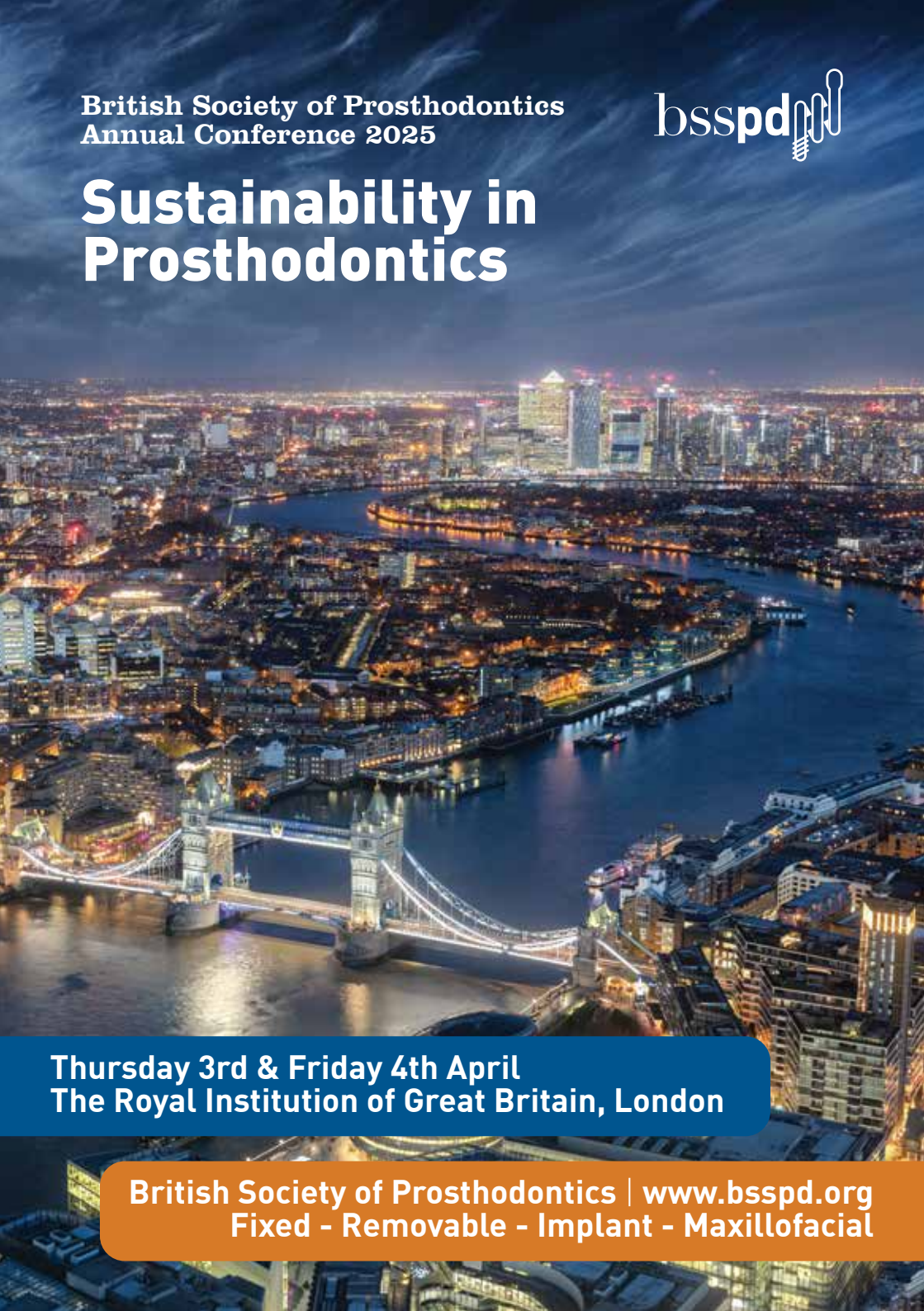
British Society of Prosthodontics
Annual Conference 2025

bsspd

Sustainability in Prosthodontics



Thursday 3rd & Friday 4th April
The Royal Institution of Great Britain, London

British Society of Prosthodontics | www.bsspd.org
Fixed - Removable - Implant - Maxillofacial

Welcome!

I am pleased to welcome you to the 71st British Society of Prosthodontic (BSSPD) Conference! The theme this year is the very topical issue of sustainability: not only applicable to the environment and waste, but also to the outcomes of prosthodontics and to the profession itself. I hope that this congress, held over Thursday 3rd and Friday 4th April 2025 will explore some of these issues and help us all to consider sustainability in our day to day working lives, but also inspire us to think to the future and how best to leave a positive lasting impression on society.

This venue, The Royal Institution of Great Britain (Ri), founded in 1799, is a public institution and has been instrumental in bringing science to the general public, most famously through their Christmas Lectures. This venue is steeped deeply in science: from 1821 to 1845 Michael Faraday made discoveries at the Ri, such as electromagnetic rotations, the chemical benzene, liquefied chlorine and electromagnetic induction. He also invented the Faraday cage to block electromagnetic fields, announced the existence of photography and developed the field theory of electromagnetism. Since then, other scientists also made discoveries and inventions including James Dewar inventing a vacuum flask, and becoming the first person to liquefy hydrogen, Kathleen Lonsdale identified the structure of benzene using photographs taken by Faraday, David Chilton Phillips and Louise Johnson were the first to complete the structure of an enzyme (lysozyme). Important announcements were also made such as JJ Thomson announcing the existence of the fundamental particle (the electron), and Muybridge demonstrating his new zoopraxiscope to Ri members. It is a pleasure for us to be a small part of this venue's history.

We will begin this conference with the exploration of 'Sustainable Restorations', and what it means to provide lasting restorations in patients living longer, living with the consequences of chronic illness and treatment, as well as how we manage complications of complex dentistry. Dr Charlotte Stilwell will chair this first session. Mr Ahmed Al-Khayat will commence proceedings with a presentation of what it means to provide complex prosthodontics in complex oral environments. Mrs Mili Doshi MBE will provide an insight into how the dentistry we provide fairs in those with a compromised ability to look after these restorations and the importance of prevention. Mr Kavit Shah will share his experiences of maintaining restorations and managing failures, especially in an aging population, within Specialist Practice.

The second session will cover 'Sustainable Materials and the Environment', chaired by Dr Zahra Shehabi, who herself is passionate about all things sustainable especially in the workplace. Professor Nicolas Martin will share with us the technological advancements in Prosthodontics that could help us sustain our environments for future generations. Professor Tim Joda is making the trip form Zurich to be with us, and will be talking us through the world of digital dentistry and artificial intelligence, and how it can help us to be more sustainable. Mr George Wright will help us navigate through a litigious society with invaluable advice to protect ourselves and have a sustainable future in dentistry.

Throughout the venue there will be poster presentations eligible for the Schottlander prize for the best Poster Display. Day one will close with the Annual General Meeting,

open to all BSSPD members, and will be followed by the Social Evening of canapés and drinks. There is opportunity during the day to visit our sponsors and continue discussions into the evening!

Day two will be chaired by Ms Jennifer Jalili and will explore the ever-important topic of having and maintaining a Sustainability Profession. Mr Richard Porter will be looking at how we can all maintain skills, mental health and interest in a career in Prosthodontics with the help of Mr Derek Moore and Mr Simon Ellis. Ms Deborah Bomfim and Mr Rupert Austin will close the first session of day two with a thought provoking look at inclusive leadership and it's role in creating 'Sustainability of the Profession'. The Schottlander Prize Oral Presentations will follow.

After lunch, the last session of the conference will be a 'Question Time' like political debate, chaired by Mr Peter Briggs, with an influential panel comprising of Professor Jenny Gallagher MBE, Ms Sana Movahedi, Professor Nicolas Martin, Mr Eddie Crouch and Mr Nick Barker. This is likely to be a lively, interactive and relevant debate.

The society, and I personally, would like to thank all the speakers, chairs and panel for taking their time to present at and be part of this conference. I would also like to thank all those presenting posters, oral prize presentations and sponsors for their hard work and contribution, as well as to all those at the Ri, for hosting and feeding us. And finally, thank you to all of you for coming – here's to an exciting and stimulating two days!

Shiyana Eliyas BDS MFDS MRD FDS (Rest Dent) PhD
President, BSSPD 2024-25

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Conference programme

Thursday 3rd April

08:15	Registration & coffee
08:45	**Welcome and opening ceremony**
	Sustainable Restorations [Session 1: Chair Charlotte Stilwell]
09:00	**Complex prosthodontics in complex oral environments** Ahmed Al-Khayatt
09:45	**The importance of prevention** Mili Doshi
10:30	Coffee, posters and trade
11:00	**Sustainable management of compromised teeth** Kavit Shah
11:45	Session 1 Plenary
12:15	Lunch, trade and Schottlander poster viewing
	Sustainable prosthodontics and the environment [Session 2: Chair Zahra Shehabi]
13:15	**Environmental sustainability in prosthodontic care** Prof Nicolas Martin
14:00	**Digital Prosthodontics** Prof Tim Joda
14:45	Coffee, posters and trade
15:15	**Dento-legal aspects of prosthodontics (Dental protection)** George Wright
16:00	Session 2 Plenary
16:30	**BSSPD AGM** (BSSPD members only)
17:00	**Drinks and canapes** (social ticket must have been pre-purchased)
21:00	Close

Instructions for poster presenters...

If you are presenting a poster please note that this will need to be put up on your allocated poster space at the conference venue by 10:00 on Thursday. You are asked to stand by your posters at the allotted time to answer questions from the delegates and judges. The posters do not need to be removed until Friday afternoon.

Friday 4th April

08:30	Registration and coffee/trade show
	Sustainability in the profession [Session 3: Chair Jennifer Jalili]
09:00	**Maintaining skills, mental health and interest in a career in prosthodontics** Richard Porter
10:00	**Inclusive leadership and sustainability of the profession** Deborah Bomfim and Rupert Austin
11:00	Coffee, posters and trade
11:30	**Schottlander oral prize presentations**
12:30	Lunch and trade
13:30	**Political Debate - Is this an emergency?** Chair: Peter Briggs Panel: Prof Jenny Gallger MBE, Sana Movahedi, Prof Nicolas Martin, Eddie Crouch and Prof Nick Barker
15.15	Coffee and trade
15:45	**Prizes and awards announcements** Prof Gerry McKenna
16:15	Session 3 Plenary
16:45	**Handover to new president Dr Upen Patel**
17:00	Close

Prayer room...

Available from 13:30 on both days in the Speaker's room.

WIFI...

WIFI username: **Ri- Public,** Password: **Cavendish**

Group meetings...

On day one of the Conference there will be a meeting of the Prosthodontic Technician's Group from 9:00 to 12:30 in the Speaker's room. On day two the UG Curriculum Group will meet from 12:30 to 13:30 in the Speaker's room.

Invited speakers

We are delighted to have a number of renowned specialists in the area of prosthodontics speaking at our 71st annual conference in London.

