The magazine for dental professionals working in Ireland
March 2017

Ireland's Dental magazine

A patient's account of dental phobia and how she overcame it

For full details turn to page 20

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"Is there any other profession that would put up with such bullying and abuse?"

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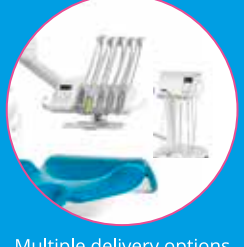

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Editor's desk

with Bruce Oxley

Tackling fear

Dental phobia is something that every dental professional will experience at some stage in their careers.

However, in many cases dental phobics will only attend the dentist as an absolute last resort, when the pain is unbearable and various home or DIY remedies have failed. This can leave the dentist with some difficult treatment decisions as the damage of many years of neglect, not to mention whatever they have tried to do themselves, becomes apparent. It then becomes a case of damage limitation rather than the preferred options of oral health maintenance and prevention.

In most cases, dental phobia is borne out of an unhappy or traumatic experience as a child, as journalist Grace Vaughan recounts on page 20. With drilling, filling and extractions the perceived norm in days gone by, the potential for an adverse reaction was perhaps greater then than it is now.

While nobody can guarantee that a patient won't have a bad experience as a child, with modern preventive techniques, minimally invasive dentistry and practices that are more child friendly, the odds are surely more favourable in this day and age.

So, the question is, do you do enough for your child patients? ■

Bruce Oxley is editor of Ireland's Dental magazine. To contact Bruce, email bruce@connectcommunications.co.uk

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Opinion

with Tommy O'Malley

Broken promises?

Tommy bemoans the latest back-tracking by the government and asks if any other profession would put up with such treatment

The Minister for Public Expenditure and Reform, Paschal Donohoe has warned Ministers that spending plans for 2018 will have to be funded by diverting money from existing lower priority projects. It seems the departments themselves will need to target the "lower priority, less efficient and less effective policy" areas. How scary is that? For dentistry, very scary indeed.

The Fine Gael party manifesto for the general election promised restoration of dental treatment benefit and free dental care for under-sixes. By the time the Programme for Government was announced, the government had watered these down to reimbursing the cost of "some routine dental treatments" and a dental health "package" for under-sixes.

In the programme, the government had the audacity to inform the public that every child was already having dental checks at six, nine and 12 years of age, promising that on top of this wonderful service under-12s will, from now, on be entitled to a comprehensive preventive dental health programme.

I'm not sure who they were trying to fool with such promises, but no one seemed say "hold on a minute". How many of my patients were seen when six, nine and 12? Very few. How many more dentists and ancillary staff will be employed to provide this wonderful service? Very few. I cannot see how the present cohort of HSE dental surgeons could cope with the increased workload.

The government wants to negotiate with the public sector unions on a successor to the Landsdowne Road Agreement this summer. While such an agreement will surely result in a better deal salary-wise and some productivity increases, it is to be hoped that these won't be at the expense of any newly employed dentists, as happened when the Association of Secondary School Teachers abandoned their newly-qualified colleagues.

The latest warning to ministers sends a clear message to departments to do what is politically efficient and effective and whatever is done it should prioritise that which does the least damage, politically. The reinstatement of previous level of cover to pre-crash levels, not to mention the idea of proper funding, of the PRSI and Medical Card schemes seems a likely casualty of the directive. From recent engagement with the minister for health, it looks like government is angling to just concede what they grudgingly committed to through the press, not in consultation with any dentists, of a fee for scale and polish and extension of the PRSI scheme to farmers and the self-employed.

March 2017 was the date mentioned for this to be implemented and I haven't heard a word about my contractual obligations in relation to providing such a service, let alone some kind of incentive such as IT funding to get me to sign up.

It is the sheer arrogance that gets me. Is there any other profession that would put up with such bullying and abuse? If a new National Oral Health Policy ("best integrated with general health services...") should come into being will private dentists be expected to co-operate or even take an interest in it, if they are merely "consulted" and then told what to do?

Is it too fanciful, even in these turbulent times, to hope for some dental health promotor to enter the political fray, probably as an independent, wait for enough Dail defeats for the government to collapse and pander to the ever growing disaffected and disenfranchised?

Maybe something like that only happens in dreams, or the US... ■

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New €37m Cork dental school

European investment paves the way for a multi-million euro development programme at UCC


The main quad at UCC

Plans to build a €37 million dental school, research centre and hospital in Cork have been given the green light after University College Cork secured €100m in European funding recently.

The university have signed a multi-million euro loan agreement with the European Investment Bank (EIB) which will support an ambitious €241m development plan at the institution.

"This will be the largest investment in capital projects at UCC in our history. The scale and ambition of the infrastructural developments align directly to key focus areas for the future, namely enhancing student experience and building on our innovation and health facilities," said UCC President Dr Michael Murphy.

"We are investing significantly in student accommodation, student ICT services and a new student hub as well as developing the medical, dental, paediatrics research, clinical health, innovation and research facilities to continue to fuel progress and success in these areas.

"This investment by the EIB will have enormous impact, not only for University College Cork, but for education and research nationally and internationally. The EIB funding is a real expression of confidence and support in UCC, its staff and students and will greatly assist the university in further improving its teaching and research facilities."

The relocation of the Cork University Dental School, research centre and hospital is one of the biggest developments alongside a new Clinical Medical School and research facility. The development plan will also see €60m invested in student accommodation as well as several million on a new student hub and student services.

The development programme is valued at €241m, with EIB providing €100m, and further funding through capital grants, borrowings and philanthropy.

Nursing home patients' oral health ignored

High sugar diet and lack of dental care is causing 'untold damage'

The unregulated use of fortified high sugar food supplements in nursing homes is causing untold damage to elderly residents, according to the vice-president of the Irish Dental Association (IDA).

Dr Anne Twomey said the situation was made worse due to the culture of gifting cakes and sweets to patients while, at the same time, failing to adequately meet their oral health needs.

She said: "These fortified oral nutritional supplements can be effective in increasing a patient's calorie intake but one of the consequences of constantly sipping these high sugar content drinks is the very negative effect they have on patients' oral health. When you add in all the gifts of sweets and soft drinks which patients receive, you have a recipe for disaster."

There are more than 25,000 patients in private and voluntary nursing homes in Ireland, many on medications that leave them with dry mouth syndrome, exacerbating dental disease.

Dr Twomey continued: "Patients who've kept their own teeth into old age can lose them in as little as three months. Very often the situation has reached crisis proportions by the time I'm called in and I have to take out 15 to 20 teeth over a short period of time. Although these patients are among our most vulnerable citizens with limited control over their daily lives, they have little or no access to oral hygiene and preventive measures. For example I came across a case where a woman hadn't had her teeth brushed in two years."

DDUH hosts healthy eating launch

The minister of state for health promotion launched new healthy eating guidelines at a special event held at the Dublin Dental University Hospital recently.

Marcella Corcoran Kennedy TD revealed the 'Healthy Food for Life' guidelines along with a 'Food Pyramid' under the aegis of Healthy Ireland.

Speaking at the launch of the guidelines, the minister said: "This new suite of resources will provide very useful practical nutrition advice for the population, healthcare professionals and for those working in other sectors such as education, social protection and industry.

"As a country, many of us do not have a balanced diet for a variety of reasons and my first priority is to make this nutrition advice available for the population."

Vulnerable patients being failed by Stormont

BDA attacks NI Government for u-turning on community dentists' contract agreement

The British Dental Association (BDA) in Northern Ireland has accused Stormont of backtracking on an agreement to modernise community dentists' contracts.

Dentists working in the community dental service are the only health service workers in the UK not to have had their terms and conditions modernised since the 1980s.

In March last year, following seven years of negotiations, BDA members overwhelmingly voted to support an agreement reached between the BDA and the NI Government on a new contract. Funding was believed to have been set aside by the Department of Health and allocated to local trusts, but the Department of Finance has since claimed that no agreement has been reached.

Grainne Quinn, chair of the BDA's Northern Ireland Salaried Dentists Committee (pictured), said: "These community dentists are the only health professionals left in the UK working under contracts drafted three decades ago. Last year we reached an agreement to bring their terms and conditions into the 21st Century, but ever since ministers and officials have been stalling.

"It has been very frustrating for these dedicated professionals who are serving the most vulnerable people in Northern Ireland. It means they have spent a year not even knowing how much leave they are entitled to, unclear if a promise of nearly two years of backdated pay increases will ever materialise, or when this situation will be resolved.

"It's an absurd situation. For 12 months the money set aside has been sitting in trusts' bank accounts gaining interest while officials in Stormont squabble among themselves over whether an agreement was even reached.

"All we are asking for is for ministers to honour an agreement negotiated in good faith and implement the agreed terms and conditions as soon as possible."

RCSI announce Qatar partnership

The Faculty of Dentistry at the Royal College of Surgeons has launched a three-year FFD speciality programme in paediatric dentistry, in association with Hamad Medical Corporation in Qatar.

The programme, which will see Hamad residents taking the FFD examination in 2020, will feature a series of lecture modules covering the essential aspects of paediatric dentistry and is also open to dentists in Ireland.

The first lecture will take place on 18 March in the Albert Theatre, RCSI and attendance at the first module is free of charge. Details of additional modules will be available in due course and the cost of attending the ongoing modules will be in line with the RCSI's existing postgraduate modules held throughout the year.

The Spring 2017 Postgraduate Dental Education Programme at the Faculty of Dentistry resumed recently with lectures on 21 January and 18 February. The next date in the programme will be 11 March.

