraser-Macnamara & Jindrich Navrátil

19.00

Leave on foot for reunion Dinner at Hard Rock Café

*

Hard Rock Café, 179 Buchanan St, Glasgow, G1 2JZ

Friday 8th September

09.00	Free Paper Session 5 – Session Chair – Jason Watson	
09.05 – 09.20	Philipi Federspil	Nasal Cancer – Excision to follow oncological or prosthetic principles?
09.20 – 09.35	Professor Kai Helling	Closure of nasal septal perforations with individually configured epitheses - indications and limits
09.35 – 09.50	Mark Svolkinas	Is acquired facial disfigurement considered as a post-operative predictor of depression in adult head and neck
09.50 – 10.10	Iwona Radzimowska	Cranioplasty: risk of infection and the concept of antibacterial coating incorporating antimicrobial peptides
10.10 – 10.25	Jindrich Navrátil	Oropharyngeal and facial pathology in the office of a Czech GP
10.25 – 10.30	Questions	
10.25 – 11.00	Coffee, Trade Stands,	Poster Presentations - Poster presenters are asked to be next to their posters for panel assessment
11.00	Free Paper Session 6 – Session Chair – Steve Worollo	
11.00 – 11.20	Barbara Anne Thomson	What information and support do head and neck cancer patients need to cope with the impact of ablative surgery?
11.20 – 11.40	Peter Evans	Custom Surgical Guides and Plates for Mandibular Reconstruction with Fibular Free Flap
11.40 – 11.55	Matthew Pilley	Printing in Soft!!
11.55 – 12.15	Andrew Richmond	Surgical Treatment of Sphenoid wing meningiomas presents significant challenges
12.15 – 12.30	Lawrence Dovgalski	Digital workflow for lower limb prosthetics
12.30 – 12.40	Questions	
12.40 – 13.30	Lunch, Trade Stands	
13.30	Free Paper Session 7 – Session Chair – Fraser Walker	
13.30 – 13.45	Sabah Zaulifqar	Clinical outcomes: clarity, accuracy and timelines
13.45 – 13.50	Questions	
13.50 – 15.10	Jason Watson	Who Expects the ‘Tribunal del Santo Oficio de la Inquisición’?
15.10 – 15.25	Discussion	Equivalence/STP
15.25	Coffee, Trade Stands	
15.30	Close of Congress,	
15.50	IMPT Business meeting	
18.20	Buses Leave for Prize giving and Banquet at Oran Mor	

Abstracts for Lecture Presentations

Free Paper Session One

Pharyngeal airway space analysis

*Charlotte Heath BSc (Hons) AIMPT, Nottingham University Hospitals Trust, Nottingham, UK
(Reconstructive Scientist)*

Orthognathic surgery is a treatment option indicated for patients who present with skeletal malocclusions. Repositioning of the upper and lower jaws to achieve a more favourable skeletal and dental relationship however, particularly movement of the mandible, has an indirect and varying impact upon the surrounding anatomy, including tongue position and pharyngeal airway space (PAS). Contrasting views exist upon the amount of impact orthognathic surgery has on PAS. However, the prevailing view in the literature shows that mandibular set back surgery results in a significant decrease in the volume of the pharynx. Why does it matter if there is a narrowing of the PAS? The reduced airway space can predispose the patient to developing obstructive sleep apnea syndrome (OSAS). On the other hand, could orthognathic surgery be used to reduce, or even eradicate, OSAS in those patients inflicted? The method of airway analysis will be discussed, followed by the results of airway analysis of patient cases undergoing orthognathic surgery for aesthetic and functional reasons and those wanting to eliminate OSAS.

Reliability of three conventional MSP techniques

*Catherine Turner MSc BSc (Hons) MIMPT, Queen Elizabeth University Hospital, Glasgow, UK
(Reconstructive Scientist)*

Results of a pilot study comparing the three most adopted Model Surgery Planning techniques; Eastman, Lockwood Key-Spacer and Glasgow. The study Evaluates the accuracy of predicted movements in comparison to actual surgical movements achieved at a skeletal level. The study focused on orthognathic maxillary movements and was split into three maxillary variations; advancement (Case A), impaction (Case B) and both advancement and impaction (Case C). Each MSP technique undertaken, followed the entire process from facebow recording to surgical wafer production. The occlusal plane angle, Anterior/posterior and vertical dimensions were recorded. One-Way Analysis of variance (ANOVA) and Bonferroni post hoc test were used for statistical analysis.