Ahmed Al-Khayatt

Complex Prosthodontics in Complex Oral Environments

Qualifying from Leeds in 2000, Ahmed spent 11-years of postgraduate experience in respected hospital units including Bradford, Sheffield, Swansea and London, most recently St George's Hospital, an acute trust and centre to cancer, trauma and cardiac specialties. Won several first prize case-reports, awarded CCST in Restorative Dentistry/Monospecialties and pursued training as the first UK dental post-CCST Clinical/Surgical Fellow in H&N Cancer Oral Rehabilitation gaining specialist surgical/prosthodontic experience in H&N cancer with some of the UK leading experts at Liverpool and Manchester.

Since 2012 he has been a Consultant in Restorative Dentistry at Bradford Teaching Hospitals, having over 20 years of experience in Implant Dentistry, Fixed and Removable Prosthodontics and active involvement in publishing both nationally and internationally.

In his spare time he enjoys quality family time and a keen aviation enthusiast with professional qualifications in recreational unmanned aerial vehicle drone piloting, sporting activities including fire-arm shooting and olympic-style recurve archery.

Mili Doshi

The importance of prevention

Mili is a Consultant in Special Care Dentistry at Surrey and Sussex Health Care NHS Trust and the Royal Hospital for Neuro-disability. Mili developed the Health Education England national initiative 'Mouth Care Matters' to improve the oral health of adults in hospitals that was rolled out across England. Mili is the past president and current chair of the British Society of Gerodontology. She is the author of several articles in peer-reviewed journals and editor of a book on the oral health of older people. Mili was awarded an MBE in 2018 for service to NHS dentistry and the BDA award for excellence for contribution to special care dentistry in 2023.

Kavit Shah

Sustainable management of compromised teeth

Kavit graduated from Guys' Kings and St Thomas' School of Dentistry in London. Following graduation he spent time in general dental practice and held dental hospital posts in Oral and Maxillofacial Surgery, Oral Medicine and Restorative Dentistry. He completed a four-year Masters and Specialist Training Programme in Fixed and Removable Prosthodontics at The Eastman Dental Institute, graduated with a distinction, and he is now a recognised specialist in Fixed and Removable Prosthodontics.

The majority of his time is spent in private practice, as a Partner and Clinical Director at The London Centre for Prosthodontics. He is passionate about education and lectures both nationally and internationally on implant and restorative dentistry. He is also involved in the delivery of structured postgraduate education in Prosthodontics and Implant Dentistry.

Prof Nicolas Martin

Environmental Sustainability in Prosthodontic Care

Nicolas Martin is a Clinical Professor in Restorative Dentistry at the University of Sheffield. He has a strong research profile as principal investigator in collaborative multi-disciplinary projects, with a focus on sustainability, pedagogy and the clinical performance of restorative systems. He has published extensively in all these fields.

Nicolas leads on several major funded projects in environmental sustainability in primary research, clinical care and pedagogy. He is passionate about increasing awareness and sharing this knowledge with the profession and the public at large. Nicolas chairs the World Dental Federation (FDI) Task Team for Sustainable Dentistry.

He led the recently ratified 'FDI Consensus Statement on Environmentally Sustainable Oral Healthcare'. This Statement is a non-competitive and non-partisan collaboration of partners across all sectors of the profession to agree and commit to an action plan. Nicolas is keen to engage with colleagues to promote these activities.

Prof Tim Joda

Digital Prosthodontics

Prof. Dr. Tim Joda is Head of eHealth at the Clinic of Reconstructive Dentistry, University of Zurich, since 2022. He is triple board-certified in Prosthodontics, Periodontology, and Implant Dentistry. Tim holds an MSc degree in Prosthodontics & Biomaterials, a PhD in Biomedical Technology, and an executive MBA.

He was a former ITI-Scholar at the University of Bern (2011), later he received the venia legendi “Privatdozent” (2016) and was appointed Associate Professor (2018). Tim was also the founding Director of the Division of Digital Reconstructive Technology & Implantology in Bern. In 2018, he was appointed Vice Chair and Director of Postgraduate Education at the Department of Reconstructive Dentistry in Basel.

Tim is Associate Editor of Clinical Oral Implants Research. He is principal investigator and actively involved in clinical and translational research on implant workflows and prosthetic treatment concepts in the field of digital technologies and data science using artificial intelligence.

George Wright

Dento-legal aspects of prosthodontics (Dental protection)

George qualified with honours from the University of Sheffield and moved into mixed practice where he was an educational supervisor for a number of years before taking on the role of training programme director (TPD) for the performer list validation by experience programme in South Yorkshire and the Humber. George joined Dental Protection eight years ago as an associate dentolegal adviser and now works full time as a Dentolegal Consultant and Deputy Dental Director.

Richard Porter

Maintaining skills, mental health and interest in a career in prosthodontics

Richard became a restorative consultant in 2007 and continued in this role for 17 years. He was care group lead for a busy trauma, oncology and deformity focussed

Restorative care group for eight years whilst maintaining a single hand private specialist referral practice.

He is a post grad student in Psychology and Behavioural Sciences and plans to remain so for the foreseeable future.He left the NHS in August 2024 and is building a private healthcare centre in central London to open in 2025.

He is CoFounder of the Aspire Dental Academy and has trained several consultants along with over 2000 post graduate GDPs.

Deborah Bomfim

Inclusive leadership and sustainability of the profession

Deborah Bomfim is a consultant and honorary clinical lecturer in Restorative Dentistry and the Clinical Director in Dentistry at the Royal National ENT and Eastman Dental Hospital. Deborah holds several external positions including being a specialty advisor for the Royal College of Surgeons England, past president of the Odontology Section of the Royal Society of Medicine (2019-2021) and president of the British Society of Restorative Dentistry (2024-5).

Rupert Austin

Inclusive leadership and sustainability of the profession

Rupert Austin is a Senior Clinical Lecturer and Consultant in Prosthodontics at King's College London Faculty of Dentistry, Oral and Craniofacial Sciences. Amongst other roles, Rupert was Previous Honorary Secretary of the British Society of Prosthodontics (2019-22) and recently contributed to the Platinum Jubilee Publication 1953-2023, celebrating 70 years of the British Society of Prosthodontics.

Debate panel members

Our political debate on day two brings together some key decision makers in dentistry and should prove to be a lively and educational debate.

Prof Nick Barker

Nick Barker qualified BDS from the Royal London Hospital in 1990 and has since gone on to gain distinction in the MSc in Restorative Dental Practice in 2009 at UCL Eastman, Fellowship of the College of General Dentistry and Fellowship of the Faculty of Dental Surgery at Royal College of Surgeons England, Membership of the Faculty of Dental Trainers at Royal College of Surgeons Edinburgh and a Postgraduate Certificate in Medical Education from University of Essex.

He is employed as the Deputy Chief Dental Officer for England and Joint Regional Chief Dental Officer by NHS England and Professor of Oral Health Sciences for University of Essex. He is also a dental practice owner and a provider of level 2 endodontic and periodontic services in Colchester, Essex.

Mr Eddie Crouch

Eddie was elected as Chair of the BDA Board in September 2020. Before that, he served as Deputy Chair between 2014 and 2020. He was Secretary of Birmingham Local Dental Committee for over ten years and was also Chair. He qualified in 1984 from Kings and provided Orthodontic Care for patients in South Birmingham for over 20 years, having previously provided general dentistry.

In the past, he has chaired the Annual Conference of LDCs and the West Midlands Association of LDCs, held the post of President of the Central Counties Branch and served on the GDPC Committee for over ten years.

Prof Jenny Gallagher MBE

Professor Jenny Gallagher MBE is the Newland-Pedley Professor of Oral Health Strategy and Honorary Consultant in Dental Public Health in the Faculty of Dentistry, Oral & Craniofacial Sciences at King's College London. She has worked in international affairs for the University since 2017 and is currently an Ambassador for International,

Engagement and Service for the university, having held the post of Dean for International Affairs at Faculty for over six years. Professor Gallagher was awarded an MBE in the 2015 Queen's New Year's Honours List for her services to oral health.

Prof Nicolas Martin

Nicolas Martin is a Clinical Professor in Restorative Dentistry at the University of Sheffield. He has a strong research profile as principal investigator in collaborative multi-disciplinary projects, with a focus on sustainability, pedagogy and the clinical performance of restorative systems. He has published extensively in all these fields.

Ms Sana Movahedi

Sana qualified in 1992 with distinction in Distinction in Dental Surgery (including Oral Pathology), Orthodontics, Paedodontics and Prosthetic Dentistry from Guy's Dental Hospital. Following on from house officer roles in Maxillofacial Surgery and Restorative at Guy's Dental Hospital and a stint of travelling, she settled into general dental practice. Alongside working clinically in general dental practice, Sana has also undertaken roles with CQC, examiner roles, as well as teaching and lecturing widely for postgraduate learners.

Since 2010 she has had roles with the Deanery (HEE) as an educational supervisor, quality lead, Training Programme Director and various Associate Dean roles. In 2020, she also took up a role as an advisor for OCDO. Sana started her post as Postgraduate Dental Dean for London & KSS in May 2023. She is currently also Lead Dean for Dental Foundation Training and Lead Dean for the DERP Early Years Programme nationally.

Schottlander oral presentation abstracts

Flexural Strength, Monomer Release and Wear Resistance of Occlusal Splint Materials

Nurul Liyana Aminuddin*, Haralampos Petridis

SO1

UCL Eastman Dental Institute

Aim: The aim of this in vitro study was to evaluate the flexural strength, monomer release and wear resistance between conventional PMMA, milled PMMA and 3D-printed resin built in different printing angles (90° and 60°) for occlusal splint fabrication.

Materials And Method: 60 rectangular and 100 disc specimens were fabricated from heat-cured PMMA (Oracryl [HP]), milled PMMA (Kerox Premia [KP]) and 3D-printed resins (FreePrint Splint 2.0 [FS] and KeySplint Hard [KS]) at 90° and 60° printing angles. Specimens intended for flexural strength and wear tests were immersed in 37°C water for 50 hours, then subjected to thermal ageing using a thermocycler for 20,000 cycles. Flexural strength was evaluated using a three-point bend test on a universal testing machine. For the monomer release test, specimens were stored in 4 ml of distilled water. The specimens were stored in an incubator at 37°C, which was replaced daily. Methyl methacrylate (MMA) elution was measured using UV spectrophotometry on days 1, 3, 5, and 7. The wear test was conducted after 140,000 cycles using a chewing simulator (SD Mechatronik CS-4.4) and the volume loss was calculated using Autodesk MeshMixer software. Statistical analysis of flexural strength, monomer release, and volume loss was performed using one-way ANOVA and Tukey's multiple comparison tests.

Results: The KP group showed the highest mean flexural strength values (115.5±5.3 MPa) which were statistically significant outperforming all other groups ($p<0.0001$). Comparing the different printing angles of the 3D-printed resins, the 90° FS group had a statistically significant higher mean flexural strength (60.5±3.8MPa) than 60° FS and KS groups ($p<0.0001$). However, the difference between 90° and 60° KS were not statistically significant ($p>0.05$).

On day 1, the KS group had the highest concentration at 19.2±5.2ppm, with statistically significant among the KP group ($p<0.0001$) and HP group ($p<0.01$). Meanwhile, the KP group exhibited the lowest concentration of residual monomer, at 7.6±3.7ppm, which was statistically significantly lower than the FS and KS groups ($p<0.0001$). From Day 1 to Day 3, the residual monomer concentrations significantly increased, peaking on Day 3, followed by a significant drop on Day 5, and a slight increased by Day 7, with the KS group maintaining the highest concentration throughout the 7-day incubation period.