For information, visit dentistry.rcsi.ie

Concern over oral cancer increases among women

Rising incidence of disease among women noted by UCC researchers

The rate of oral cancer among women in Ireland has risen significantly in the last decade according to a new study from University College Cork (UCC).

A group of researchers from the Department of Epidemiology and Public Health at UCC examined the cases of 2,147 individuals who were diagnosed with oral cancer between 1994 and 2009. They found that there was an annual increase of 3.2 per cent in females compared to an annual decrease in oral cancer rates among men of 4.8 per cent between 1994 and 2001,

The study, recently published in the journal BMC Cancer, estimated the life-time risk of developing oral cancer at 0.7 per cent for males and 0.5 per cent for females. Meaning that, on average, seven men out of 1,000 and five women out of 1,000 have a risk of being diagnosed.

Researchers expressed concern about the rising incidence of oral cancer in females which rose from 24 per cent in 1994 to 32 per cent in 2009, especially as the disease is traditionally more common in men. They said the trend might be related to underlying patterns of tobacco consumption over the past decades where the decrease in smoking was at a slower rate in women.

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Inaugural OMFS event held in Dublin

Successful study day is set to become an annual event

Dentists and surgeons from across Ireland came together recently for the first ever Oral and Maxillofacial Surgery (OMFS) study day held at the Royal College of Surgeons in Ireland (RCSI).

Every OMFS unit in Northern Ireland and the Republic was represented at the event, which covered many topics on the speciality, including clinical audits and innovative research.

Tom Barry, consultant oral and maxillofacial surgeon at Galway University Hospital, said: "There was a focus on quality of healthcare and a frank discussion on the management of oral and maxillofacial cases took place.

"Interesting talks were also presented on the topics of the delivery of maxillofacial care in Dublin, facial infection rates in Northern Ireland, quality improvement in maxillofacial care and medicine-related osteonecrosis of the jaw.

"A presentation on the prevalence and nature of oro-pharyngeal dysphasia in relation to temporomandibular joint disorders was another interesting talk on the day. There was also an interactive session on diagnostic and management dilemmas encountered in practice. A frank discussion ensued between all clinicians in relation to the problems presented."


Tom Barry

Prizes were awarded for the best presentations given by non consultant hospital doctors. The winners were Dr Chris Wright from Altnagelvin Hospital for his presentation of 'BCC excision margins' and Dr David McGoldrick (St James's Hospital) for his paper entitled 'Significance of neutrophil to lymphocyte ratio as a prognostic aid in cancer and in particular its relationship to mouth cancer'.


(L-R) Dr Rebecca Courtney (TCD), Dr Orna Collins (TCD), Dr Mary Coleman (St. James Hospital)

Tom said: "The plan is to have this meeting on an annual basis as it was such a success. We would also like to thank our sponsors, GS Medical, KD Surgical, Techno Surgical and Zimmer Biomet for supporting this event."

Appointment at HDMS

Dental equipment specialists HDMS have recruited a new equipment service engineer to cover customers throughout Ireland

John Donnelly, (pictured) who is based in Ballinasloe, has an extensive experience in technical repairs and diagnostics. He said: "I'm really delighted to have joined the company and, having been trained in-house with HDMS and with the manufacturers over the past six months, I can't wait to get out meeting the customers and getting to hone my skills on the equipment. The company has a great reputation for efficient service and repairs and I'm delighted to be able to add my expertise to help provide great customer service and advice."

Paul Hogan, owner and manager of HDMS, which is now in its eighth year of business, said: "Due to an increase in business, over the last three years in particular, as well as an increase in new equipment sales, we felt the time was right to expand our engineering team to support our ever expanding client list. John will provide the same first class and reputable service that all our new and old customers have received over the last number of years from HDMS."

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The future starts now

A fourth year Trinity College Dublin student picked up a cheque for €1,000 recently for winning a competition aimed at encouraging innovation among Irish dental students.

Rebecca Ngo's essay *The Future Starts Now* was chosen out of hundreds of entries to Seapoint Clinic's Bright Spark Competition.

A spokesman for Seapoint Clinic said: "Rebecca's outstanding essay on what she thinks the future of dentistry will be in her time in practice really stood out from all the rest. The challenge of selecting a winner proved difficult at times for our dentists but Ms Ngo's piece on the future of modern dentistry really bowled them over."

Rebecca's essay spoke about advances in digital dentistry, ozone therapy and lasers heralding the start of drill free dentistry and haptic training technology being in wide use for students. She also wrote about the possibilities of personalised dentistry including genetic screening and stem cell research.

Homecoming for Cork Professor

Former Cardiff consultant returns to Cork

Cork graduate Chris Lynch has returned home after more than a decade in the UK to take up a post as professor of restorative dentistry at UCC.

Chris graduated in 1999 and, following a year in general practice in the UK, he returned to Cork for the first time to take up a senior house officer post in 2001. He completed his specialist training and was then appointed senior lecturer and consultant in restorative dentistry at Cardiff University in 2006. In 2007, he successfully defended his PhD, on aspects of the microstructural arrangements within human enamel.

At Cardiff he became head of prosthodontics in 2011 as well as head of the learning and scholarship department for more than three years. In 2013, he was promoted to a readership by Cardiff University, and in 2015 he received a promotion to professor of restorative dentistry and dental education.

Chris has also published a textbook on *Successful posterior composites* and has been recognised with awards such as the 'Award of Excellence in Dental Education' from the Association for Dental Education in Europe, and Fellowships from the American College of Dentists, the Faculty of General Dental Practice (UK), the Academy of Dental Materials and the International College of Dentists.

He is also the current editor-in-chief of the *Journal of Dentistry*.

Careers day hailed a huge success

Students from the dental schools in Belfast, Cork and Dublin were in attendance at the recent Careers Day at the Royal College of Surgeons Faculty of Dentistry.

More than 85 final year students, along with qualified dentists saw presentations from a host of practising dental professionals from a range of specialties and disciplines.

A spokesman for the Faculty of Dentistry said: "The intention of the Careers Day was to provide a series of 15 minute presentations from a number of different clinicians who all shared their training experiences to provide insight for potential future training pathways. With more than 85 candidates registered, the day was a huge success."

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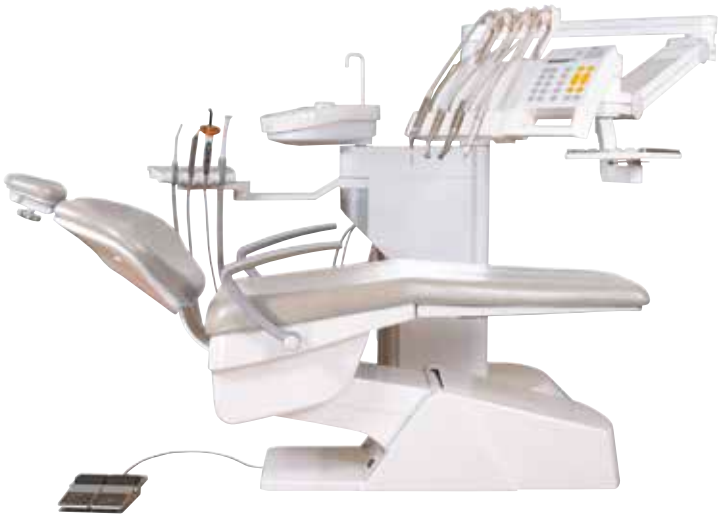

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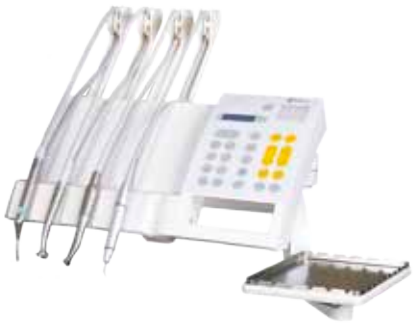

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BDA NI president takes up new role

Professor David Hussey launches new CPD programme at celebratory dinner

A celebratory dinner was held recently for the new president of the BDA Northern Ireland branch and to launch the new CPD programme for 2017.

Professor David Hussey was joined by family and friends on Friday 20 January at Queen's University Belfast to celebrate his new role as BDA branch president. Guest speaker and BDA national president Stuart Johnston, welcomed David to the role and spoke about the branch continuing "their innovative and appealing CPD programme".

Focusing on his annual theme of gerodontology Professor David Hussey said his programme "aims to reflect on the changing health trends within the UK, as highlighted by the fact that dementia and Alzheimer's disease have overtaken cancer and heart disease as the main cause of death in England and Wales".

With an increasing elderly population in Northern Ireland and with more than 20,000 people living with dementia, David said: "The profession needs to be flexible and tailor our treatment provision to the needs of the population in our region and the Branch CPD programme for 2017 makes a significant contribution to this requirement."

2016 NI branch president Anne Stevens with 2017 president David Hussey

Online drug prescribing is 'indefensible'

The British Dental Association has described the online prescribing of antibiotics without first seeing the dental patient as "indefensible".

A recent *Sunday Mirror* probe highlighted how easy it is to get antibiotics online, with one journalist posing as a patient taking just three minutes to get a prescription after completing a questionnaire.

Chair of the BDA's health and science committee, Russ Ladwa, said: "The health risk presented by antimicrobial resistance (AMR) requires a change in gear from patients, practitioners, and policy makers alike.

"To this end, the *Sunday Mirror's* article reinforces the importance of raising awareness of AMR with the public, and in the case of a suspected dental infection, seeing a dentist first rather than going online for antibiotics."