Results demonstrated significant differences ($P < 0.05$) between the predicted movement and at least one or more MSP techniques within 7 of the 12 reference points. Eastman and Glasgow demonstrated differences of less than 2mm. The Lockwood technique demonstrated differences of ≤ 2 mm in 93.75%.

3D or not 3D that is the question

*Fraser Walker MSc FIMPT, Queen Elizabeth University Hospital, Glasgow, UK
(Head of Service)*

The use of 3D models is now common place in the Maxillofacial laboratory. New uses for this technology are being found on a daily basis. The obvious attraction to planning surgery on replicate skulls has many advantages. The anatomical anomalies when using articulators and facebows for planning orthognathic surgery can be minimized with 3D models however there are issues and pitfalls using this technology. This presentation will discuss some of the successes and failures of this exciting new technology.

Titanium Cranioplasty Manufacture

*Amy Davey MSc BSc (Hons) AIMPT, Southmead Hospital, Bristol, UK
(Reconstructive Scientist)*

This study investigated the effect that manufacturing techniques had on the surface characteristics of pressed titanium cranioplasty plates, commonly manufactured in laboratory practice. The aim was to highlight the variety of techniques currently used, assess these methods of manufacture and produce manufacturing recommendations.

The surfaces of sample plates manufactured using current techniques were examined using scanning electron microscope (SEM) and energy dispersive x-ray (EDX) spectrometry. The results were analysed to identify statistical differences.

A large range of manufacturing techniques of titanium cranioplasty plates was confirmed and significant differences were found between the individual manufacturing processes commonly used. Bead blasting with aluminium oxide (Al_2O_3) and trimming tool choice had a significant impact on surface contamination, however passivation and anodising techniques had no significant effect.

Recommendations were made to minimise manufacturing time, reduce risk of complication (thus costs) and unify methods to enable a safe, reliable treatment.

-

Utilising Digital Technologies for Burns Mask Provision

*Steven Hollisey-McLean P Dip, Morriston Hospital Swansea, Wales, UK
(Principal Maxillofacial Prosthetist)*

Following the review of burns care in the British Isles the services were strategically centralised into specialist centers for adult and child care. Although successful this centralisation has in some areas disrupted the link between the Maxillofacial Laboratory and the burns care services for the provision of facial burns splinting. Charities have sought to fill the service gap by sourcing services from commercial companies from within and outside the UK for mask provision. This presentation looks at the latest technologies for the provision of burns splinting and how these can be employed by UK Maxillofacial Laboratories to support their regional burns care services both efficiently and economically.

-

Free Paper Session Two

BAOMS Lecture: Is Virtual a Reality?

*Miss Victoria Cook, BDS FMDs RCPS MBC hB MRCS (Ed) FRCS (OMFS), Victoria Hospital, Kirkcaldy, UK
(Consultant Oral and Maxillofacial Surgeon)*

-

Location, Location, Location

*Kirsty Barbour Dip PS MIMPT, University Hospital Crosshouse, Kilmarnock, UK
(Principal Maxillofacial Prosthetist / Deputy Manager)*

Fabrication of an aesthetically pleasing orbital prosthesis is a challenging process. The correct location and orientation of the ocular component is vital to achieve this. Implant-supported prosthesis are the preferred option of retention for

prosthetic rehabilitation. The ideal position and number of implants for restoring orbital defects would be three non-linear implants in lateral, supraorbital, and infra-orbital rims. Such implant arrangement is not always achievable considering the extension of the defect, bone quality and quantity of the defect walls.

This presentation aims to discuss the challenges encountered in the prosthetic rehabilitation of an Orbital defect where implants could not be ideally placed and how these can be overcome

Partial Auricular Prosthesis – Alternative retention

*Heidi Silk BSc (Hons) MIMPT, Poole Hospital NHS Foundation Trust, Poole, UK
(Principal Maxillofacial Prosthetist)*

This case study shows an innovative solution for the retention of a lower partial auricular prosthesis. A conventional approach, an acrylic substructure and a loop design are discussed along with the use of a self-retentive backing and a flexible mould technique.