The KP group showed statistically significantly the lowest volume loss (2.5±1.3mm3) compared to the other 5 groups ($p<0.01$). The higher volume loss was observed in 90° FS (9±1.4.6mm3). The analysis found that the differences in volume loss values between 90° and 60° built angles in FS and KS groups were statistically not significant.

Conclusion: The milled PMMA splint was recommended to be used for bruxism and long-term application, such as a post-operative Michigan splint due to its high flexural strength, high wear resistance and good biocompatibility. Meanwhile, the 60° 3D-printed resins had better flexural strength and wear resistance compared to the 90° 3D-printed resins. Even though the 3D printed occlusal splint had low flexural strength and wear resistance, the 60° 3D printed occlusal splint was suitable for short-term application only, clinically for a few months.

Advancing Dental Materials with High-Fidelity Octopus-Inspired Suction Cups

Eda Dzinovic*, Sadia Ambreen Niazi, Owen Addison, Sherif Elsharkawy

King's College London

SO2

Objective: The effective interfacial interaction between two dissimilar surfaces remains a significant challenge in materials science. Wearable medical devices, skin patches, and wound dressings often fail to function effectively, particularly on wet and rough surfaces. Similarly, complete dentures, as a cost-effective solution for tooth replacement in dentistry, frequently exhibit poor adhesion to oral tissues. Nature, however, provides many examples of organisms that overcome such challenges through specialised highly ordered micro- and nanotopographies that help them to adhere strongly and reversibly to various surfaces, thereby offering insights for bioinspired approaches. Applying biomimetics, we fabricated high-fidelity octopus suction cups in poly (methyl methacrylate) (PMMA) and asked whether these designs improve PMMA's adhesion to the mucosa.

Methods: Using polyether material, we took an impression of a medium-sized (d=12 mm) fresh octopus suction cup. The impression was scanned with an intraoral scanner (Emerald S, Planmeca, Coventry, UK) and scaled down to 100 µm in diameter with 200 µm pitch. Next, the microstructures were printed via two-photon polymerization 3D printer (NanoOne 1000, x20, UpNano, Vienna, Austria). Post-printing, the designs were transferred onto PMMA blocks (1 cm2) using poly(dimethylsiloxane) (PDMS). As a proof-of-concept, digital models of an upper non-patterned denture and an octopus suction cup (OS) were merged and printed using the SprintRay Pro S55 DLP 3D printer (SprintRay, Los Angeles, USA/ Weiterstadt, Germany). The uniaxial pull-off test was employed across different preloads and environments (dry, wet, and artificial saliva) to determine the maximum detachment force (FMAX) and total work of adhesion (WADH) (area under the curve-AUC).

Results: PMMA blocks with suction cups (SC) were significantly ($P < 0.0001$) less adhesive to the mucosa explant in a dry environment, exhibiting smaller maximum detachment forces across all preloads than a smooth block. This was attributed to the larger contact area of smooth blocks compared to samples with SC. In distilled water and artificial saliva, while the hydration decreased the maximum detachment force and area under the curve of the smooth block, the FMAX of PMMA with SC increased significantly compared to dry conditions (preload 0.02N; FDRY= 0.00142 ± 0.0005 N, FD. WATER= 0.04 ± 0.005 N, FA. SALIVA= 0.04412 ± 0.005). This effect is likely caused by roughness-induced capillary adhesion and the low wettability of surfaces with topographies. Similarly to small PMMA blocks, smooth (control) dentures lost the adhesion mechanism significantly in distilled water and artificial saliva, whether the retentiveness of the surface with SC was higher across all environments.

Conclusion: Biologically accurate micro- and macroscale suction cups in PMMA exhibited promising results in wet conditions, making a step towards improving the rather limited adhesion of PMMA to the mucosa. This approach could enhance the retention of traditional complete PMMA-based dentures while also promoting sustainability by reducing reliance on denture adhesive creams.

Schottlander poster presentation abstracts

A Restorative-Orthodontic Management of Amelogenesis Imperfecta

Noor Al-Helou*, Naren Thanabalan, Dr Timothy Friel

Barts Health NHS Trust

SP01

Background: A 21 year old male patient with Amelogenesis Imperfecta type 1 (AI) sustained maxillofacial trauma in 2019 to the right mandibular parasymphyseal region. This resulted in a misalignment of the mandibular arch and occlusal disharmony, resulting in functional and aesthetic concerns. Orthodontic treatment to correct misalignment was attempted, however there were bonding issues for bracket placement. A restorative-orthodontic multidisciplinary approach was required to optimise the treatment outcome.

Clinical Examination: The patient presented with a Class III incisal relationship on a Class 3 skeletal base complicated by generalised spacing of the maxillary and mandibular arches, reduced overjet and bilateral posterior openbite. Due to the AI, there was reduced availability of enamel and conical shaped teeth which posed challenges when treating. The patient was moderately restored with preformed metal crowns on all first permanent molars and composite restorations (UR1, UL1, LL134, LR1345), whereby the latter has surface staining.

Following consultation a set of dental casts were mounted on a semi-adjustable articulator using a facebow and jaw registration records. A diagnostic wax-up of the UR5 to UL5 was produced to ideal proportions utilising a conformative approach, which helped guide orthodontic movements.

The wax up was shown to the orthodontic team to ensure they approved of the plan. The orthodontic team requested the UL1 to not be built up further mesio-distally to aid with alignment and therefore this was removed from the plan. The upper 5-5, except UL1, was planned to be restored using the injection moulding technique and the lower incisor midline diastema was planned to be closed with direct composite restorations.

Clinical Management: Following approval of the diagnostic mock-up, a composite injection moulding technique was employed to restore the UR5 to UL5. A midline diastema between LR1 and LL1 was closed with direct composite. All teeth restored were sandblasted prior to composites being placed to alleviate some of the issues with bonding. The patient is currently receiving his orthodontic treatment and will return post debonding for final refinements of the composite.

Discussion: This case highlights the importance of a multidisciplinary approach and how collaboration can result in more favourable patient outcome. A restorative approach alone would not have been able to camouflage the skeletal issues and the patient may have needed to accept residual spaces. The injection moulded technique was able to accurately transfer the diagnostic wax-up intra-orally and address the patient concerns of appearance, occlusion and dentine sensitivity.

Comparative Evaluation of Digital and Conventional Occlusal Analysis: Systematic Review and Meta-Analysis

May Al Janahi*, Keyvan Moharamzadeh, Haitham Elbishari, Gerry McKenna

SP02

Mohammed Bin Rashid University Of Medicine And Health Sciences, Dubai Health

Background: Occlusion forms the cornerstone of oral function, influencing mastication, patient comfort, and prosthodontic success. Accurate quantification of occlusal contact area (OCA) and occlusal contact number (OCN) is vital for diagnosing and correcting occlusal imbalances. Conventional tools, such as articulating paper, offer qualitative insights but lack the precision and reproducibility needed for modern practice. Digital occlusal analysis, with its advanced sensor-based technology, provides real-time, quantitative data and visualization, holding promise for transforming diagnostics. However, challenges with standardization and clinical validation have hindered widespread adoption. This study bridges this gap by systematically evaluating the comparative performance of these methods, offering a data-driven foundation to guide advancements in prosthodontics.

Objectives: This study explores the variations in occlusal contact area (OCA) and occlusal contact number (OCN) between conventional and digital occlusal analysis methods. It also examines the potential of digital techniques to deliver greater accuracy and consistency, with the goal of contributing to evidence-based improvements in prosthodontic care.

Materials and Methods: A systematic review and meta-analysis were conducted following PRISMA guidelines. The inclusion criteria encompassed cross-sectional and in vitro studies addressing OCA and OCN using both conventional and digital methods. Comprehensive searches were performed across Scopus, Embase, Cochrane Library, PubMed, and ScienceDirect, supplemented by manual searches. From 148 studies initially identified, 10 met the inclusion criteria, and 4 were included in the final meta-analysis. Two independent reviewers screened and extracted data, with quality assessed using the ROBIS tool. Random-effects models were used to calculate standardized mean differences, and heterogeneity was analyzed using I^2 statistics. Statistical analyses were conducted using Stata software.

Results: Digital occlusal analysis showed slightly higher OCA values, but the difference was not statistically significant ($P = 0.06$). In contrast, conventional methods performed better in detecting OCN ($P < 0.01$), confirming their reliability. Variations in methodologies and sample populations across studies highlight the need for standardized protocols.

Conclusion: The findings highlight the potential of digital occlusal analysis as a valuable tool for enhancing diagnostic accuracy in prosthodontics, particularly in measuring OCA. However, its clinical significance remains uncertain, with conventional methods continuing to serve as the standard for OCN evaluation. Disparities in the technology used for digital sensors and the thickness of articulating papers emphasize the necessity of establishing standardized protocols for effective comparisons and practical applications. Future investigations should prioritize the

integration of digital and conventional techniques, assess their long-term clinical impact, and aim to advance evidence-based practices to optimize prosthodontic care.

Modified Segmental Cutting of the PNAM Premaxillary Bowl for Repositioning Severely Rotated Premaxilla in Complete Bilateral Cleft Lip and Palate: A Case Series

Gian Nur Alamsyah*, Alda Arifialda, Lisda Damayanti, Helmi Siti Aminah

Universitas Padjadjaran

SP03

An important characteristic of Bilateral Cleft Lip and Palate (BCLP) infants is that the clefts cause the premaxilla to be mobile and only apically fixed to the vomer bone. The premaxilla is often protruded and rotated due to the lack of sphincter function in the orbicularis-oris muscle. One of the challenges clinician faces is repositioning the severely rotated premaxilla before labioplasty surgery. A novel approach to safely and precisely reposition the premaxilla involves modifying the segmental cutting of the premaxillary bowl in Presurgical naso-alveolar molding (PNAM) and adding a soft-liner material to the opposite area according to the desired repositioning distance. This article presents a case series of four BCLP infants with severely rotated premaxillae who underwent treatment using a modified segmental cutting technique of the Premaxillary bowl. The treatment involved fabricating a PNAM appliance with a premaxillary bowl and implementing extraoral strapping. The premaxilla was actively repositioned medially by segmentally cutting the premaxillary bowl in the median direction of the face, adding a soft-liner material to the opposite area as needed for the desired repositioning distance, and using buttons with extraoral strapping secured by orthodontic rubber bands. Control and activation adjustments were performed at varying intervals, typically every 8–10 days. After 40–50 days, all infants' premaxilla were successfully repositioned to the median position, resulting in a well-aligned maxillary arch. The presurgical management of BCLP infants using the segmental cutting technique of the premaxillary bowl combined with the addition of a soft-liner material offers a viable treatment option for the measurable and controlled repositioning of the premaxilla.

Keywords: cleft lip and palate, bilateral PNAM, premaxillary bowl

What is the impact of Osseodensification technique on heat generation during implant osteotomy? A scoping review

Ahmad Alballaa

The University Of Sheffield

SP04

Background: Heat generation (HG) during implant osteotomy (IO) is a critical factor influencing bone healing and implant success. Excessive HG can lead to osteonecrosis, impairing osseointegration. Osseodensification (OD), an innovative drilling technique introduced in 2016, aims to improve implant stability and increase residual ridge width but has been associated with increased HG compared to conventional drilling (CD). This scoping review synthesizes existing evidence to evaluate OD's impact on HG compared to CD during IO, explores reported factors influencing HG during OD, and identifies current knowledge gaps for future research.