SD Show official app launched

Download the new smartphone app for iOS and Android now and take advantage of some great Show offers

The official smartphone app for the Scottish Dental Show 2017 is now available to download from the App Store and Google Play. As well as a full list of speakers, lectures, workshops and exhibitors, the app also offers exclusive deals and offers for delegates attending the event at Braehead Arena in Glasgow on 19 and 20 May.

The My Offers section will not only provide delegates with great deals on the days of the show, they will benefit from offers in the weeks leading up to the event, providing great value for both show exhibitors and attendees.

The app also provides comprehensive directions to Braehead Arena as well as details of all the exclusive hotel deals that are on offer.

Other benefits include social media integration through Facebook and Twitter, a Submit a Selfie function for all your Show selfies, as well as the opportunity to nominate for the Scottish Dental Awards that will take place on 19 May at the five-star Glasgow Hilton Hotel.

To download the app for iPhone, search for 'Scottish Dental' on the App Store or Google Play for android devices

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*Terms and conditions apply. See www.sdshow.co.uk/prize-draw-terms-and-conditions/

Keynote reveals lecture topics for 2017 Show

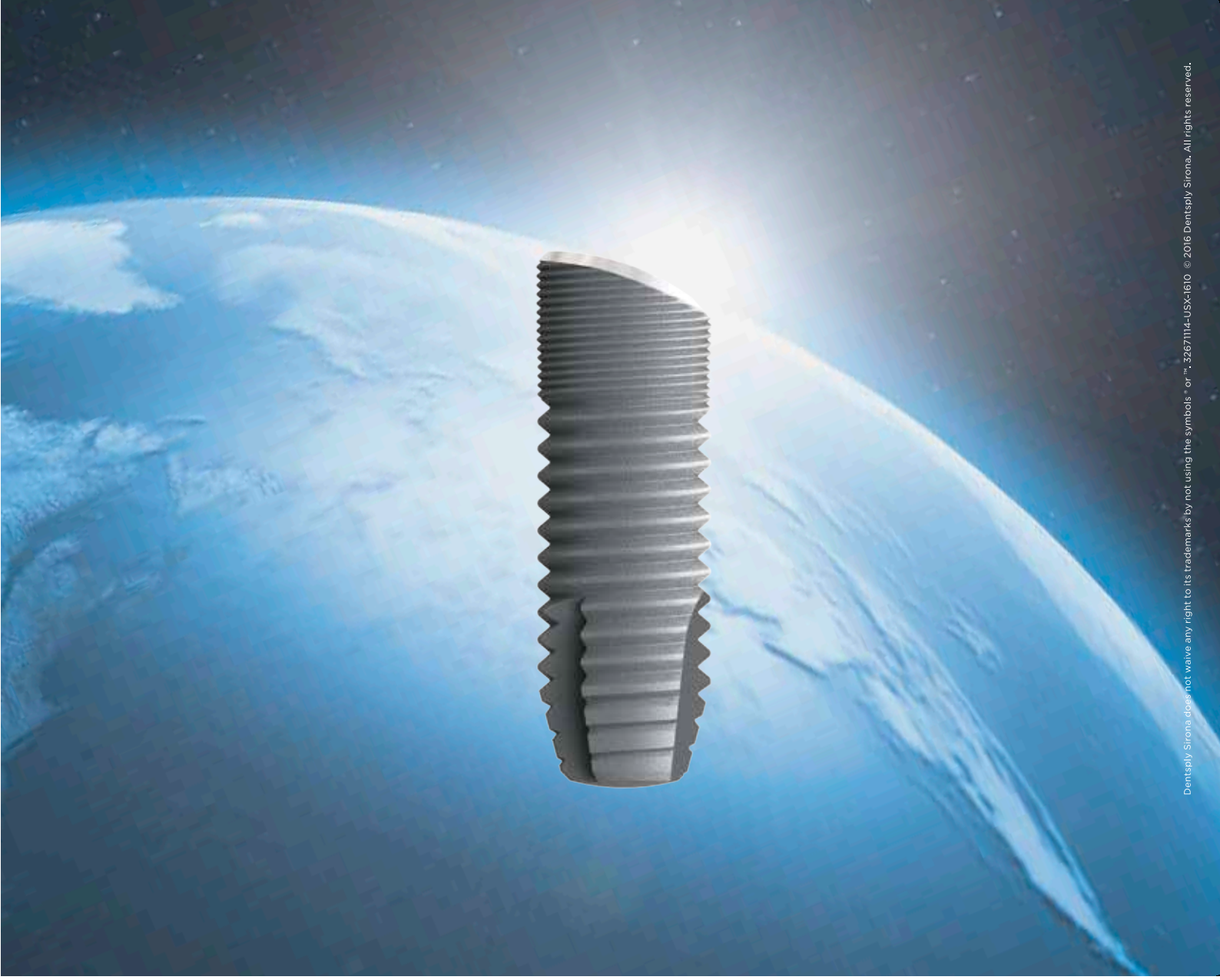
With up to nine hours of verifiable CPD available over the two days of the Scottish Dental Show 2017, there is something of interest for the entire dental team.

Dr Christopher Orr, the event's keynote speaker, will open the show on Friday 19 May with two one-hour lectures, with the first entitled: 'Beyond smile design: planning the whole mouth for function and aesthetics'. His second talk is called: 'Inlays, onlays and endocrowns – is it time to say goodbye to traditional posterior crown preparations?'

Belfast graduate Professor Orr explains what he hopes delegates will take from his two talks: "The two presentations are on quite different topics. From the inlays presentation, I hope that they will come away

with an understanding of some new ways of working, which can be implemented the next day in the practice. And from the treatment planning lecture, I hope that they will gain an understanding of the bigger picture of planning a mouth for aesthetics and function."

To register for your FREE delegate pass, visit www.sdshow.co.uk/register



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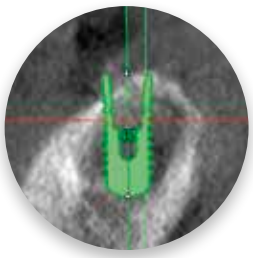

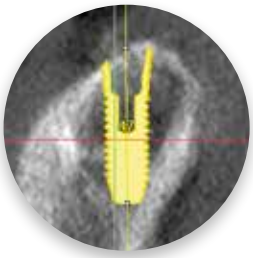

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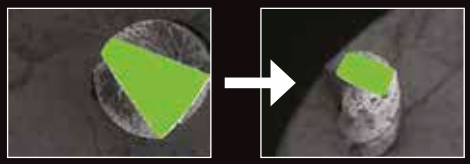

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11 March
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11-13 May
IDA Annual Conference 2017
Lyrath Hotel, Kilkenny
Visit www.dentist.ie

12-13 May
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15 May-15 June
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18 May
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19 May
Scottish Dental Awards 2017
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Word of mouth

with Dr Paul O'Dwyer

Time for a makeover?

With the green shoots of recovery now taking hold, is it time to give your practice a bit of love and attention?

Who knows where the time goes? As we settle in to another year, with January left behind, a new reality is dawning. The US has a new president, Brexit appears to be about to become a reality and global markets are jittery. On the domestic scene, our minority government is still in power and noises are being made that the health system is in for another overhaul.

The green shoots of recovery appear to be taking hold. Unemployment is dropping and house prices are rising. With these indicators showing people going back to work, with it comes (hopefully) some more disposable income. In the past, this column has looked at the impact this makes on patients returning to your practice – and hopefully this is continuing to happen. However, I'd like to take a look at our partners in the industry of dentistry rather than just the profession of dentistry – that is the dental suppliers.

In the last few lean years, dental equipment (large and small) saw a significant reduction in sales. This was due to patient numbers dwindling and the resultant decrease in income for dentists. This meant we were less likely to invest in new equipment. As the economy picks up, patients return and disposable income increases, it's time to literally 'take stock'.

On visiting the stands at recent trade shows, I've asked about trends in the market place. It strikes me again and again, how industry commentators and leaders mention the value of refurbishment and re-fit – particularly for practices that are 10 years or older.

From my own experience and talking with many other dentists, there was a small boom of new practices between 1998 and 2005. These practices have now been open 12-20 years. The rule of thumb normally in most practices is: small facelift at year five, minor refurbishment at year 10 and overhaul at year 20. With this in mind, and taking into account the vagaries of our precarious economic recovery, I would suggest that many older practices take the time to look at their current kit, waiting room and fixtures. In planning ahead for the next few years and indeed possible sale, now is the best time to invest.

The recent introduction of industry awards has seen an increased awareness of fixtures and fittings, something that patients have noticed too. In welcoming back absent patients and encouraging new patients through the door, it's nice to have a bright and cheerful waiting area. I've mentioned in this column before that there are dedicated outfitters just for dental surgeries in the US which underlines how far the profession has come to view itself in recent years.

Trends in this area have swung from clinical and spartan mint greens/pale blues to opulently chic waiting areas reminiscent of a boutique hotel. The tone of the practice and its location tells a lot about the expectation of the patient base (clientele) and, tellingly, the expectation of the practice itself.

Sometimes, we need to stop and take a look around our surgeries to see if the surroundings mirror the high level of dental treatment we are providing. Patients tend to dwell on the tangible: "Nice waiting area/friendly staff/easy access/handy parking," rather than the intangible (to them) i.e. beautifully carved amalgams...

As the tide rises, it will hopefully lift all boats and, in keeping the keel even, let's think about a lick of paint for the old boat too. Our dental suppliers are our partners in keeping our practices bright, attractive, modern and inviting. Hopefully, this year will see an upturn for us all, whatever else happens globally.