Principles of Facial form - An Artists Viewpoint

*Susan Insole HNC MIMPT, Queen Victoria Hospital, East Grinstead, West Sussex, UK
(Maxillofacial Prosthetist)*

Representational artists and sculptors study facial anatomy with a view to creating life-like images and forms. There are many books and other resources available that are aimed at art students, to help them create anatomically accurate artworks. These offer detailed information, and ideas that can also be of great help to us, as makers of facial prosthetics. The aim of this talk is to illustrate some points that have been gleaned from artistic sources that have been helpful to the author. Several principles of facial form, particularly of the orbital region and nose will be described using anatomical drawings, and photographs of classical sculptures.

The effect of UV radiation on the effect of a pigmented silicone with incorporated UV opacifiers.

*Sameera Patel MSc BSc (Hons), Gloucester Royal Hospital, Gloucester, UK
(Reconstructive Scientist)*

Maxillofacial prostheses display a colour change with increased use due to the instability and subsequent degradation of the pigments and silicone. The purpose of this study was to evaluate the colour stability of skin-tone pigmented M511 maxillofacial silicone subjected to ultraviolet (UV) light exposure using a weathering machine after the addition of two nano-sized UV opacifiers at varying concentrations; Titanium Dioxide (TiO₂) and Zinc Oxide (ZnO). Nine groups of eight samples of varying concentrations of opacifier mixed into the silicone were studied. The skin-tone pigmented silicone was mixed with the different concentrations, polymerized, and exposed to UV light in an accelerated weathering machine. Colour readings L*, a*, and b* were taken before UV exposure (at 0 hours) and every 100 hours for a total of 1000 hours, and the colour change (Delta-E - ΔE) was calculated. All groups exhibited a significant colour change.

Free Paper Session Three

Use of 3D modelling in Obtaining Informed Consent

*Charles Fraser-Mcnamara, Helen House, Great Cornbow, Halesowen, UK
(Company Solicitor)*

In order to undertake any invasive surgery patient consent is a pre-requisite. In the area of, in particular, facial reconstruction it is necessary to obtain informed consent - A 2-dimensional representation may be helpful but a 3 Dimensional representation, perhaps with a 3D printed model will inevitably lower the risk of misunderstandings and subsequent litigation

3D Technology for Orthognathic repositioning splints

*Elaine Baird DiP MIMPT, Queen Elizabeth University Hospital, Glasgow, UK
(Principal Maxillofacial Prosthetist)*

With the advent of 3D orthognathic surgery planning the use of 3d printed intra operative positioning splints has become a reality. Published articles seem to differ in the accuracy claimed using this technology. A preliminary study of a novel method of positioning the maxilla eradicating the use of surgical wafers will be presented.

'Implementing 3D Printing into your Hospital – Why, How – and What Now?'

*Oliver Burley MSc BSc (Hons) AIMPT, North Manchester General Hospital, Manchester, UK
(Reconstructive Scientist / Maxillofacial Laboratory Manager)*

Through primary research, professional colleagues and the media, we can all appreciate the endless possibilities that 3D printing technologies has given us. It is already widely accepted that, for many surgical procedures, 3D printing has become a necessity in providing modern healthcare to ever increasing patient expectations. However, implementing a 3D printing service into hospitals requires more than just a funding source. What could initially be thought as daunting task can, once broken down and planned, be an exciting and achievable goal.

The purpose of this presentation is to inspire maxillofacial units in how to best succeed in gaining acceptance of a 3D printer business case. This is achievable by considering the hospital's needs, desires and USP's, raising interest amongst neighbouring disciplines and obtaining a funding source based upon sound and measurable evidence. By extracting all potential opportunities in using 3D, a successful business case is never too far away.

The (not-so-) Intimidating Applications of 3D Planning and Printing

*Amy Davey MSc BSc (Hons) AIMPT, Southmead Hospital, Bristol, UK
(Reconstructive Scientist)*

Long-gone is the feeling that if 3D printing is ignored, it may go away. 3D printing has taken the world by storm and has ever growing applications and benefits to many industries. However, it can also be an intimidating prospect for some.