Methods: Following PRISMA-ScR and JBI guidance, a comprehensive search of published and grey literature was conducted across ten databases and search

engines: PubMed, Cochrane, JBI, Scopus, WoS, BASE, British Library, Google Scholar, Google, and ProQuest. A hand search was also performed. A priori protocol was published. An information specialist assisted in developing the search strategy. The Population, Concept, Context (PCC) framework was employed: Population = IO, Concept = OD, Context = HG. Only English-language studies, with no publication date restrictions, were included. Data extraction and charting were independently reviewed.

Results: Five studies met the inclusion criteria, comprising ex-vivo and in-vitro designs utilizing porcine, bovine, and human bone models. OD generally demonstrated a statistically significant increase in HG compared to CD; however, all recorded temperatures remained below the critical threshold of 47°C for osteonecrosis. Key factors influencing HG included bone density, RPM, and irrigation. Significant gaps in the literature include a lack of clinical studies and high heterogeneity among current lab-based studies.

Conclusion: OD appears to be a thermally safe technique for IO under controlled conditions, offering benefits in bone stability and ridge expansion. Cooled irrigation (4°C) plays a significant role in reducing HG. Specialized burs for OD, such as Densah® (Versah™), seem to offer no advantage over standard drills when used in a counterclockwise motion. Further clinical studies are required to validate these lab-based findings.

Management of Dento-Alveolar Trauma During the COVID-19 Pandemic with Five-Year Follow-Up: A Case Report

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SP05

Liverpool University Dental Hospital

This case report outlines the multidisciplinary management of a 14-year-old male patient who presented in 2019 with complicated crown-root fractures of the upper central incisors (UR1 and UL1). The treatment journey highlights the challenges of dento-alveolar trauma management during the COVID-19 pandemic and reflects on material selection, procedural adaptations, and long-term outcomes in preserving both aesthetics and function.

Background: Initial management involved removal of mobile coronal fragments, gingivectomy, and dressing of the affected teeth, followed by provision of a temporary overdenture. Various treatment options, including extraction with immediate implant placement and socket preservation, were explored but deemed unsuitable due to the patient's age and craniofacial growth potential. Root preservation and fixed prostheses were ultimately chosen, aligning with the patient's preference for minimally invasive, aesthetic outcomes. The patient is still in active craniofacial growth, necessitating a treatment plan that accommodates future changes in dental and skeletal structures.

Methods: The treatment sequence encompassed root canal therapy, fiber post placement, and provisional chair-side temporary crowns. Subsequent stages included digital design and fabrication of enamic crowns, which were replaced at two years with definitive Lithium Disilicate (LiDi) crowns for enhanced durability and aesthetics. This approach utilised contemporary material science and digital workflows, while also highlighting limitations that were observed during the early stages of digital fabrication.

Results: The preservation of the alveolar bone was achieved, mitigating post-extraction bone resorption and supporting future implant options. Tarnow's principles

guided interdental papilla preservation, ensuring superior aesthetic results. The definitive restorations demonstrated high patient satisfaction, with functional stability maintained over the five-year follow-up period. The enamic crowns, however, exhibited suboptimal durability due to repeated decementation, likely caused by stress hoop concentration at the crown margin, leading to failure under functional load.

Discussion: This case underscores the importance of adapting material selection to clinical demands. In hindsight, PMMA crowns, with their superior performance for extended temporization, would have been a preferable alternative, as the enamic crowns exhibited suboptimal durability. The transition to LiDi crowns showcased the value of hybrid approaches, blending digital and traditional methodologies for anterior restorations. Furthermore, the pandemic context necessitated innovative solutions to adapt clinical workflows and maintain continuity of care, pushing for more flexible and efficient approaches in patient management.

Conclusion: This case highlights the long-term viability of root preservation and fixed prostheses in managing dento-alveolar trauma in adolescent patients. Insights gained from material selection and procedural refinements will inform future cases, particularly as digital workflows evolve. The preservation of the alveolar ridge ensures optimal conditions for potential implant placement, providing a robust framework for ongoing patient care and aesthetic outcomes. Importantly, this case demonstrates how management strategies can be adapted to account for ongoing craniofacial growth, ensuring sustainable and patient-centered outcomes.

Anterior Spring Cantilever Bridge: A Sustainable Solution to a Challenging Prosthodontic Puzzle

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SP06

University of Manchester and University Dental Hospital of Manchester

Background: The rehabilitation of partially edentulous patients with compromised dentition and systemic conditions requires meticulous planning to restore function and aesthetics while ensuring long-term prosthodontic sustainability. Patients do not always lose teeth in a manner that leaves adjacent teeth suitable as abutments for conventional prostheses. Spring cantilever bridges provide a bio-conscious and minimally invasive solution for anterior tooth replacement, especially when abutment teeth are already restored, and conventional or implant-supported prostheses are contraindicated. However, their success depends on careful design and material selection.

This case report outlines the replacement of a failed anterior spring cantilever bridge using a bespoke two-piece design that incorporated minimally invasive principles, ensuring the sustainability of the new prosthesis.

Case History: A 70-year-old male was referred to the Restorative Department at the University Dental Hospital of Manchester with concerns about a sunken porcelain-fused-to-metal (PFM) spring cantilever bridge (SCB) extending from the maxillary right canine (UR3) to the maxillary right central incisor (UR1), a loose PFM crown on the maxillary left central incisor (UL1), and an ill-fitting mandibular cobalt-chromium partial denture; altogether causing soreness, impaired masticatory function, and psychological distress over his smile. The patient had a medical history of osteogenesis imperfecta and kyphosis, as well as over 10 years of alendronic acid infusion therapy, which increased his risk of medication-related osteonecrosis of the jaw (MRONJ).

Initial examination revealed generalised biofilm-induced gingivitis, a sunken SCB, a leaking PFM crown on the root-treated UL1. The mandibular arch presented a Kennedy Class II modification 1 pattern with several retained, previously root-treated roots.

Methods: Primary disease stabilisation focused on optimising oral health through risk factor control, fluoride therapy, periodontal treatment, and direct restorations. Discussion of oral rehabilitation options for the failing SCB revealed that both a conventional bridge and an implant-supported crown were contraindicated due to unsuitable abutments and the risk of MRONJ, respectively.

Prosthodontic management initially involved dismantling the failed SCB and crown on UL1, refining abutment preparations, and fabricating a bespoke SCB with a two-piece design. The first component, a PFM retainer on UR3 with a metal connector to UR1, was cemented first. The metal loop connector was reinforced to enhance rigidity, with a more obtuse angle shifting the fulcrum away from the abutment to minimise stress. The second component, a pressed lithium disilicate (LiDiSi) crown for UR1, was cemented onto the substructure, allowing for easier replacement in case of future failure. This design facilitated aesthetic matching of the LiDiSi crowns made for the UR1 bridge pontic and the UL1 crown. A positioning jig was used to facilitate the cementation sequence and precise alignment of the prosthesis. Finally, a new mandibular cobalt-chromium partial denture was provided.

Conclusion: This case highlights the efficacy of spring cantilever bridges in select cases, despite their reduced prevalence in modern dentistry. Incorporating unique design features ensures prosthetic sustainability while addressing functional and aesthetic challenges in patients for whom conventional treatments are unsuitable.

Denture Design: In a Bind

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School Of Dentistry University Of Birmingham

SP07

Introduction: A 62-year-old male was referred to secondary care with worn and loose dentures, which had otherwise been functioning well since their construction, seven years previously. The patient describes his current dentures as the ‘best’ he’s ever had. The patient was diagnosed with Binder’s syndrome, resulting in underdevelopment of the maxilla, severe hypodontia localised to the anterior maxillary region and an intraoral defect at the base of the labial sulcus which communicates with the nasal cavity. He is otherwise fit and well aside from being an ex-smoker.

Case Summary: The patient has had multiple dentures since childhood, which have replaced the upper anterior teeth. The dentures have been manufactured with either an acrylic or metal base and have varied in their design. The presenting set of dentures have functioned well for the patient but have recently started to become loose. Examination revealed a P/- metal-based denture which was stable but stained and occlusally worn with a lack of retention such that the patient no longer felt confident wearing the prosthesis in public. Critically, the patient was satisfied with the denture extension into the anterior labial sulcus both functionally and aesthetically, providing appropriate lip support and a functional seal needed to facilitate mastication and speech.

The denture design for the functioning denture was replicated. Great care was taken with primary and secondary impressions with significant modifications to stock and customised impression trays to capture the extensions of the anatomy to include the

defect. Copy indices of the current deep anterior flange were taken for the lab to replicate the lip support that the patient had grown accustomed to (adapted to) and preferred.

Discussion: The anatomical genetic defect that Binder's syndrome produces can interfere with denture construction, speech, mastication, soft tissue support, communication with the nasal cavity and aesthetics. Treatment is often surgical but resultant defects can be restored with fixed or removable prosthesis.

Conclusion: Treatment involving the provision of a removable prosthesis post the surgical intervention for a 62-year-old with a residual defect was challenging. This case demonstrates the need for careful and customised impression techniques in order to deliver a well-fitting and functional prosthesis. Elements of the patients preferred denture were copied and re-made in order to deliver a removable prosthesis with enhanced retention which improved the patient's confidence and quality of life.

Full Mouth Guided Implant Rehabilitation

Gosia Ciepiela CDT, Nikolas Vourakis DDS MSc

SP08

GC prosthetic Solutions

Full-arch reconstruction is always a complex treatment solution, but it can also substantially increase patients' quality of life. Comprehensive treatment planning is crucial to mitigate the risks and minimise the chance of complications for the smoothest patient experience and most predictable clinical results. Computer-guided implant surgery can be a valuable tool for full-arch rehabilitation, placing implants in an ideal position. This involved a fully digital, prosthetically driven workflow, with dentists and dental technicians collaborating from the start.

CBCT to optimise data capture and facilitate an accurate digital plan for implant placement and prosthesis design. The planning of the position and angulations of the implants was done according to the ideal virtual wax up that was produced with The Digital Design Software. A teeth-supported printed acrylic guide for fully guided surgery.

No bone reduction was performed and the FP3 approach according to the Misch classification for both the provisional and final prosthesis was followed.

The implant beds were then prepared with the surgical guide in situ. Six dental implants were placed in the maxilla according to the predetermined positions, depths, and angulations, and four in the mandible. The implants were placed through the guides for better accuracy and precision. Each implant achieved a surgical primary stability of >35Ncm. Once the implants were placed, the surgical guide was removed, and the remaining teeth were extracted.

The design of the provisional prosthesis follows the Gallucci prosthetic guide protocol. This bridge is an exact copy of the digital wax-up we used to plan the implant positions.

After 3 months, an IOS impression was executed, and a digital dataset was created superimposing soft tissue, implant scan bodies, antagonist, and temporary prosthesis scanning files.