"In welcoming back absent patients and encouraging new patients through the door, it's nice to have a bright and cheerful waiting area"

The root of all dental fear

Journalist Grace Vaughan talks about her experiences with dentistry and how she managed to face her fears of the dentist's chair

Fear of anything can have a serious and negative impact on a person's quality of life. When we develop a phobia we do one of two things, confront or avoid. Some phobias can be avoided, like the fear of flying (if you're happy to spend your life solely travelling by boat and train) but others are not so easy to avoid, like the fear of the dentist, which is an all too common phobia. Granted, you can dodge the needle and drill in the short term but one painful gum abscess and raw nerve later and you'll be screaming out for a dental appointment.

Dental phobia like any phobia often has its roots (excuse the pun) and, for some people, that can derive from a previous bad experience in the dental chair or, as in my case, it is brought on by something much more complex.

When you're a child, everything appears bigger

My dental phobia began with my first trip to the dentist when I was six years old. Back in the 1970s, routine visits to the dentist were unheard of and people only tended to go out of necessity – for example, tooth pain that became intolerable. The cavity in my tooth had gotten bigger and was causing pain so a teacher advised a visit to the dentist.

Even though I'd never been to a dentist before, I'd heard stories about people going and how they dreaded it because there was pain involved. So already I had other people's fear of needles and drills projected onto me – but in the end it wasn't the injection that proved most traumatic, it was the dentist himself and the fact that he had an artificial eye.

When you're a child everything appears bigger and I can still recall it, the memory of this big shiny glass eye peering into my mouth and the panic I felt, thinking the dentist is going to take the wrong teeth out because he's half blind.

He didn't, of course, and the decayed tooth travelled home with me in a little plastic cup to show off to my friends at school the next day. But the trauma quickly turned to fear and it was a very long time before I went back to a dentist again – and only when I had to, if I had a gum abscess, say, and the whiskey-soaked cloves in cotton wasn't cutting it in the painkilling stakes.

The fear was so great I tried to pull out my own teeth

Some people will go to any extremes in order to avoid their fear. You often hear stories of people with a fear of dogs, germs or open spaces, never leaving their house. In my case I resorted to using a knife to try to extract my own teeth. However, all I succeeded in doing was breaking said teeth down to the roots and developing mouth ulcers from the shards that cut into my tongue and cheek. Eventually the broken roots needed to

"I found people who conquered phobia with the aid of a good dentist with a real understanding of dental anxiety"

go too but not before I did my research, found people who suffered with dental phobia but conquered it with the aid of a good dentist with a real understanding of dental anxiety or odontophobia, to give it its technical name.

In the end, I did find a kind and gentle dentist who extracted the remainder of my broken teeth. However, the residual fear remained and I didn't make the regular six-monthly check-ups like I promised myself I would. The next visit to the dentist was post-pregnancy with a broken filling and after that a couple of sporadic visits to have my teeth cleaned. The fear might have lessened dramatically but I hadn't quite conquered it.

The fallout

The old adage "you don't know what you have until it's gone," is very fitting when it comes to teeth, and losing them. It turns out our back teeth are more important than we give credit for as chewing food is not their only function. I discovered that posterior teeth act like scaffolding, a support system for the jaw muscles and, when they are taken out, the jaw muscles start to collapse causing cheeks to become sunken and the face to appear aged.

And that's just the aesthetics. The remaining teeth that are overcompensating for the missing teeth start shifting to bridge the gaps and from that TMJD (Temporomandibular Joint Disorder) can develop, with symptoms ranging from jaw pain, headaches to ringing in ears.

If like me, you work at a computer all day long, you are at greater risk of developing TMJD – as sitting at length in front of a screen unconsciously clenching the jaw to aid concentration stresses out the facial muscles and that's how pain occurs. Had I known that the fall-out of a dental fear would result in having to wear an uncomfortable mouth guard at night, albeit with little success, I would have confronted my fear a lot sooner. Because now only implants would fix the problem but it would be an invasive procedure, not to mention expensive.

Evolution in dentistry

Having heard horror stories about people seeking dental treatment abroad I opted to stay local and book consultation for dental implant procedure. Thankfully, from the moment I walked into Boyne Dental, in Navan, Co. Meath, I realised how far dentistry had come. It was a far cry the practice where my dental journey began at the age of six with its pokey waiting room, grey plastic chairs and two miserable magazines to share among a roomful of glum patients.

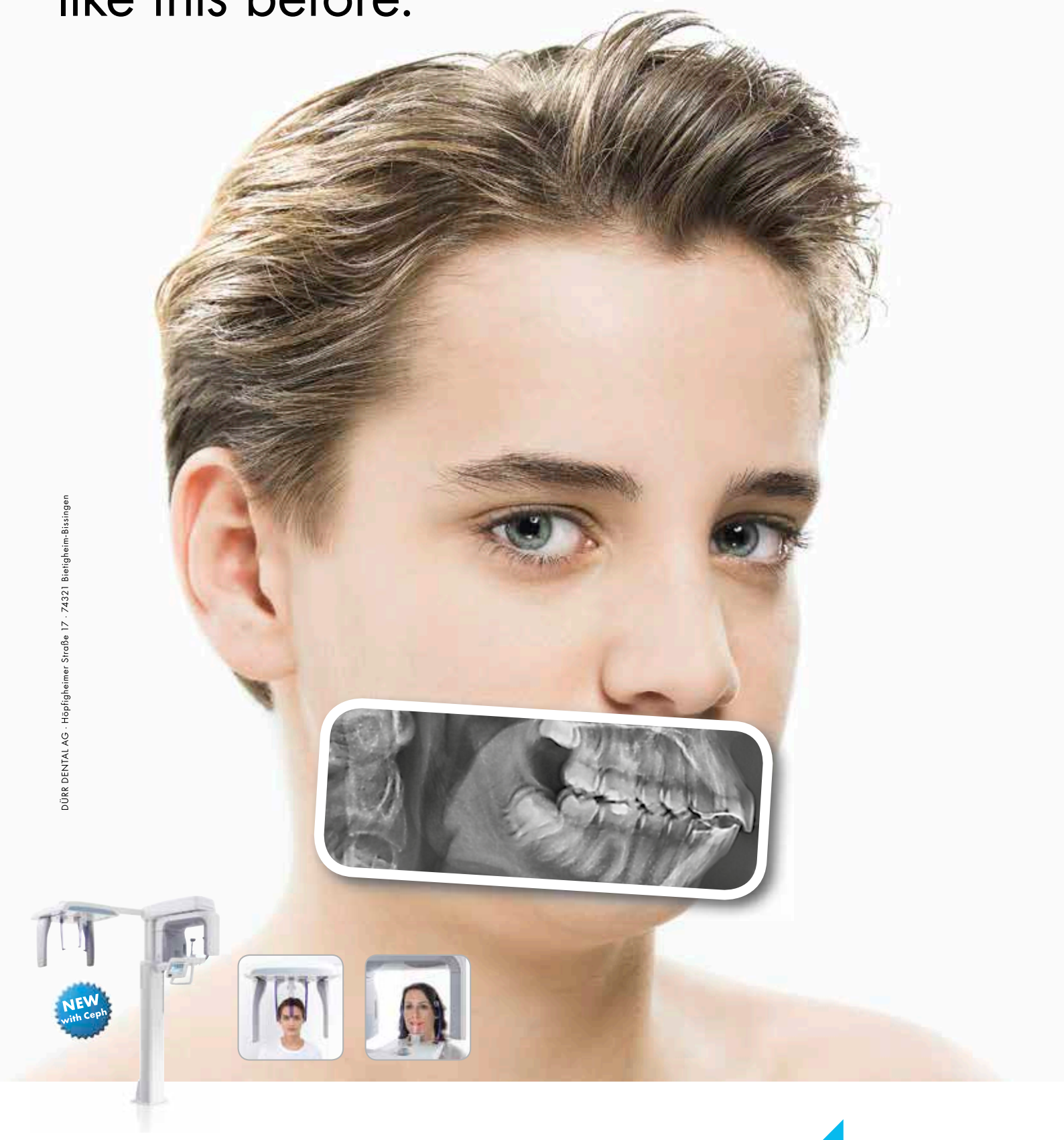
The reception area of Boyne Dental was like stepping into a stylish café clad with modern round tables and funky chairs. Staff freely floated around welcoming and reassuring people that their appointment would be

Continued »

ABOUT THE AUTHOR

Grace Vaughan is a writer with an MA in Scriptwriting from the Dún Laoghaire Institute of Art, Design and Technology. Her work has been featured regularly in national news site publications – Independent.ie and Journal.ie – and on online parenting sites both here in Ireland and the UK – MummyPages, Eumom.ie, HerFamily.ie, and Mumsnet.com

I've never seen Philip like this before.



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soon. Instead of picking up one of the array of magazines as I sat down, I surveyed the spacious reception its bright walls tastefully decorated in artwork celebrating the local heritage. Instantly I relaxed because with modern décor comes modern medicine. And modern medicine in dentistry means minimal pain during any procedure.

One to greet his patients personally, Dr David Murnaghan descended the stairs and introduced himself with a warm handshake. We chatted as we made our way up to his office which I was surprised to find was equally as spacious. Having been to a few dental surgeries over the years, although many things had improved, surgery sizes remained the same in that they were all small. While I sat on a couch chatting about the possibility of dental implants, an assistant worked quietly at two computer imaging screens displaying 3D X-rays.

I realised that every sensory reminder of that first bad trip to the dentist were absent – the sound of the drill, the smell of antiseptic, the sight of people with bloodied cotton wedged in their mouths. In its place was light-hearted banter between David and his assistant and a TV in the background with low volume nature sounds. Everything felt different. Looked different. Even the dreaded dental chair looked more inviting with its soft leather.