At last, the healthcare sector is beginning to adopt the use of 3D planning and printing for uses widely spread over various healthcare specialties, not just maxillofacial prosthetics and technology. This presentation introduces the topic of digital 3D use, discusses the variety of uses and applications, and concludes on a full case-study of a complex facial trauma reconstruction using 3D planning and printing.

Free Paper Session Four

Maxillofacial Prostheses – Prioritised Design Guidelines Prioritised for Resource Limited Countries

*Sophia Tetteh MSc BSc AIMPT, Loughborough Design School, Loughborough, UK
(Chartered Engineer)*

Rehabilitation of maxillofacial defects or deformities in resource-limited countries is usually provided through charities or non-governmental organisations volunteering assistance overseas and training local staff in the construction and fabrication of bespoke prostheses. Furthermore, these countries suffer from a lack of technical knowhow and trained personnel and have very limited access to unaffordable surgical procedures. Donated prostheses are not suitable and deterioration due to extreme weathering conditions dramatically reduces service life. Hence the aim of this research is to create a maxillofacial prosthetics design requirements and specification guideline specifically prioritised for resource limited nations or regions. A mixed qualitative method was utilised in the creation of the guideline including shadowing and observation; interviewing and literature searching to create the prioritised guideline. The main highlight of the prioritised guideline thus far has been cost, material longevity, UV and colour stability

Easter Egg Ocular Prosthesis

*Vaughan Jones MCGLI, Queen Victoria Hospital, East Grinstead, UK
(Maxillofacial Prosthetist)*

The advantages of making a hollow ocular prosthesis for certain patients have been firmly established. This presentation is an illustrated description of a method used to produce a custom made hollow prosthetic eye using a technique that has been in existence for many years, but has not, to my knowledge, been discussed or written about.

The advantage of the methodology is that the weight of the trial prosthesis is similar to that of the finished prosthesis, which may not be the case with a large wax pattern hollow ocular prosthesis. This enables the prosthetist greater accuracy when trial placing the iris pupil unit.

Volume Displacement Technique: Lower Lid laxity in Anophthalmic Sockets

*Kuldeep Raizada PhD, BCO, BADO, FAAO, International Prosthetic Eye Center, Hyderabad, Telangana, India
(Clinical Ocularist & Anaplastologist)*

Loss of an eye, is a disastrous condition that not only leads to loss of vision but also causes cosmetic blemish. Eye conditions include phthisis bulbi, atrophic bulbi, sightless deformed globe and an ophthalmic socket. Enucleation and

evisceration can be performed either placing or without placing an orbital implant. Final outlook depends on the symmetrical appearance with a prosthetic eye or a prosthetic shell.

Socket deformities such as lower lid sagging and soft tissue displacement commonly seen in the past, when the eye removal surgery techniques were performed without placing an orbital implant. Another reason is using stock eyes prosthesis that give rise to socket deformities in the long run due to poor fitting. Aging and scarring of the lower fornix are other contributing factors.

Eyelid laxity occurs with some prosthetic eye users that may be associated with ectropion, entropion and lower lid sagging. This can happen due to laxity of medial and lateral canthal tendon, lower lid tarsal plate displacement, weak orbicularis muscle and mispositioning of inferior tarsus muscle. The most common cause for the displacement or laxity of lateral canthus in prosthetic eye users are include weight of the prosthesis on lower eyelid and thick lateral edge of the prosthesis.

Clinical Ocular Prosthetics

*Keith Pine BSc MBA PhD MIMPT, Auckland, New Zealand
(Ocular Prosthetist)*

“Clinical ocular Prosthetics” is a peer review book which for the first time, brings together literature from a wide range of ophthalmology, prosthetic eye and contact lens areas and from research into the eyes socket response to prosthetic eye wear. Since the book was published in 2015 further research progress has been made including eyelid margins and prosthetic eyes, and a major study of New Zealand prosthetic eye wearers that has resulted in four scientific papers. The study covered: The mucoid discharge, visual perception, and appearance concerns of prosthetic eye wearers. How anapathalmic patients feel about the eye loss and wearing a prosthetic eye. The impact of eye loss and prosthetic eye wear on recreational, occupational, and social areas of functioning. The psychosocial wellbeing of anapathalmic patients.