A titanium substructure was digitally designed, considering both the functional and aesthetic aspects of the virtual wax-up and the emergence profile shaped by the FP3 provisional prosthesis.

The overlaying PMMA superstructure was digitally designed to fit the metal substructure, accomplish a flawless finish line, avoid any undercuts, verify the path

of insertion and thus facilitate the bonding procedures. Using a self-curing luting composite, the zirconia superstructure was bonded with the titanium substructure. The final polished screw-retained prostheses were delivered and torqued at 30 Ncm, and the radiographic assessment was executed.

After the follow-up appointments at 1 and 4 weeks, the patient was scheduled for periodic maintenance every 3 months. The retrievability of the final screw-retained PMMA titanium-supported prosthesis allowed us to monitor the outcome of the interface over time.

Evaluating Avulsion Injury Management at King's College Hospital: A Retrospective Audit

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King's College London

SP09

Background: King's College Hospital is one of four major trauma centres in London. In King's Dental Institute the restorative department provide an acute dental trauma service for adults (aged 16 and over), where dental trauma can be assessed, and acute management can be provided. Traumatic dental injuries (TDIs) are a costly and significant public health problem. They have significant socio-psychological impact on affected individuals affecting quality of life (Glendor et al. 2007; Daly et al. 2002; Lam 2008; Lam 2016; Bastone et al. 2000). Dental trauma not only requires acute treatment but also long-term planning and management of sequelae including pulpal necrosis, root resorption and tooth loss (Bourguignon et al. 2020; Day et al. 2020; Fouad et al. 2020).

Aim: This audit aimed to compare the management of dental avulsion injuries at King's College Hospital against the International Association of Dental Traumatology (IADT) guidelines (Bourguignon et al., 2020). The primary objective was to determine if reimplanted teeth commenced root canal treatment (RCT) within 14 days of injury, and the secondary objective was to assess whether avulsed teeth were splinted for the recommended 2-week interval.

Method: A retrospective audit was performed between 2 April and 30 September 2024 using patient electronic records. Data were collected and recorded in Microsoft Excel. Information gathered included demographics, cause of injury, the tooth involved, extra-oral dry time (EODT), reimplantation details, commencement of root canal treatment, and splinting duration.

Results: Twenty-four patients (63% male) with a total of 33 avulsed teeth were identified. Ages ranged from 16 to 78 years, with falls (37.5%) and assaults (29%) being the most common aetiology. The upper left central incisor (27%) was most frequently avulsed. Only 5 of the 33 avulsed teeth were reimplanted: 3 subsequently underwent RCT within 14 days (100% compliance for those reimplanted) and 2 were removed for treatment-planning reasons. Of the 27 non-reimplanted teeth, reasons included unknown location (81%), treatment-planning decisions (7.4%), or extensive extra-oral dry time (11%). Splinting durations varied from 2 days to 5 weeks for various patient and clinical factors.

Discussion: These findings highlight the challenges of managing avulsed teeth and underscore the need for further development of protocol and adherence to evidence-based guidelines. Although reimplanted teeth met the 14-day root-canal treatment initiation benchmark, the overall reimplantation rate was low due to a large number

Thursday

1. Korean fried chicken, spring onion, chilli and lime
2. Chicory and apple salad with roasted figs, croutons and maple dressing (ve)
3. Cabbage and potato biriyani with roti bread and coconut yoghurt (hot) (ve)
4. Cornish Lobster slider, lobster bisque ketchup
5. Pulled Hereford short rib cottage pie, smoked applewood and thyme mash (gf)

Fri

1. Toast beer battered
   capers, straw potato
2. Salt-baked golden b
   pistachios and shall
3. Strozzapreti with oy
   tarragon cream sauc
4. Suffolk smoked chi
   carrot crisp (gf)
5. Searcys signature sa
   caramelised onion g

Please let the service st
The chicken dish

day

Pollock, crushed peas,
oes

eetroot, lamb's lettuce,
ot vinaigrette (ve)

ster mushroom and
ce (hot) (ve)

cken, carrot puree,

usage, mustard mash,
gravy, crispy onions

aff know of any allergens.
es served are Halal.

Social Evening

Ticketed event: Six canapés and two drinks served

1. Smoked Godminster cheddar rarebit, pickled walnut ketchup (v)
2. Mushroom pinwheel with mushroom ketchup (ve)
3. Red quinoa cracker with vegetable tartare and artichoke mousse (ve) (gf)
4. Beef rib, bone marrow and chervil puffed grains
5. London Cured smoked salmon, whipped horseradish, pickled cucumber (gf)
6. Double chocolate cookie sandwich (v)

of teeth not being recovered after avulsion. Enhanced record-keeping of extra-oral dry times and increased public awareness of the need to locate avulsed teeth could collectively improve outcomes.

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Teamwork makes the Dreamwork

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SP11

NHS England

Introduction: Since 2007, Clinical Dental Technicians (CDTs) have been incorporated into the General Dental Council (GDC) register. They can then treat patients directly to create full dentures without a prescription and provide other prostheses with the aid of a prescription. For dentists to be able to refer to CDTs and implement full of use of skill mix they need to understand CDTs' scope of practice.

Aims: This study aimed to investigate Foundation Dentists' (FD) awareness of the scope of practice of CDTs and whether they would refer to them.

Method: Before an online teaching session FDs in the Midlands were asked a set of questions regarding CDTs' scope of practice and their thoughts on referrals. A short teaching session about skill mix was delivered by a General Dental Practitioner, CDT and Dental Therapist. A questionnaire was then distributed after the session to determine changes in knowledge and attitudes.

Results: A total of 67 out of 110 FDs completed the first questionnaire. Of those 67 FDs, 49(74%) had heard about CDTs, 39(59%) would refer to a CDT, 24(37%) admitted to not knowing the difference between CDTs and Dental Technicians (DTs) and 4(6%) had already referred to CDTs.

After the session 35 of the 67 FDs filled out the second questionnaire. Of those 35(100%) FDs would then refer to a CDT, all had a clearer understanding of the

differences between DTs and CDTs. There was still some confusion regarding CDTs' scope of practice with 19(56%) not knowing that CDTs can take radiographs.

Discussion: The data collected shows there is a lack of awareness of the role of CDT amongst FDs. The results show that even after this short session, the FDs were able to identify key differences between DTs and CDTs, but there was still a lack of understanding of a CDTs full scope of practice.

In 2009 knowledge of CDTs was shown to be low across UK Dental Students. (M.K. Ross, 2009). Despite the NHS encouraging skill mix, although not explicitly mentioning CDTs (NHS England, 2023), this study shows awareness of CDTs is still low. While CDTs reportedly find their working relationships with dentists symbiotic for both parties (Gurveer Jaggee, 2019), it is difficult for this relationship to develop if there is little to no awareness of the profession. With NHS workforce pressures and the ageing population (Gallagher, 2010) CDTs could make a valuable contribution to sustaining the workforce. This study highlights that more is needed to improve new graduates' awareness of CDTs, for them to consider working with them in the future.

Conclusion: For skill mix to be effective Dentists need to be aware of all team members' scope of practice. This study shows that new graduates have little awareness regarding the role of CDTs, but simple skill mix training sessions can improve this.

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A conservative approach to the management of dental trauma with adhesive restorations: A case report

Emma Gray*, Despoina Chatzistavrianou

SP12

King's College Hospital

Introduction: The management of missing anterior teeth presents clinicians with an array of technical, functional and aesthetic challenges. The social and emotional impact of tooth loss on patients, especially in the anterior region, must also not be overlooked. These difficulties may be further compounded when anterior teeth are lost suddenly, as in the case of dental trauma. Given the range of both fixed and removable prosthodontic options available, patients must be well-informed and included in all treatment planning discussions throughout.

This case report presents a patient with avulsed upper central incisor teeth and numerous other fractures and luxation injuries as a result of trauma. A multidisciplinary

approach to oral rehabilitation was employed to achieve optimal functional and aesthetic outcomes, including appropriate and timely management of acute dental trauma and subsequent longer term treatment planning.

History: A 33-year old medically fit and well male patient attended the Restorative clinic following a recent fall whilst on holiday several days previously, resulting in avulsed upper central incisor teeth, multiple dental fractures and a luxation injury. The avulsed teeth were lost at the time of injury.

Immediate Management: A splint was placed following repositioning of displaced teeth. An immediate partial acrylic denture was also fitted to replace the missing units.

Long Term Management: Following splint removal, fractured teeth were restored with adhesive restorations and endodontic treatment was completed as necessary. Discussions then began regarding longer term management of the missing units, which included further imaging and diagnostics required for potential implant rehabilitation. Eventually, having taken into account all dental and patient factors, the upper anterior space was restored with a fixed-fixed resin bonded bridge.

Discussion: The range of options available to this patient highlights the importance of clear communication and thorough discussion before finalising the treatment plan. The patient opted for a fixed prosthesis to restore the missing units and was initially keen to explore dental implants. Upon further investigations, the need for complex surgical procedures and long-term maintenance, the patient opted to proceed with a resin-bonded bridge as a minimally invasive approach.

A multi-disciplinary approach for the management of hypodontia: A clinical case report

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Eastman Dental Hospital

SP13

Hypodontia is the congenital absence of deciduous or permanent teeth or both. It is estimated that around 1-6 % of the population are affected by hypodontia. It can also present with other features such as spacing between teeth. Features of hypodontia can have a significant impact on the psychological and functional health of the individual.

Case Background: The patient had first presented at age 17 on a hypodontia clinic with the complaint of spacing in his upper arch. The UR2, UR5, UL2, UL5 were missing, the UR1, UR3, UL1, UL3 has significant wear as well due to bilateral open bites posteriorly causing only the anterior teeth to be in function. Orthodontic treatment was carried out to idealise spaces so at completion of orthodontic treatment, the spaces in the upper arch were closed leaving 1 unit space to replace missing UL5 and the UR3, UL3 were moved into the place of UR2 UL2. Whilst patient was moved from a class III incisor relationship to an edge-edge relationship, the open bites posteriorly remained suggesting some underlying failure of eruption of the posterior teeth.

Upon completion of orthodontic treatment, patient was referred to the Prosthodontic department for management of the poor aesthetics associated with the UR1, UR3, UL1, UL3, replacement of the missing UL5 and lack of function posteriorly.

Treatment Plan

Prevention Phase: Patient underwent a course of supra gingival PMPR and detailed instructions on oral hygiene maintenance to ensure periodontal health.

Diagnostic Phase: Photos and articulated study casts were used to develop digital diagnostic wax-ups (DWU). Two DWU were made digitally, one where the length of UR1, UL1 was increased by 1 mm and another by 2 mm. The latter would create the most ideal anatomical proportion for the upper anterior teeth. The DWU's were evaluated intra orally with mock trials and it was felt that the increase in length by 2 mm would open up the spaces posteriorly too much causing challenges with fabricating posterior occlusal restorations with appropriate dimensions therefore an addition of 1 mm was agreed and the posterior wax up was completed.

Treatment Phase:

- Composite restorations were provided on the UR1, UR3, UL1, UL3. The UR3, UL3 were made to appear like lateral incisor teeth.
- The UR4, UL4 were provided buccal-occlusal EMAX veneerlays.
- The UR6, UL6, LR4, LR5, LL4, LL5, LL6 were all given EMAX occlusal onlays.
- The UR7, LR7, LL7 were all provided with heat treated gold onlays.
- Occlusal stability was restored with the occlusal relationship being in group function in lateral excursive movements.
- The UL5 was replaced with an implant supported crown restoration.