"Everything felt different. Even the dreaded dental chair looked more inviting"

Nobody relishes the thought of a stranger rummaging around inside their mouth but I was soon soothed when I reclined back and watched the flat screen overhead of polar bears playing in icy water. I found myself biting back a tear, not of pain or fear but of relief at how different things were now compared to that of my childhood. It made me think of my own children and how going to the dentist will be a much more pleasant experience for them and they'll go so often it will be like... brushing teeth.

Know the drill

After scans of my teeth and jaw, it transpired that I was not a candidate for dental implants, well not for the standard, straightforward procedure anyway. The recommended time for getting that type of implant is within six months of the tooth being extracted. After that, bone loss starts and you're quickly in the realms of more invasive and expensive surgery involving bone grafts.

But, it wasn't all bad news. I was in good health generally. Apparently dentists can detect more than just gum disease – the mouth being the gateway to deeper parts of the body – can display signs of heart disease, diabetes and oral cancer.

If I've learned anything about my journey through dental fear it is this. Control. Or lack of. As a patient you are not in control, the dentist is. And you put your trust in their hands, literally. Education is a great thing but too often text books are about the body, the condition and not enough about the person.

When it comes to dental anxiety treating the whole person instead of just the problematic truth can make a world of difference. A simple question like asking how the patient feels can help a dentist gauge the psyche of that patient. Some adults don't like to show fear as they feel they'll be judged as weak – but the reality is that for many, once they step through that surgery door, whether it be a GP's or a dentist's, they regress into that vulnerable child who feels afraid and less in control. A good dentist will already know this.

If we don't feel empathy for patients then we've no business treating them. ■

New to Scotland and Ireland

Endosseous Ltd has recently been awarded the sole distribution rights for Bego Implantology within Scotland and Ireland

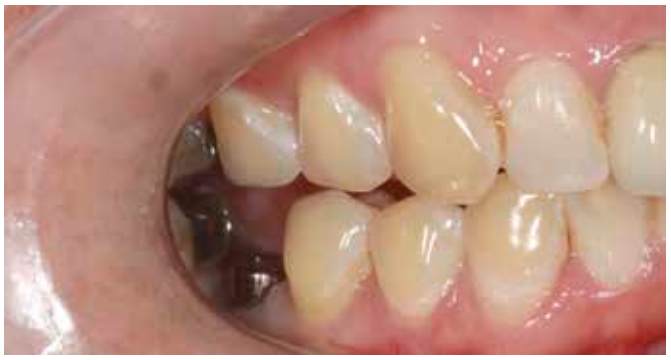
Endosseous directors Alexander Adair and Colin Hogg are thrilled to be teaming up with one of the oldest and most well-respected dental companies within both Germany and throughout the globe.

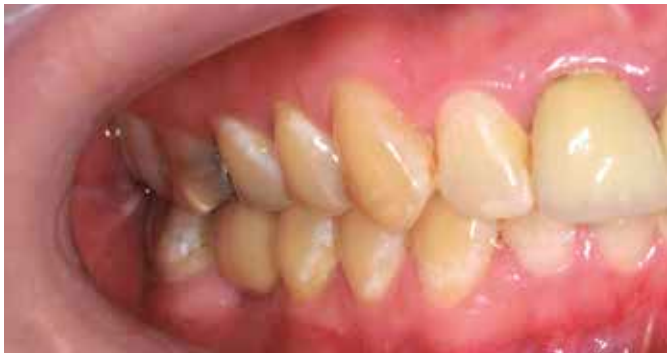
In 2016, Bego celebrated its 125th anniversary. Its motto, 'Partners in Progress' is a philosophy integral to the entire ethos of Endosseous Ltd.

Alex said: "We formed in May 2016 and are drawing on a wealth of experience. Our intention is for Endosseous Ltd to lead the way within the UK dental implant market by combining our experience with renowned German expertise. Between us, we have more than 50 years of involvement with dental implants – myself within the technical aspect of the business for more than 30 years, and Colin within the commercial side for 20 years.

"Our motivation is to offer clinicians excellent value while delivering a comprehensive and well-researched implant system. There has been a paradigm shift within our industry. More and more dental professionals are seeking solutions which (a) work and (b) are cost effective, without compromising patient outcome. To prove that it can be achieved, and in a first for our industry, Bego will guarantee not only their components but the prosthetic work as well.

"We know that every implant practice has different needs and wants. We are uniquely positioned to support our clients to deliver solutions which please both themselves and their patients. Our customers are our business and not just a number on a computer system."





(LEFT – BEFORE AND AFTER) One of the very first Bego implant cases, picture courtesy of R Murphy. Lab work by Vitality Dental

Within its portfolio, Endosseous has several implants for different treatment indications:

S-line implants

A parallel-sided implant for all bone qualities. Standard V-shape self-tapping threads provide good stability. The reducing thread depth around the neck is achieved by expanding the core diameter, while maintaining the outer diameter to reduce stress and maintain marginal bone. This is in addition to the moderately roughened surface and an implant interface, which more than matches the strength of similar implants. The interface consists of a deep internal hex, along with an internal 45° cone, which provides resistance to horizontal forces and maintains the integrity of the micro-gap.

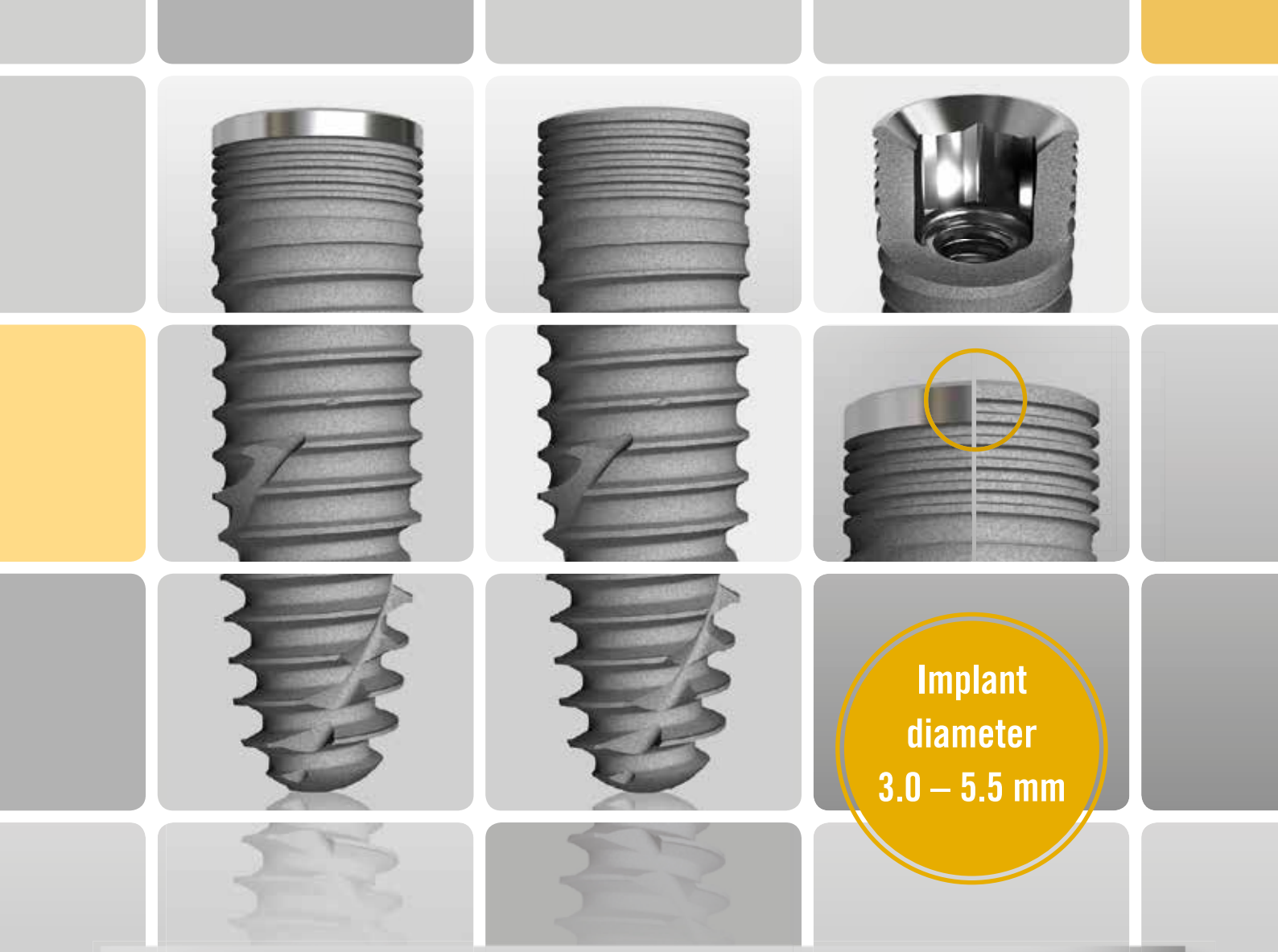
RS(X) implant

The implants in the RS/RSX-Line display a conical implant body. The implant body is equipped with a self-tapping, bionic thread. The bionic thread reduces the mechanical loading on the implant body and is advantageous for the surrounding bone. The implant-abutment connection was designed employing the tried-and-tested principle of the 45° cone. The 45° cone allows biomechanically advantageous transmission of forces from the abutment to the implant. At the same time, no micro-gap appears when subjected to physiological loading. The RS/RSX implants feature platform switching of 0.25 mm. The platform switching reduces the loading peaks in the bone along the bone margin.