(To Be Confirmed)

Jörn Brom MIMPT, Heidelberg, Germany

Free Paper Session Five

Nasal Cancer - Excision to follow Oncological or prosthetic principles?

Philippe A. Federspil & Jörn Brom, University Hospital Heidelberg, Dept of Otorhinolaryngology, Head and Neck Surgery, Heidelberg, Germany

Cancer of the nose may arise in the mucosa of the nasal cavity or the external skin. Excision of the cancer is usually performed by partial or total rhinectomy. Rehabilitation may be achieved by either plastic reconstruction or fitting of a nasal prosthesis. The fixation of a nasal prosthesis may be hindered by the movements of residual nasal structures with mastication and mimics. Therefore, the question arises during cancer surgery whether the resection should be enlarged in order to remove such residual structures as e.g. the alar bases, or to convert partial rhinectomy to total rhinectomy in all cases.

However, since 10 years, we adopted a policy to restrict the resection purely to oncological needs in order to be able to offer plastic nasal reconstruction should the patient wish to opt for it. However, we even kept a maximum of nasal anatomy in those patients going for prosthetic rehabilitation. All patients were implanted with the titanium mini plate system Epiplating by Medicon eG (Tuttlingen). We did not experience any drawback in fitting partial nasal prostheses. In the contrary, the preservation of a maximum of unaffected anatomical structures had a positive psychological impact on the patients. The retention was still excellent. Moreover, this strategy allows easier plastic reconstruction if the patient chooses it. This confirms our strategy of maximal preservation in cancer surgery of the nose.

Closure of Nasal Septal Perforations with Individually Configured Epitheses - Indications and Limits

Professor Kai Helling & Jörn Brom,

There are numerous reasons for the development of nasal septal perforations. Only in a few cases idiopathic perforations are found, more often are inflammatory perforations by granulomatosis with polyangiitis and most frequent are iatrogenic perforations after septoplasty, surgical intervention to stop bleeding in cases of epistaxis and Osler's disease but also cocaine consumption.

The direct consequences of septal perforations are the incrustation of the nasal cavity and rhinitis sicca anterior (dry nose), granulation tissue with consecutive bleeding, impairment of nasal breathing by air turbulence and generation of breathing noises. In particular, anterior perforations involving the nasal valves - the narrowest region in the nose - are often difficult to close by conventional septal buttons because of their thickness.

Meanwhile, 30 patients had been treated by individually configured septal epitheses, allowing us to discuss the advantages and disadvantages. The benefits of an individually configured epithesis is its slim shape which can be adapted to the anatomy of the nose even in cases of severe septal deviations and narrowing by prominent turbinates. Additionally, the thin lips of the epithesis carefully enclose the margin of the perforation thus avoiding unintended movement and bleeding of the mucosa. Furthermore, no surgical intervention is necessary in older and multimorbid patients.

Substantial limits of the closure of septal perforations with individually configured epitheses are the sizes of the perforation. In the case of missing margins of the perforation the epithesis cannot be fixed sufficiently and the impression prior to manufacturing is often difficult. In one case the epithesis was manufactured on the basis of a CT scan and constructed by 3D plotter.

Numerous cases with history and photo documentation will be presented.

Is acquired facial disfigurement considered as a post-operative predictor of depression in adult head and neck cancer patients?

*Mark Svolkinas MSc BSc PGDip ILM AIMPT, Queen Elizabeth University Hospital, Birmingham, UK
(Maxillofacial Prosthetist)*

Objectives: Review to what degree acquired facial disfigurement is considered in published academic literature as a post-operative predictor of depression in adult head and neck cancer patients. Achieved by critically analysing the depression assessment tools employed post-operatively and the weighting given to acquired facial disfigurement as an influencer of depression.

Methods: Five digital databases were searched extensively with controlled vocabulary search terms pertaining to head and neck cancer, depression predictors and facial disfigurement. Exclusion criteria included publication year and language. Retrieved papers were rated for level of evidence and scientific quality. Key findings summarised and tabulated.