Upon completion of the prosthodontic rehabilitation, a final evaluation was conducted to evaluate aesthetics, occlusion, function and overall patient satisfaction. Patient was provided with a Michigan splint.

Result: This comprehensive treatment approach to manage the hypodontia of this young male patient yielded significant improvements in both the aesthetics and function. Overall patient satisfaction was rated very high with an improvement in the overall quality of life for the patient.

Management of a Partially Dentate 64-Year-Old Patient with Mini Implants for an Implant-Retained Denture

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SP14

Birmingham Dental Hospital

Background: Managing partially dentate patients with pre-existing implants presents unique challenges, particularly when implants of unknown origin and varying placement are involved. This case report details the treatment of a 64-year-old patient with three pre-existing mini-implants for an implant-retained denture. The patient's clinical history included severe non-carious tooth surface loss, ongoing prosthetic issues, and previous implant failure, complicating the treatment plan.

Case Presentation: A tennis coach and professional fisher sought treatment for a lower implant-retained denture that had lost retention. He reported composite chipping, erosion into dentine in the upper anteriors, and attrition in the lower anteriors. The patient presented with a Kennedy Class I mandibular arch, with well-formed edentulous ridges. The lower prosthesis was an acrylic denture with a chrome lingual connector, supported by three 3M IMTEC mini-implants placed over ten years prior. A fourth implant had been removed due to failure. He had been using superglue to retain the denture.

Management and Treatment Plan

A phased approach was implemented:

1. **Stabilisation Phase**:
   Generalised periodontal disease (Stage II, Grade B) was managed by the general dental practitioner. An interim soft occlusal guard was provided to address bruxism-related wear. Diagnostic wax-ups were performed, and direct composite build-ups were placed on UR12 and UL12.

2. **Prosthetic Rehabilitation**:
   A new lower denture was made and modified with cold-cure acrylic to accommodate implant components and enhance fit.

Outcome: The modified implant-retained overdenture significantly improved retention and function. The patient experienced enhanced confidence, reduced discomfort, and improved masticatory efficiency. Follow-up appointments were scheduled to monitor peri-implant health and prosthetic integrity.

Discussion: Mini implants offer a viable solution for denture retention in select cases but are limited in long-term stability, particularly under high load. This case highlights the importance of comprehensive assessment, treatment planning, and patient education regarding implant maintenance and future prosthetic needs. The adaptation of the existing prosthesis served as an effective interim solution while maintaining long-term flexibility.

Conclusion: Managing patients with pre-existing mini-implants requires a multidisciplinary approach. This case demonstrates the challenges of non-standard implant restorations and emphasises the role of staged treatment in addressing both functional and psychological concerns. Long-term monitoring and further research on the longevity of mini-implants in high-function patients are essential.

Keywords: Mini Implants, Implant-Retained Denture, Partial Edentulism, Prosthodontics, Bruxism, Restorative Dentistry, Case Report

Preserving Teeth, Postponing Implants: A Prosthodontic Perspective on Endodontic Management of Severely Traumatised Teeth

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SP15

Aims: Luxation injuries and root fractures are common dento-alveolar injuries and are often challenging to manage. These often lead to tooth loss, with lifelong consequences. This case demonstrates that with proper diagnosis, treatment planning and follow-up, teeth with severe traumatic injuries can be preserved, delaying need for prosthetic replacement. Preserving natural teeth offers significant benefits emphasizing the importance of incorporating conservative management into prosthodontic decision-making.

Case Presentation: A 17-year-old patient presented with a mid-third root fracture of the UR1 and severe lateral luxation injuries to UL1 and UL2 following a boxing injury. The coronal portion of UR1, UL1 and UL2 were all palatally displaced resulting in a severe crushing injury to the PDL on the palatal side and separation injury to labial side. No dentoalveolar fractures were sustained.

Acute management involved repositioning of the teeth and 6 weeks provision with a flexible splint. The splinting time was extended due to the apical position of the

root fracture at UR1. Following evidence of pulpal necrosis of the UR1, endodontic treatment was completed in the coronal portion to the fracture line with an MTA plug. An implant-retained crown was considered for UR1 replacement once the patient turned 18- years-old, however was opted against as he remained asymptomatic with sound clinical and soft tissue despite poor radiographic appearance.

At 3 years post trauma, a CBCT scan indicated UL1 pulp chamber internal resorption, following which orthograde endodontic treatment of UL1 was completed.

At 5-years radiographic follow-up, UL1 showed significant periapical healing. Radiolucency between the coronal and apical fragments of UR1 showed separation of the fragments due to continued growth and development, rather than progressive resorption. The UL2 remained stable.

At 8.5- years post trauma the patient remained clinically stable, asymptomatic, and content with the aesthetics, with no other sequelae.

Discussion: This case illustrates the potential of correct, timely endodontic management to delay or defer prosthetic replacement. While implant-retained crowns provide predictable outcomes, preserving natural teeth offers superior aesthetics, supports alveolar ridge maintenance, and reduces the restorative burden. The importance of these factors is emphasised in young patients. This patient would be expected to have an average life expectancy of 70-80 years, meaning that an implant retained prosthesis placed in the second decade of life would have to last 50-60 years. Furthermore, extraction of the upper anterior teeth and prosthetic replacement would not guarantee an aesthetic outcome similar to what the patient had, certainly in terms of the pink aesthetics.

By retaining the patient's natural teeth for at least 8.5 years, potentially extensive and invasive treatment was avoided in the short to medium term and has potentially reduced the complexity of subsequent fixed prosthodontics. Integrating such considerations into treatment planning ensures a balance between conservative and restorative approaches.

Conclusion: Correct acute management, monitoring, and timely management of severely traumatised teeth can effectively postpone or even eliminate the need for prosthetic replacement. This case emphasizes the need for prosthodontists to evaluate the benefits of tooth preservation as part of a holistic treatment plan.

Full circle: Long term management of complex full mouth implant restorations in an elderly patient

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SP16

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Introduction: Dental implants have become an essential part of modern dentistry and there is extensive evidence to show a good survival rate of 90% at 10 years. Recent evidence also shows the survival of implants is 80% at 20 years. With this long-term data, and the increasing popularity of digital dentistry, this is now a common and robust treatment option in the prosthetic world. However, this poster presentation highlights the importance of considering the sustainability of these restorations when treatment planning, especially as patients age and potentially become more challenging to manage. Ultimately, implant failure is multifactorial and personalised care, sometimes innovatively, is essential in management of these patients.

Case History: This clinical case outlines an 88-year-old female's journey from fixed prosthetic rehabilitation to an ultimate conversion to removable prosthetics. She had previously been rehabilitated with upper and lower IMZ implants in the 1990s; the upper arch consisted of implant retained crowns and bridgework and the lower arch was restored with a bar retained complete fixed prosthesis. With multiple failures over the years, including due to two mandible fractures and a strong parafunctional habit, her treatment journey resulted in returning to removable appliances again.

She presented with upper and lower unretentive dentures, resulting in a functional concern. The oral anatomy was challenging with Atwood class VI ridges, a shallow palate and minimal sulcus depth. The remaining restorative work was in an uneven distribution across the arches. The upper arch had implant retained crown and bridgework replacing UL1-6 only. The remaining two implants in the lower arch were in the LR35 position with a short unilateral bar across this. Given the now redundant implant system, dismantling the bar was not possible.

Complicating factors included her medical history. Of note, she had Sjogren's syndrome resulting in xerostomia, limited mouth opening and inflexibility of the oral tissues. She broke her neck prior to starting this course of treatment and was unable to lie back, resulting in treatment being carried out with the patient sitting upright.

This all resulted in an unconventional treatment plan of construction of an upper partial denture, modifying trays and rims to account for lack of access and stability. Additionally, construction of a lower implant bar retained denture included a chairside retrofit to the existing bar, using an acrylic stalk on a gold bar clip.

Discussion: Although the treatment allowed for restoration of function and aesthetics in a patient with challenging medical and oral factors, clinical techniques required adaptation to sustain use of the remaining implants. This case has shown a full circle journey from a fixed implant rehabilitation back to a conventional removable one. Sustaining complex historic restorative work to ensure its survival is challenging and adaption to failure is essential.

Conclusion: Although implant treatment has cemented its place in dentistry, this presentation demonstrates the need for careful consideration of the sustainability of these restorations when treatment planning to ensure overall success for the aging patient.

Rehabilitation of an Oncology Patient with an Implant-Retained Obturator and Nasal Prosthesis following a Total Rhinectomy and Partial Maxillectomy

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SP17

Background and Aims: A diagnosis of head and neck cancer, followed by disfiguring surgery can severely impact a patient's quality of life, leading to cognitive, physical and psychological challenges. This can be further complicated if adjuvant radiotherapy is required.

This case reports the digital planning and surgical delivery of fully guided flapless implants placement. This report describes the clinical and prosthodontic factors involved in planning a pre surgical obturator and challenges in delivery of care under

anaesthetic. Furthermore, it will demonstrate management of complex rehabilitation using a blended digital and conventional approach in the delivery of a prosthetic nose, effectively restoring the patient's function and aesthetics.

Case Presentation: A 62-year-old patient diagnosed with T4N0M0 squamous cell carcinoma of the nasal cavity and partial maxillary erosion was referred to the Restorative Department at the Royal London Dental Hospital by the ENT team for pre surgical planning. The treatment plan involved a total rhinectomy and partial maxillectomy with likely post operative radiotherapy. The patient's medical history included chronic obstructive pulmonary disease, asthma, hypertension, hypercholesterolaemia and absence seizures. The patient was edentulous due to periodontal disease.

Prior to surgery, an upper primary silicone and lower compound impression was taken and the occlusal vertical dimension was established. Using a medical CT scan, coDiagnostix® implant planning software was used to plan for guided placement of four parallel maxillary tissue level implants posterior to the planned resection field.

Following completion of resection, the surgical guide was secured with a fixation pin in the palate and implants were placed as per manufacturer's protocol. Cover screws were placed transmucosally for a 1 stage implant placement approach. The healing plate was screwed to allow for osseointegration prior to loading. After 6 weeks, the cover screws were replaced with abutments for an implant retained denture and the fit surface of the cover plate was adjusted to accommodate healing.

After radiotherapy was completed, the patient was reviewed. A new lower impression was taken, and a new lower complete denture was constructed with an edge-to-edge occlusion, conforming to the patient's Class III skeletal base. Digital workflow was used to fabricate a prosthetic nose, which was planned to have a magnetic attachment to the implant retained obturator. A digital facial scan was taken with an intra oral scanner and facial scan application. A putty impression taken prior to resection, provided a guide of the natural shape and contour of the nose. The magnet for the obturator was secured chairside using cold cure acrylic, and a pickup impression was taken of the corresponding magnet in the nasal prosthesis using heavy and medium bodied silicone. Following adjustments of the wax try-in to improve the contour, the definitive prosthesis was fitted successfully.

Conclusion: This case highlights the importance of multidisciplinary management of complex oncological rehabilitation. With the combined use of conventional and digital techniques, a predictable result was achieved, and the patient's quality of life was vastly improved.