Mini-line

Ideally designed for the edentulous jaw, narrow ridges with pronounced resorption and the small anterior gaps, the Semados Mini-Line enables implant solutions that might have been overlooked for more traditional treatment. The Semados Mini-Line provides an economical and swift restoration. ■

To complement the implant range, Endosseous offer the complete range of prosthetic solutions from convention cast on abutments, stock abutments to CAD milled abutments and bar frameworks, and a comprehensive range of regeneration products.



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Chronological versus biological age

When it comes to treating the ageing population, the best treatment might not be the most appropriate

Fig 1
Removable partial chrome cobalt denture

In 2013, 14 per cent of the world's population was over 60 years of age. It is estimated that, by 2050, this figure will have increased to 19 per cent[1]. However, as people age they develop more health conditions. Multimorbidity is the "presence of two or more diseases in one person"[2]. Research indicates that, by 70 years of age, 63 per cent of people can expect to have developed two or more disorders[3].

Common chronic conditions in the elderly include cardiovascular disease, type 2 diabetes, depression, COPD and osteoarthritis. Multimorbidity has been shown to impact immune function greater than age alone[4].

These multiple chronic conditions can also result in polypharmacy where patients have to manage an increasing number of medications. In Europe, over half of the elderly population take more than six medications per day[5]. This results in an increased risk of adverse drug events. Treatment plans for an elderly patient should be based on their individual risk factors, functional difficulties and preferences.

A growing elderly population increases the indications for partial removable dental prostheses and expands the indications for implant therapy. When considering implant surgery in elderly patients, pre-operative medical fitness is more important than chronological age[6].

The standard of care in geriatric patients has to be adapted to the patient's motivation, medical condition and socio-economic circumstances. Oral health can significantly affect an elderly patient's nutritional intake. It has been found that complete denture wearers have thinner masseter muscles whereas implant retained over-dentures lead to increased muscle thickness[7]. Unlike most adults, a BMI >25 in elderly patients is associated with reduced mortality. It is therefore important that elderly people can chew adequately to avoid restricted diets that offer lower nutritional values[8].

Medical consideration in elderly patients considering dental implant treatment

Cardiovascular diseases

These can be divided into atherosclerosis, hypertension, chronic heart failure and atrial fibrillation. A recent myocardial infarction, stroke and cardiovascular surgery is an absolute contraindication to implant surgery[9]. Medical control of the disease is imperative prior to implant therapy. Patients with stent implantation after coronary artery disease usually have dual antiplatelet blood-thinning therapy to prevent clot formation.

Bleeding disorders

Bleeding can be prolonged in patients with haemophilia or those taking medication such as warfarin for anticoagulation. Current recommendations advise against modifying the anticoagulation provided the INR is <3.5. The exception may occur upon consultation with the patient's medical team in cases of high-volume bone grafting or extensive flaps. Splints can be used to manage expected bleeding.

The number of patients taking new oral anticoagulants such as dabigatran and rivaroxiban is increasing. New oral anticoagulants do not require monitoring, but they

lack a reversal agent. It is important that dentists follow the most recent guidelines regarding the management of these patients, especially when considering invasive implant surgery [10].

Poorly controlled diabetes mellitus

This can result in delayed wound healing, an impaired response to infection and susceptibility to periodontal disease. Dentists should check their patient's HbA1C (glycosylated haemoglobin) prior to implant placement. Implant and bone augmentation surgery in an uncontrolled diabetic can lead to serious wound healing complications.

Osteoporosis

A decrease in bone mass and bone density increases the risk of fracture. Oral bisphosphonates reduce osteoclast function increasing the risk of bisphosphonate-related osteonecrosis of the jaw. Oral bisphosphonates are a potential risk factor for osteonecrosis of the jaw but not for implant success and survival[11].

Chronic obstructive pulmonary disease

Chronic bronchitis and emphysema result in a chronic cough, sputum production and shortness of breath. Special consideration needs to be given to the type of local anaesthetic administered. It is recommended that the maximum dose of local anaesthetic be halved in patients >65 due to reduced liver function[12]. Also dentists should be mindful of the risk of adrenal insufficiency in elderly patients taking long-term steroids.

Psychological conditions

Depression is common among the elderly population. At the age of 90, three out of four patients have a diagnosis of dementia [13].

Treatment planning options

Shortened dental arch concept

The shortened dental arch is where 10 upper teeth oppose 10 lower teeth [14]. Dentists can reduce the biological risks for the patient and avoid problems of low acceptance by providing this treatment option[15]. Gerritsen et al concluded that a shortened dental arch can last for 30 years and that there is no recommendation for adding a partial denture. McKenna et al also examined the shortened dental arch concept in 89 patients who were >65 years old. His results demonstrated a better oral health-related quality of life score in patients with a shortened dental arch compared with those wearing removable partial dentures [16].

Removable partial dentures (RPD)

This is an economical prosthodontic solution involving sound abutment teeth for increased retention. It helps maintain teeth of strategic value if implants are not an option[17]. The prosthetic flange can also maintain facial fullness. However, abutment teeth for removable partial dentures are high risk for both caries and periodontal disease.

Prognostic factors for partial RPD abutments include [18]:

- Crown-root ratio
- Root canal treatment
- Periodontal pocket depth
- Type of abutment – multi-rooted maxillary molars can make for unfavourable abutments
- Occlusal support and function of the abutment tooth.

Partial removable dentures with implants

Conventional dentures have limitations as oral function can decline with age. Old age is not a contraindication for dental implant treatment however; some medical conditions can increase their risk of failure. It is the degree of systemic disease control that is important rather than the nature of the disorder itself. Dentists should consider the American Society of Anesthesiology's (ASA) Classification. The ASA restricts dental implants to ASA 1 and 2 patients. Implant placement may be undertaken in some very carefully considered ASA 3 cases.

In comparison with conventional dentures, implant over-dentures have the advantage of slowing peri-implant bone

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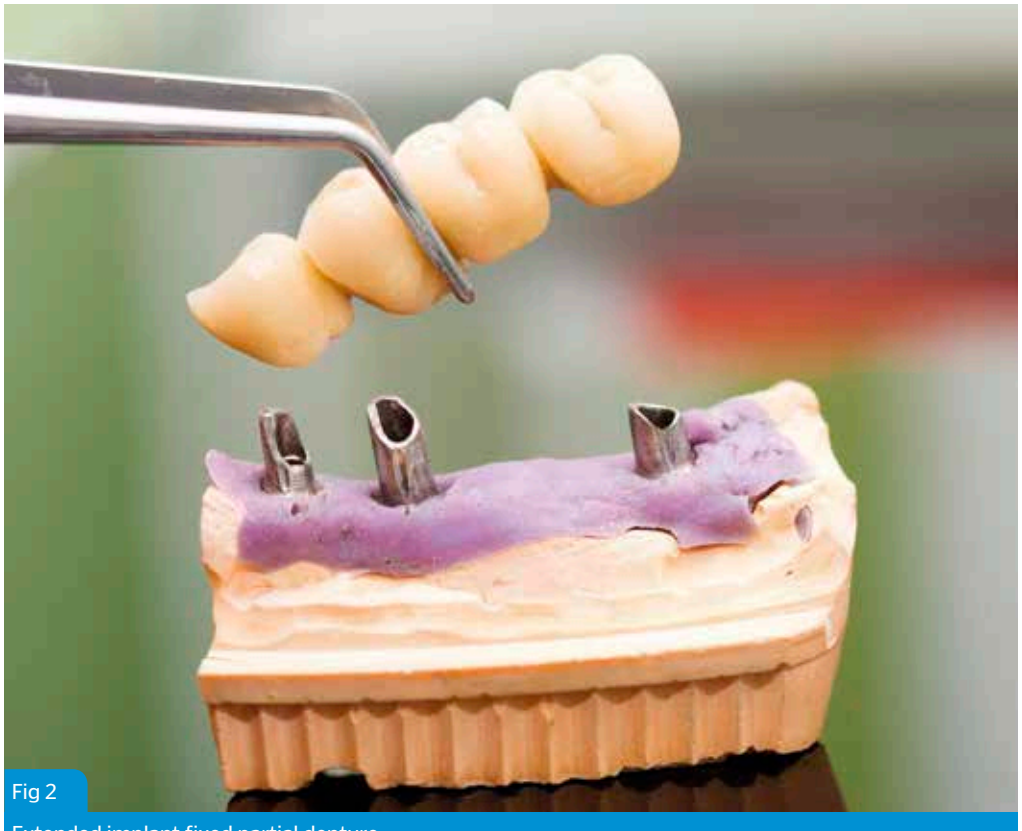

Fig 2
Extended implant fixed partial denture

ABOUT THE AUTHOR

Dr Laura Fee graduated with an honours degree in dentistry from Trinity College, Dublin. During her studies, she was awarded the Costello medal for undergraduate research on cross-infection control procedures. She is a member of the Faculty of Dentistry at the Royal College of Surgeons. In 2013 she completed the Certificate in Implant Dentistry with the Northumberland Institute of Oral Medicine and has since been awarded the Diploma in Implant Dentistry with the Royal College of Surgeons Edinburgh. Laura is currently completing the Certificate in Minor Oral Surgery with the Royal College of Surgeons, England. She has also been involved with undergraduate teaching in the School of Dentistry, Belfast, where she has an honorary oral surgery contract.

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resorption and preventing bone atrophy[19]. There is also a significant improvement in chewing ability with two lower implant supported over-dentures as a result of improved muscle co-ordination. Implants increase support, retention and can improve the aesthetic outcome by avoiding the use of clasps which results in greater patient satisfaction.