Conclusion: Evidence suggests that acquired facial disfigurement is acknowledged as a predictor of post-operative depression, influences patient concerns and hence distress/depression levels; however, assessment tools for psychological distress and depression do not assess disfigurement concerns adequately and remain lacking despite the consensus that disfigurement is a key concern of head and neck cancer patients.

Cranioplasty: risk of infection and the concept of antibacterial coating incorporating antimicrobial peptides

*Iwona Radzimowska MSc BSc (Hons), Queen Elizabeth University Hospital, Birmingham, UK
(Reconstructive Scientist)*

The number of patients reconstructed with a prosthetic cranioplasty is increasing. Titanium has become a material of choice for cranial implants in the UK and worldwide. An implant associated infection is a serious complication which can result in cranioplasty removal. Surface coatings incorporating the antibacterial peptides present a promising approach in limiting the infection rates. An in vitro study was conducted to determine the antimicrobial activity against *S. epidermidis* of the antibacterial peptide coating on the titanium surface. The results of the study suggest that the peptide coating was characterised by simple immobilisation, cost-effectiveness and significant antimicrobial activity. Further investigations of this approach are therefore recommended.

Oropharyngeal and facial pathology in the office of a Czech GP

*Dr. Jindrich Navrátil
(Doctor of Medicine & Examiner for Medical Qualifications)*

A review of and exposition of the Role of the Czech General Practitioner in the Oropharyngeal and Facial Pathology including the interaction with emergency services and liaison with Specialists in the field.

Free Paper Session Six

What information and support do head and neck cancer patients need to cope with the impact of ablative surgery

*Barbara Anne Thomson MSc, PG DiP, PG Cert, BSc, DiP (EnG), MIMPT, Queen Elizabeth University Hospital, Glasgow, UK,
(Maxillofacial Prosthetist)*

A structured literature review focusing on what information and support head and neck cancer (HNC) patients need to cope with the impact of ablative surgery. This review centred on exploring key issues associated with delivering care following surgical intervention which ultimately result's in facial disfigurement. This review acknowledged that living with disfigurement has interconnected issues, such as loss of sight, taste, hearing, and the public's perception of facial

disfigurement. An extensive literature review was undertaken within 5 databases, Cinhal, Medline, PsychInfo, Embase and the Cochrane Library.

To explore this phenomenon, the methodology selected reflected the inclusion of qualitative studies, all of which used a grounded theory approach to gain the true data from this group of patients. Grounded theory presents the patient's own experiences and give extensive detail to personal experiences along the treatment pathway. The results of the structured literature review demonstrated that key themes are not often met.

Custom surgical guides and plates for mandibular reconstruction with fibula free flap

*Peter Evans HNC MIMPT, Morriston Hospital, Morriston, Swansea, Wales, UK
(Maxillofacial Laboratory Service Manager)*

The defects secondary to surgical ablation of the mandible affect speech, respiration, mastication, and cosmesis. To achieve optimum results model reconstruction based on CT/MRI images, computer-aided design, and additive manufacturing have been widely used to improve the accuracy and quality of surgery. This planning can be provided by medical companies or developed 'in house' with the appropriate skills, software and equipment.

As the fibula dimensions often do not match that of the affected mandible region to be reconstructed there is a compromise between positioning the fibular superior for ideal dental implant placement or inferior for cosmetic reconstruction of the lower border. We describe the use of a custom titanium reconstruction plate that raises the level of the fibula and uses the contra-lateral contour in the plate design for the lower border contour.

Printing In Soft!

*Matthew Pilley MIMPT, University Hospitals of Leicester NHS Trust, Leicester Royal Infirmary, Leicester, UK
(Maxillofacial Laboratory Manager)*

The use of 3D printing is common practice in many maxillofacial units, enabling the manufacture of pre-surgical planning models, bone cutting guides, and surgical wafer construction.

This paper outlines the additive advantages and wider applications of additive manufacture when the ability to print in soft materials is possible. The impact this has on our service and increased workload.

Sphenoid winging it – or not!!!

*Andrew Richmond MIMPT, Queens Medical Center, Nottingham University Trust, Nottingham
(Principal Maxillofacial Prosthetist)*

Surgical treatment of Sphenoid wing meningiomas presents significant challenges.

At Nottingham, a lateral transzygomatic approach is used to improve post-surgical outcomes.