Comparative Analysis of Full Arch Implant Impressions Using Photogrammetry Versus Conventional Techniques: A Systematic Review

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SP18

Achieving accurate prosthesis passivity is critical to the long-term success of full arch implant-supported rehabilitations. In prosthodontic practice, inaccuracies during the impression and verification stages can compromise passivity, resulting in mechanical complications such as prosthesis fracture, marginal bone loss, and implant failure.

While conventional impression techniques remain the widely used standard in full arch implant rehabilitations, advancements in digital technologies have introduced photogrammetry as an alternative, offering the potential for greater accuracy and efficiency.

This systematic review compares the accuracy of photogrammetry to conventional impression and verification techniques for full arch implant rehabilitation. The primary focus is on two key parameters: trueness (the degree to which the impression reflects the actual implant position) and precision (the ability to reproduce the same results consistently). Additionally, the review explores patient and clinician satisfaction with both methods, assessing working time, comfort, and overall clinical workflow.

A comprehensive literature search was conducted using MEDLINE, EMBASE, and Dentistry & Oral Sciences Source (DoSS), supplemented by grey literature searches. Five studies were included, comprising two in vivo and three in vitro trials. The results demonstrated mixed outcomes. Two studies found that photogrammetry yielded comparable or superior accuracy to conventional splinted impressions, particularly for large-span rehabilitations. Two studies reported lower accuracy with photogrammetry, especially in capturing complex implant angulations. One study found no significant difference in implant survival or marginal bone loss between the two techniques. While photogrammetry demonstrated improvements in patient and clinician satisfaction, due to reduced chairside time and fewer prosthetic adjustments required, conventional techniques remain familiar to most practitioners, ensuring predictable workflows and outcomes.

Photogrammetry offers potential advantages in prosthodontic workflows by improving efficiency and minimising errors associated with material shrinkage and distortion in conventional impressions. However, current photogrammetric systems do not capture peri-implant soft tissues, necessitating an additional impression step that may introduce minor inaccuracies when merging datasets. Addressing this limitation through standardised protocols or complementary digital workflows could enhance the clinical viability of photogrammetric techniques.

Despite the high initial cost of photogrammetry devices, ongoing technological advancements are expected to reduce barriers to adoption. From a prosthodontic perspective, photogrammetry shows promise in improving prosthetic passivity, reducing complications, and enhancing patient outcomes. However, further high-quality clinical trials are necessary to validate these findings and establish photogrammetry as a standard for full arch implant rehabilitations.

In conclusion, this review underscores the clinical relevance of photogrammetry in prosthodontics, particularly for full arch rehabilitations where achieving passive fit is critical for long-term success. By improving the accuracy of implant registrations and reducing working time, photogrammetry has the potential to complement existing prosthodontic workflows. As both conventional and digital techniques continue to evolve, clinicians must balance familiarity and predictability with the potential benefits of emerging technologies to achieve precise, long-term full arch restorations. As digital technologies continue to evolve, photogrammetry could become an essential tool in achieving predictable, efficient, and precise full arch restorations.

Management of traumatic overbite with removable prostheses and composite build-ups: A Case Report

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SP19

Introduction: An overbite is the vertical relationship between the upper and lower incisor teeth, it is regarded as deep when the overlap exceeds half of the height of lower incisor tooth, and it is considered traumatic when there is damage to associated soft and/or hard tissues. Patients often complain of damaged teeth, pain, and poor appearance and function. Rehabilitating these patients presents a challenge due to limited inter-occlusal space, lack of posterior function, and sometimes high masticatory loading. We present a case of management of traumatic overbite using a combination of removable prostheses and direct composite restorations to help control the occlusal vertical dimension (OVD) and restore both occlusal function and aesthetics.

Case Presentation: A 60-year-old male was referred by his dentist to the Restorative Dentistry clinic with failing restorations, poor aesthetics, and reduced function. Examination revealed Class 2 Division 2 incisors on a Class 2 skeletal base with Akerly Class IV traumatic overbite. There were multiple carious lesions, generalised gingival inflammation with localised regions of erythema corresponding to regions of inadequate plaque control noted. Previous attempts at rehabilitation were unsuccessful due to a lack of occlusal control.

Treatment planning consisted of distinct phases of treatment whose overall aim was to provide good occlusal control, primary disease stability, and definitive rehabilitation. Treatment consisted of multiple extractions, provision of partial acrylic dentures with an anterior bite platform to control OVD and posterior occlusal support, composite build ups to aid distribution of occlusal loading across natural and artificial dentition.

Impressions, facebow and inter-occlusal records were taken for articulated study models and a diagnostic wax-up, with an increase of 3 mm in OVD anteriorly. Stabilisation involved, extraction of teeth with poor prognosis, management of dental caries, provision of oral hygiene and professional mechanical plaque removal, provision of immediate acrylic overdenture partial dentures and composites at the desired OVD. Patient was reviewed at 1 week, 4 weeks, and 3 months to review healing and compliance newly prescribed OVD and maintenance of oral hygiene and prostheses. Definitive acrylic prostheses were then created to the newly established OVD together with maintenance of both oral hygiene and composite restorations.

Discussion: The restoration of traumatic overbite with decreased OVD requires a balance of aesthetics, function, and occlusal harmony. Management options may range from simple removable appliances to a combination of orthodontics, orthognathic surgery, and restorative dentistry. Removable overdentures can be used successfully in the management of traumatic overbites and are specifically indicated in cases where the tooth position is such that developing stable tooth-to-tooth contacts is impossible. In addition, the overlay denture be made to cover the remaining teeth's occlusal surfaces. However, this is likely to be subject to wear, so in the long term, a cobalt-chromium framework is ideal.

Conclusion: The problems that arise with a traumatic overbite can undoubtedly present clinical challenges. Treatment aimed to reduce soft tissue trauma, improve

periodontal health, and improve occlusal stability, function, and aesthetics. Successful rehabilitation can be achieved with careful planning and management of the occlusion.

Integrating Sustainability: Our Experience in University Dental Education with a Focus on Prosthodontics

SP20

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Objectives: This paper presents innovative perspectives on environmental sustainability, drawing on our own experiences in the field of university dental education, particularly within Prosthodontics.

Methods: Various factors influence the sustainability of oral healthcare systems. These include the environmental impacts associated with dental practices, adoption of the "reduce, reuse, recycle, rethink, and redesign" principles, the procurement and use of equipment, materials, and supplies, with a specific focus on plastics, effective management of biomedical waste, optimization of energy and water usage, and reducing indoor and outdoor pollution. Furthermore, the implementation of digital technologies, adherence to existing policies and guidelines, and advancements in scientific research and dental education are essential to improving sustainability in dentistry.

These themes are presented within the context of our experience in dental university education, specifically within the field of prosthodontics. Accordingly, the results of some of our original scientific research studies were selected and comparatively displayed, further contributing to highlighting the previously exposed ideas.

Results: Aspects regarding our innovative approaches in teaching digital prosthodontics are presented, including a computerized method that allows for virtual case simulation on modular digital dental models and the use of haptic technology as part of our sustainable strategies. Furthermore, as 3D-printing technology is increasingly used in dental laboratories and demonstrates significant potential to reduce hazards among professionals, we present a synthesis of our scientific research findings on 3D-printed materials. This includes assessments of fidelity in 3D-printed interim fixed dental prosthetic restorations, their mechanical behaviour, and biochemical interactions with saliva, highlighting examples of sustainable practices.

Conclusions: Understanding the concepts of sustainability in dentistry and sharing our experiences encourage us to act responsibly and to develop and engage in sustainable practices. Moreover, these initiatives could contribute to the continuous development of modern university education. This present work highlights the importance of increasing the level of interest and awareness of sustainability in university dental education. We need to continuously re-energize scientific research, development, and innovation projects, fostering international collaboration. Additionally, it is important to identify and support risk-taking innovators and entrepreneurs, including students, from an early stage. We should also create and develop new or transformative technologies that positively affect our climate, without significant sacrifices.

Surgical management and dental rehabilitation of a Browns tumour in the anterior maxilla

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SP21

Brown tumours are a form of giant cell lesion, which originates from mesenchymal cells. They occur due to abnormal bone turnover. This case report describes the multidisciplinary care of a rare case of a Browns tumour located in the anterior maxilla, occurring as a side effect of secondary hyperparathyroidism.

Patient Preventative Advice to mitigate signs and symptoms of tooth wear: A literature Review

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SP22

Tooth wear has profound consequences for a patient's oral health and quality of life. Preventive advice has been suggested as a method of reducing the burden of tooth wear in the population. This literature review provides an update on preventive advice regarding the mitigation of tooth wear and presents evidence-based clinical recommendations that dental professionals can use chairside.

Online databases PubMed and SCOPUS were searched for articles published from 1980-2021. A total of 17 studies evaluating the efficacy of preventative advice regarding erosion, abrasion and attrition in the permanent dentition were included.

From the data gathered, a set of clinical recommendations was formed, peer reviewed and implemented at Cardiff and Vale University Health Board Dental Hospital.

The guidelines provide simple, evidence-based recommendations that can be given by dental professionals to patients chairside, in order to help mitigate tooth wear. These recommendations expand on the briefer Delivering better Oral Health Guidelines.

Going forward these can be combined with other national guidelines to provide high quality cross-nation guidelines.

Innovative Prosthodontics Solutions for Maxillofacial Reconstruction Using Zygomatic Implant Retained Magnetic Obturators: A Case Series

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SP23

This case series highlights the application of zygomatic implant-retained magnetic obturators in the rehabilitation of patients undergoing partial or total maxillectomy due to malignancy. Three distinct cases are presented to demonstrate the versatility and effectiveness of this approach in restoring both function and aesthetics for individuals with complex maxillofacial defects resulting from cancer treatment.

Case 1: A 72-year-old female with stage PT1 CN0 M0 SCC of the right maxilla, who underwent wide excision as a partial maxillectomy. Following this, a zygomatic implant-retained magnetic obturator was placed to restore oral function and improve facial aesthetics, ensuring adequate speech and swallowing capabilities post-surgery.

Case 2: A 68-year-old female who had a semi-maxillectomy for high grade alignment solitary fibrous tumour right maxilla. Following the procedure, a zygomatic implant-retained magnetic obturator was used to provide a stable and functional prosthesis, promoting both facial symmetry and oral rehabilitation, which significantly improved the patient's quality of life.

Case 3: An 89-year-old female diagnosed with T4a N2b M0 SCC of the left maxilla. After a partial maxillectomy, a similar prosthodontics solution utilising zygomatic implants was employed, providing superior retention and support for the obturator, facilitating improved speech and swallowing, and achieving improved functional and aesthetic outcomes.

All three cases underline the critical role of zygomatic implant-retained magnetic obturators in managing complex maxillofacial defects post-oncologic resection. The use of zygomatic implants offers a reliable and durable solution for achieving prosthodontics retention in patients with limited bone availability, particularly in the context of post-cancer rehabilitation. The incorporation of magnetic retention further enhances the ease of prosthesis maintenance and patient comfort.