Strategic implant positioning can also help toconvert a Class I and Class II Kennedy arch into a Kennedy Class III configuration following the extraction of a hopeless abutment. This improves the elderly patient's ability to eat harder food. This encourages elderly patients to eat a more diverse diet, which not only boosts their nutritional intake, but also enables them when socialising to finish their meals at the same time as family and friends[20].

Implant-supported over-dentures are also associated with psychological benefits such as improved social interactions and better self-confidence. Wismeijer et al examined patient satisfaction among 36 conventional and implant assisted partial denture wearers[21].

The results showed a significant improvement in patient satisfaction with support of healing caps on implants as opposed to the conventional partial removable denture by itself. There was an even greater improvement in patient satisfaction when ball anchors were attached to the implants for retention.

In cases where patients are fully edentulous the recommended configurations are as follows:

- Four or more implants in maxilla
- Two or more implants in mandible.

Removable options for the fully edentulous patient

The McGill Consensus statement on over-dentures recommends that "a two-implant over-denture should become the first choice of treatment for the edentulous mandible" [22]. Implant-retained over-denture designs should be easy to clean, repair and also to re-activate retention. Long-term results suggest that a mandibular over-denture retained by two implants with a single bar may be the best treatment strategy for edentulous patients with an atrophic ridge.

A bar can remove pressure from the tissue[23]. There appears to be no influence with regards to the length of the cantilever arm (up to 12mm) and crestal bone loss[24]. There is also good evidence to support the use of four implants with single retentive elements in the maxilla with a conventional loading protocol[25].

Combination syndrome

Two implants have an axis of rotation meaning that forces on the posterior ridge are higher than if the patient had a complete denture. Anterior flabby ridges and more posterior ridge loss can result from two implants necessitating more frequent denture relining in the upper jaw[26].

Short and reduced diameter implants

Short and reduced diameter implants are increasingly making dental implants possible in low and narrow alveolar ridges. They preserve bone and reduce the mouth opening requirements for an elderly patient. The surgery is less invasive and the need for augmentation procedures is eliminated, which results in less surgical morbidity. The reduced complexity of the procedure also reduces the financial burden on the patient.

Implant configurations for Fixed Dental Prosthesis (FDP)

It is not necessary to replace every tooth that is missing in an elderly patient. Careful assessment is required when choosing the type and dimensions of implants. The minimal distance between teeth and implants must be respected and also bearing in mind the need for pink aesthetics. Short edentulous spaces that comprise of three missing teeth can normally be restored with two implants. Cantilevers help avoid bone augmentation procedures which can reduce the surgical morbidity for elderly patients.

Extended edentulous spaces have greater than three teeth missing. Implant positions are determined by the prosthodontic plan considering the number of teeth to be replaced, anatomical limitations and the bone volume present. When four teeth are missing in the anterior region, two implants and a FDP with a pontic or cantilever design can be utilised. When four teeth are missing posteriorly two to three implants are usually sufficient, utilising a one piece or segmented design.

An edentulous ridge can be restored with a one-piece FDP or three to four segmented FDPs. A full-arch one-piece FDP requires four to

Continued »

Fig 3
Lower implant over-denture bar

"Dentists can provide life-changing treatment for patients of advanced age"

Continued »

six implants. Utilising the shortened dental arch concept or cantilever units can help reduce the number of implants required for a FDP in the edentulous ridge. The implant sites should be evenly spaced if possible. Cantilevers can eliminate the need for a sinus augmentation procedure in the maxilla. Distal implants can also be straight or tilted to avoid anatomical structures.

Full arch segmented FDP are indicated in certain cases where patients have gradually lost teeth or if segments need to be removed for periodic cleaning. Full arch segmented FDPs usually require more implants, such as eight in the maxilla and six in the mandible. The implants can be strategically positioned to allow three to four short-span implant-supported FDP [27].

Conclusion

Dentists can provide life-changing treatment for patients of advanced age. Minimally invasive interventions with reduced healing times are recommended. Strategies for successful dental treatment for elderly patients must allow for frequent breaks, postural issues and increased chair time. Access and mobility issues can become barriers to care as patients become more reliant on others and experience reduced autonomy. It must be borne in mind that complications and prosthetic repairs are frequent[28].

Objective information should be clearly provided in writing and, where possible, with pictures. Declining cognitive function can affect a patient's understanding of treatment, which raises the issue of valid consent. It is important that patients have proven oral hygiene compliance. A prosthesis which is easy to manage and straightforward to clean will increase patient acceptance [29]. Neuroplasticitiy reduces in ageing patients making it difficult to develop new muscular patterns when adjusting to a denture.

Careful case selection is crucially important for patients advancing in age. It is important for dentists to address the patient's specific concerns and to remember that the best treatment may not always be the most appropriate. Modifications that make denture management easier such as unscrewing an implant ball attachment and relining a denture can dramatically improve an elderly patient's quality of life. The goal of treatment planning should allow for simple therapeutic step-back solutions if the patient enters a period of decline. ■

Fig 4
Implant-retained over-denture

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Zirconia implants – an alternative

Oral surgeon Vaidas Varinauskas argues that there are significant benefits in using zirconia implants as opposed to titanium

Teeth implantation and prosthetic restoration on implants have been lately more and more acceptable by patients as a standard treatment method to restore a reduced chewing function, which significantly influences their life quality. In more complicated clinical situations, long-term successful outcomes can be planned with modern regeneration and dental implantation systems of hard and/or soft dental segment tissues.

Since the discoveries of Professor Per-Ingvar Brånemark, the father of osseointegration, titanium implants have been routinely used for lost teeth replacement due to its well-documented biocompatibility and suitability for tooling. This material has been used for about 50 years as implant substrate with very high success rates. However, such implants can corrode and degrade, thereby releasing ions. Titanium allergy is barely recognised in mainstream medicine. About four per cent of all patients tested will be allergic to titanium [1].

For those affected by titanium allergy, the symptoms can range from simple skin rashes to muscle pain and fatigue. Like all metals, titanium releases particles through corrosion. These metals become ions in the body and bind to body proteins. For those who react, the body's immune system will attack this structure. This starts a chain reaction which can lead to many symptoms including chronic fatigue syndrome. Patients and dentists do not want to accept this and are looking for an alternative.

"Zirconia possesses superior mechanical properties such as higher tensile strength"

One possible alternative to titanium is zirconia, one of the tooth-colored materials. Zirconia became an attractive alternative material in dentistry because of its high aesthetic potential and comparable strength to traditional metals. Zirconia possesses superior mechanical properties such as higher tensile strength, compressive strength and modulus of elasticity when compared to pure titanium. Zirconium is a chemical element with atomic number 40, in the periodic chart it is located next to titanium and their properties are very similar. It is a hard metal, resistant to corrosion and similar to steel. It does not exist in nature in the pure state. It can be obtained through complex physico-chemical process.

Zirconia has proven its utility in dental implants through a series of animal and human clinical studies[2] wherein it has been shown to successfully osseointegrate into bone and be highly biocompatible[3]. Zirconia implants have been available on the commercial market since 2001. The current

Continued »

ABOUT THE AUTHOR

Dr Vaidas Varinauskas, PhD is a registered oral surgery specialist with the Irish Dental Council.
He is member of the Irish Association of Oral Surgery (IAOS) and a member of the International Team for Implantology (ITI).
He often shares his experience, lecturing and presenting courses in various conferences and seminars. He is author and co-author of 13 articles in refereed scientific journals related to teeth implants and oral surgery.
In October 2014, Vaidas was rewarded with PhD degree at Lithuanian Health Science University for defending his theses on *Functional study of overloading of symmetrical dental implants and fixed full-arch restoration in edentulous jaw case by finite element method.*
He accepts cases of minor oral surgery, dental implantation with metal-free 100 per cent ceramic dental implants, guided jaw-bone regeneration (3-D bone block augmentation) and recessions around teeth and implants covering with soft tissue grafts.

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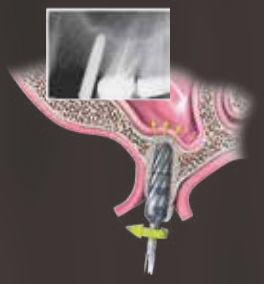

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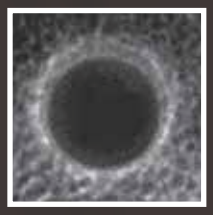

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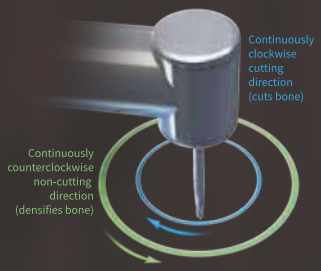

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A zirconia dental implant has the colour of a natural tooth so does not shimmer through in the cases of thin or recessed gums. This allows patients to have a natural-looking and aesthetically-pleasing outcome. Zirconia is a biocompatible material that is resistant to chemical corrosion, nor will it conduct electricity or heat. As a bioinert material, it will never trigger chemical reactions, migrate to other sites in the body or interfere with the maintenance of optimal oral health. Since zirconia implants are bioinert, they're a perfect tooth replacement solution for patients who adhere to holistic health principles.

Indications:

- All aesthetic zone cases, especially in thin biotype gingival cases
- Patients with metal allergies and chronic diseases resulting from them and as an alternative to titanium implants in any intraoral location
- Single tooth replacement in cases of high smile-line
- Single tooth replacement in back teeth region
- Immediate implantation after tooth extraction
- Multiple missing teeth replacement
- All-on-4 technique (whole dental arch restoration on four dental implants) for top and/or lower jaw
- All-on-3 technique (whole dental arch restoration on three dental implants) for top jaw only
- Implants for the fixation of full or partial denture.