The presentation outlines the role of the Maxillofacial laboratory in the planning and reconstructive phases of this procedure utilising in-house 3D printing in conjunction with more conventional laboratory techniques.

Digital Workflow for lower limb prosthetics

*Lawrence Dovgalski BSc (Hons), PDip Morrilton Hospital, Morrilton, Swansea, Wales, UK
(Principal Maxillofacial Prosthetist)*

Large lower limb prosthetics are perhaps some of the most challenging for the prosthetist to design and manufacture due to location and size. We describe the use of scanning, software design and additive manufacture to reduce the prototype creation, clinical and design time and at the same time improved accuracy of results with two case presentations for patients suffering with cosmetically reduced tibularis, fibularis and gastrocnemius muscles following trauma. We discuss our manufacturing technique, along with material and retention choices.

Free Paper Session Seven

Clinical outcomes: clarity, accuracy and timelines

*Sabah Zaulifqar MSc BSc (Hons) AIMPT, Queen Elizabeth University Hospital, Glasgow, UK
(Reconstructive Scientist)*

Good medical records – whether electronic or handwritten – are essential for the continuity of care of our patients. Adequate medical records enable you or somebody else to reconstruct the essential parts of each patient contact without reference to memory. This brief presentation will look at the quality of clinical authorising medical and care follow up records following a patient episode. An example will be presented and the legal requirements will be discussed including the required quality of the medical record, a method for costing and audit outcomes.

Who Expects the ‘Tribunal del Santo Oficio de la Inquisición’?

*Jason Watson BMedSci CSci FIMPT, Queens Medical Center, Nottingham University Trust, Nottingham, UK
(Consultant Reconstructive Scientist)*

Our journey to statutory registration has raised a few questions for the profession, some fundamental to the profession as a whole:

Q. Are we Clinical Scientist or Maxillofacial Prosthetist?

A challenge of identity for some, or our only route to statutory registration to protect our vulnerable patients.

Q. Do we need Dental Technology undergraduate training to become a Clinical Scientist in Reconstructive Science?

We have debated this at great length, especially in light of the training recruitment difficulties we have faced. At our recent AGM jointly with BOAMS (June 2017) we discussed this very issue and it was noted that our surgical colleagues voted unanimously to continue dental education alongside medicine.

Q. Are current experienced Maxillofacial Prosthetists equivalent to the new STP programme?

An area of great discussion and frustration for some members throughout my term as Education Officer.

This is not a ‘Mass Extinction Event’ of dinosaurs like myself, but a progressive change. I will present the myth, the fiction, the facts and encourage debate on these issues.



Workshops

(Wednesday 6th September: 15.30 – 17.30)

Technovent - Hands on workshop : HCR silicone for Finger Prostheses

Heidi Silk – Hands on workshop for Self Retained Nipple Prostheses

Surface Imaging Solutions Limited - Hands-on workshop using the VECTRA3D H1 3D camera system

Dolphin® Imaging & Management Solutions – Demonstration of Virtual for Orthognathic Surgery Planning

Materialise – Demonstration of Proplan software for Orthognathic Surgery Planning

ESM – (To Be Confirmed)

Poster Presentations

(Friday 8th September: 10.25 – 11.00)

Poster presenters are asked to be next to their posters for panel assessment.

Commercial Supporters

The President, Chairman and council of the IMPT would like to express their gratitude and thanks to the following commercial organisations that have supported this congress, with exhibitions or sales literature.

The organizing committee encourage delegates to visit the exhibits during coffee and lunch breaks to discover the latest in commercial innovations and enhance our practice.

The IMPT would also like to express special thanks to Glasgow City Council for hosting the civic reception at Glasgow City Chambers.



2017 Traders

Cochlear



Hear now. And always

Surface Imaging



ESM Imaging



Cavendish



John Winter



Polymer Systems



Polymer Systems Technology Limited

Tri-Tec 3d



Dolphin



Renishaw



Technovent



Materialise





Website: www.impt.co.uk

Registered Charity no - 2334615

A company Limited by Guarantee. Registered in England under Company Registration Number 2334615

Registered Office: Ground Floor, Helen House, Great Cornbow, Halesowen, West Midlands B633AB