The cases presented here contribute to the ongoing discourse on the integration of advanced prosthodontics techniques in multidisciplinary approaches for the rehabilitation of patients with maxillofacial defects following cancer treatment. This series underscores the importance of individualised treatment planning and highlights the potential for improved patient outcomes when combining surgical and prosthetic innovation.

Overcoming prosthodontic challenges in a patient with Epidermolysis bullosa (EB)

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Epidermolysis bullosa (EB) is an inherited, rare genetic dermatoses characterized by mucocutaneous fragility and blister formation, inducible by often minimal trauma. It has an incidence of 19.6 per one million births, and exhibits a broad phenotypic spectrum, with potentially severe extracutaneous manifestations, morbidity and mortality. Over 30 subtypes are recognized, grouped into four major categories: EB simplex, junctional EB, dystrophic EB and Kindler EB. Currently there is no curative treatment, and multidisciplinary care is targeted towards minimizing the risk of blister formation, wound care, symptom relief and specific complications, the most feared of which and the leading cause of mortality, is squamous cell carcinoma.

Mutations affecting the proteins involved in the formation of the basement membranes are associated with the development of oral blisters. Downstream scarring gradually results in loss of oral mucosal elasticity, microstomia, tongue tethering and loss of the vestibular sulcus such that toothbrushing becomes problematic. The latter, combined with high energy diets rich in refined carbohydrates to prevent continued weight loss, cause severe caries. This is exacerbated in Junctional EB, where enamel defects resulting in pitted or hypoplastic enamel are seen due to genetic disruption. Furthermore, Kindler EB can affect the junctional epithelium resulting in early-onset and advanced periodontitis. The case below demonstrates the prosthodontic challenges associated with treating patients with EB and how they were overcome.

A 53-year-old patient with EB simplex presented to the restorative multidisciplinary clinic at Birmingham Dental Hospital for assessment for new upper partial denture.

Prior to this, the patient was being seen in the Periodontal department since 2018, as part of a national adult EB service in collaboration with Dermatology colleagues.

The UR123 were lost as a child due to trauma and a previous bridge replacing these teeth had failed. The patient previously had a denture made but struggled to tolerate this and was currently wearing an Essix retainer to replace the missing anterior teeth. Furthermore, the patient struggled with a hyperactive gag reflex which was likely exacerbated by pharyngeal dilation as a treatment for oesophageal strictures related to EB.

Initially a new Essix retainer with prosthetic teeth was made as an interim prosthesis. Conventional impressions were managed but the models were scanned for future access to reduce the need for future impressions. A Polyetheretherketone (PEEK) framework was 3D printed to test the patient's tolerance to the posterior extension prior to Co-Cr framework fabrication. This was tooth supported and had minimal mucosal coverage to reduce trauma to the mucosa. These considerations resulted in a well-fitting, tooth supported denture which the patient tolerated well. Long term, a new Co-Cr partial denture will be considered utilising digital workflows to negate the need for further impressions and using design features from the PEEK framework for which the patient has demonstrated good tolerance.

Prosthodontic Rehabilitation in a Post-Cancer Patient – Partial Denture Fabrication and Closure of a Central Diastema

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SP25

University Of Birmingham

Background: Cancer treatments, such as surgery, radiation, and chemotherapy, can have significant negative oral health consequences, including exacerbated periodontal disease leading to tooth loss, soft tissue damage, and functional impairments. Prosthodontic rehabilitation plays a vital role in restoring both aesthetics and function for these patients as well as giving them their confidence back. This case report focuses on a patient who following cancer treatment, experienced uncontrolled tooth loss and migration and subsequent prosthodontic intervention, including the fabrication of partial cobalt-chromium dentures and closure of a central diastema.

Case Presentation: A 56-year-old female patient presented with significant dental compromise following treatment for breast cancer. The patient had lost several teeth due to exacerbation of her periodontal disease following her chemotherapy. Additionally, the patient exhibited a prominent central diastema due to tooth migration, which was exacerbated by the loss of lateral incisors and the altered soft tissue contour.

Treatment: The treatment plan involved the fabrication of upper and lower partial cobalt-chromium dentures to restore both occlusion and aesthetics. The upper denture was adapted with a natural imbrication of the upper lateral incisors to improve aesthetics and allow the patient to hold on to her natural teeth where possible. In addition, direct restorative treatment using composite allowed for careful closure of the central diastema. The goal was to achieve functional restoration of the masticatory system and improve the patient's smile aesthetics, which had been impacted by both the cancer and its treatment.

Outcome: The patient achieved a significant improvement both functionally and aesthetically. The central diastema closure not only enhanced the appearance but also contributed to the patient's overall self-esteem and confidence. The prosthetic rehabilitation was well-accepted, and the patient reported high satisfaction with the final result.

Conclusion: Prosthodontic rehabilitation, including denture fabrication in combination with restorative treatment plays a crucial role in restoring both function and aesthetics for cancer survivors. This case highlights the importance of a multidisciplinary approach and personalized treatment planning in managing the complex needs of post-cancer patients.

Keywords: Prosthodontics, Cancer rehabilitation, Denture, Central diastema, Aesthetic restoration, Oral rehabilitation

Should we extract teeth prior to radiotherapy for Head and Neck Cancer Patients?

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SP26

Head and neck cancer patients are often treated with radiotherapy (RT) which can create unique challenges and oral complications, including xerostomia, trismus, and osteoradionecrosis (ORN), which significantly impact oral health and quality of life. Xerostomia increases the risk of developing dental decay due to the loss of the protective effective of saliva. Trismus can limit accessibility of oral hygiene and treatment especially to the most posterior teeth which can increase their risk of deterioration. ORN is a risk if the patient has dental extractions post RT which is very difficult to manage and has no real cure, this can significantly impact the patient's quality of life and function. These side effects pose challenges to post RT patients in maintaining their oral hygiene and dental health especially for the most posterior teeth. For this reason, extraction of certain teeth prior to RT to limit post-RT complications is something to be considered. The decision-making process surrounding which teeth should be extracted can be particularly difficult as it must be carefully balanced against the potential impact on oral function, quality of life as well as the impact on the cancer treatment pathway and long-term complications.

Currently the available literature considers the following teeth for dental extractions: unrestorable, severely decayed, periodontally compromised, periapically involved, partially erupted, impacted or teeth located in the field of high dose radiation. These also reinforce the importance of a pre-treatment dental assessment for prevention advice. The impact of these decisions long-term are not well understood.

The association between the different parameters such as medical comorbidities, smoking and alcohol status, HPV status, social support at home, oncological treatment (including radiation fields and doses +/- chemotherapy), feeding during and at the end of treatment, mouth opening and dental status are still to be fully investigated and would aid future decision making.

The aim of this project is to determine if decisions made regarding dental extractions prior to radiotherapy of the jaws do reduce future dental complications. Retrospective data were collected on the patients treated with radiotherapy for head and neck squamous cell carcinomas (SCC) between the years of 2017 and 2018 from the histopathology list of SCC diagnoses, in order to understand the 5year outcomes. A total of 143 patients were diagnosed with SCC or metastatic SCC (age range: 30-95years). One hundred and twenty one patients underwent radiotherapy. Fifty-seven patients had dental assessments, and the rest did not, however most underwent some dental extractions. This project may be beneficial in establishing more detailed guidance on the decision-making for dental extractions pre-radiotherapy.

Management of anterior and lateral open bite with adhesive fixed prostheses.

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Barts Health NHS Trust

SP27

Background: Deranged occlusion and functional impairment present significant challenges in restorative dentistry. This case highlights the management of a 62-year-old female patient with a functional occlusion limited to UR7 and LR7, despite an intact dentition and no history of trauma. The patient's primary concern was impaired masticatory efficiency, which impacted her quality of life.

Clinical Examination: Extraoral findings were unremarkable. Intraoral examination revealed no signs of tooth wear but identified an anterior open bite and bilateral posterior open bite. The dentition was heavily restored, and occlusion was achieved only in a left lateral position, allowing limited contact between teeth. Additional findings included infraoccluded UR6 and UL6, and restorations in suboptimal occlusal relationships. Radiographic analysis confirmed no periapical pathology, adequate alveolar bone levels, and the absence of carious lesions. Mounted study casts were prepared for comprehensive occlusal analysis and treatment planning.

Clinical Management

1. **Initial Phase**:
   Obtained diagnostic impressions along with a facebow to facilitate occlusal analysis and detailed treatment planning.
2. **Diagnostic Phase**:
   A diagnostic wax-up to visualise the proposed occlusal vertical dimension (OVD) was fabricated.
   I conducted a reversible trial of the new OVD using linked block acrylic onlays on posterior teeth to evaluate functional and aesthetic outcomes. The patient was sent away with this for 2 months.
3. **Definitive Restorative Phase**:
   After through discussion with patient the block acrylic onlays were replaced with indirect lithium disilicate (Emax) restorations on the posterior teeth, establishing a stable and functional occlusal scheme.
   Ensured precise occlusal adjustments to achieve optimal contact and comfort.
4. **Maintenance Phase**:
   Scheduled periodic follow-up appointments to monitor occlusal stability, assess the longevity of restorations, and reinforce oral hygiene practices.

Conclusion: This case demonstrates the effective rehabilitation of a patient with a severely deranged occlusion through a structured approach. Addressing the functional challenges significantly improved the patient's masticatory efficiency and overall quality of life. The use of reversible trials and precise occlusal reconstruction ensured predictable outcomes. Long-term success relies on ongoing maintenance and regular reviews to preserve the integrity of the restorations and occlusal stability.

Save the date...

Annual BSSPD Conference 2025

The British Society of Prosthodontics 2026 Annual Conference, Thursday 16th & Friday 17th of April 2026, International Convention Centre, Birmingham

I am honoured to be elected as the BSSPD President for the 2025-26 term, and I sincerely thank you for your support. It is with great excitement that I invite you to the 2026 BSSPD Conference in Birmingham—please save the date!

The theme for the conference will focus on preparing both our current and future workforce to meet the evolving needs of our population. As the world changes faster than ever, ensuring our healthcare professionals are equipped with the right skills and training is more important than ever. Together, let's explore what the future holds and how we can stay ahead of the challenges and opportunities that lie ahead.

Birmingham has undergone a remarkable transformation in recent years, making it an exciting destination for the 2026 conference. The city has seen major investment, with striking new developments reshaping the skyline. Centenary Square and the area around Town Hall have been revitalised, offering stunning public spaces, while an array of new restaurants, bars, and cultural hotspots have brought fresh energy to the city. If you haven't visited Birmingham recently, you may find it almost unrecognisable!

Our venue, the ICC, is a world-class conference centre, perfectly located in the heart of this vibrant, diverse city. New for 2026, we are introducing a post-conference networking reception at the end of day one. This will be a fantastic opportunity to reconnect, engage with exhibitors, and enjoy refreshments in a relaxed setting. And with Birmingham's thriving nightlife just steps away, you can continue the evening with friends and colleagues—perhaps even reminiscing about your undergraduate and trainee days on nearby Broad Street or in Brindley Place.

I look forward to welcoming you to Birmingham in Spring 2026!

Upen Patel
President Elect BSSPD

CPD certificates

This meeting will provide 12 hours of verifiable CPD in total (6 hours Thursday and 6 hours Friday). Delegates wishing to obtain CPD MUST sign in on both days to be awarded the hours allocated for that day.

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