Contraindications:

- Patients that exhibit a lack of compliance to post-surgical instructions
- A lack of operator clinical and technical knowledge about implant surgery and prosthetic restorations
- Any other general contraindications to implant rehabilitation such as bruxism.

At this moment we have two concepts of zirconia implants – one-piece and two-piece implants with zirconia abutments.

Main aspects of one-piece (mono-block) tissue level zirconia implant

The one-piece tooth implant was conceived in an attempt to copy nature – tooth as a solid crown-root unit. The one-piece implant has no micro gap between implant and abutment, no loosening of fixation screw. Eliminating the micro gap between the implant body and abutment eliminates the possibility of bacterial attachment and inflammation. Without a micro gap, there is less long-term soft tissue irritation. The solid implant allows axial forces to be applied into a solid structure without attachments. Correct implant positioning at the time of implantation is critical to the success of the restoration and aesthetics of the final crown.

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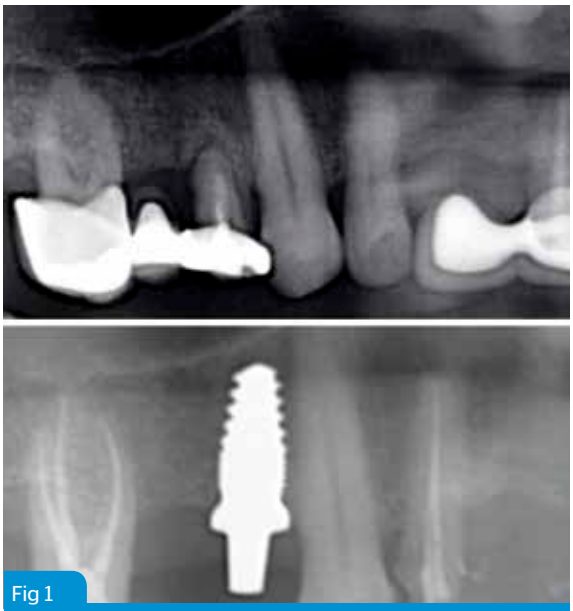

Fig 1
Before and after X-rays showing zirconia implant in situ

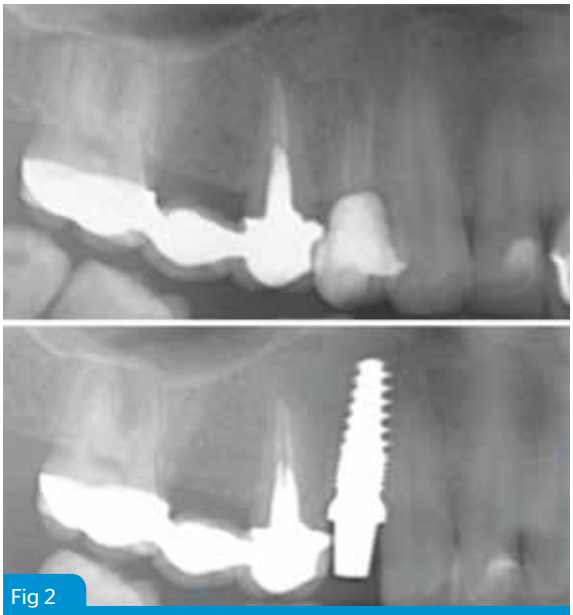

Fig 2
Single zirconia implant placement

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Fig 3
Before and after X-rays and intra-oral photograph

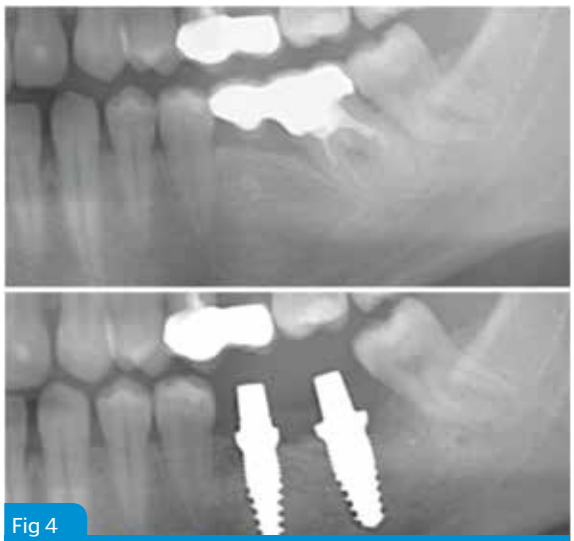

Fig 4
Before and after X-rays showing zirconia implants in situ

Continued »

Whereas a two-piece implant system can compensate for implant body positioning by using angled abutments, one-piece implants have limited compensation ability. Only around 20 degrees of correction through preparation of the abutment can be applied. It can be done intra-orally, as ceramics do not conduct heat like metal or natural tooth structure – maximum bur speed of 160,000 rpm with a minimum of 50 ml/min of irrigation.

Several factors must be taken into consideration when planning for one-piece zirconia implant cases. The total number of implants, diameter, length and position should all be based on the available space, quantity and quality of bone. The shortest available one-piece zirconia implant is 8 mm. Bone grafting procedures should be undertaken when necessary to achieve minimum height of supportive alveolar bone. All zirconia one-piece implants should be surrounded by 1.5 mm of bone, with 3 mm of bone between two implants.

In one-piece implant cases, for faster, easier and precise prosthetic work, companies have created impression copings made of zirconia that can be used as a pick-up impression using a closed-tray impression technique. These are zirconia cores perfectly adjusted, for ceramic layering technique or over-pressing.

For one-piece implants, the restorative margin is at gum level and therefore more easy to maintain and keep clean. Significantly less plaque forms on zirconium surface. This reduces the risk of peri-implantitis, cardiovascular disease and stroke.

"Correct implant positioning at the time of implantation is critical to the success of the restoration and final aesthetics"

Locator and ball-attachment monoblock one-piece zirconia implants are intended for surgical implantation on edentulous upper and lower jaws to attach full prostheses in order to replace all missing teeth. On-four locator implants can attach full denture in the maxilla/mandible and only two ball-attachment implants in the lower jaw.

Main aspects of two-piece zirconia implants

These are two-piece glued tissue level implants and screw-retained bone level implants.

Only time will tell if they are better then one-piece implants. At this moment we only have a few clinical studies[4, 5] and longer monitoring is necessary to demonstrate durability

Conclusions

Zirconia was introduced into dentistry in the 1990s because of its excellent mechanical and chemical properties as a material for frameworks, abutments, implants, and orthodontic brackets. Clinical studies published to date indicate that zirconia is well tolerated and sufficiently resistant.

A number of studies have been done to compare the osseointegration of zirconia implants with that of titanium implants and conclusions are that there is no significant difference between the osseointegration of zirconia implants and that of titanium implants.

In my opinion, zirconia-based implants provide a very useful alternative to titanium implants. ■

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Migraines and potential solutions

Niamh Flynn describes the treatment options available for patients suffering from the various types of migraine

Migraines are unlikely to spur action to call one's dentist but many orofacial surgeons will be familiar with patients complaining of this debilitating disease. While it is estimated that 95 per cent of orofacial pain will result from dental causes such as toothache or dental abscess (Scully 2008), migraine can present too and knowing the treatment options available for patients could save potential headaches for patients and dentists alike.

The likelihood of a patient presenting with migraine is not too surprising given the burgeoning number of individuals who suffer with the condition. The International Association for the Study of Pain (2011) found that approximately 5 to 10 per cent of men and 13 to 18 per cent of women suffer with migraine. Approximately 20 to 30 per cent of these individuals will experience aura and neurological symptoms such as visual disturbances.

Approximately 20 to 60 per cent of female migraineurs have migraine attacks associated with their menstrual cycle (MacGregor, 2010). Hormones clearly play a role in causing migraines, particularly in the days prior to menstruation when the oestrogen levels drop. This likely explains why women are up to three times more likely than men to suffer with migraine.

Migraine is different to other types of headache. It is a complex condition typified by severe pain. Some migraine sufferers will also experience sensitivity to light, sound and smell. There are four stages of a migraine episode which have been identified by the International Headache Society (IHS). Not every migraineur will experience all four stages and the number of stages can vary from one migraine to the next. Initial changes of mood and very high or very low energy levels with intense food cravings are typical of the first stage, which is often referred to as the prodrome stage. The aura stage is stage two and occurs approximately 20 to 60 minutes prior to the migraine. Sufferers will report seeing zigzag lines or other visual hallucinations. Other senses can be affected also. Stage three is the migraine itself and that can last between four and 72 hours. The postdromal stage, stage four, is typified by fatigue, difficulty concentrating and gastrointestinal symptoms.

Migraines are painful, debilitating and absolutely disruptive. There is no one definitive explanation for the pathogenesis of migraine although there are several theories which have been put forward. These include a vascular theory, a neurotransmitter theory and a brain stem theory. However, no one theory accounts for all the symptoms which occur in a single attack (Goltman, 1936) which presents a challenge for individuals treating the disease.

ABOUT THE AUTHOR

Niamh Flynn is a sport psychologist specialising in hypnosis and is based at the Galway Clinic, a private hospital in the west of Ireland. She has a masters in sports medicine (MMedSci) from the University of Sheffield, a masters in business administration (MBA) from Michael Smurfit Business School UCD, a bachelor of arts in psychology (BA), a diploma in hypnotherapy and psychotherapy (DHP) and is a certified instructor (CI) with the National Guild of Hypnotists (NGH). Her book End Migraine Fast and clinically proven audio hypnosis programme for migraines, are available to buy via the website www.bodywatch.com

Migraine stages

	Stage 1	Stage 2	Stage 3	Stage 4
	Prodromal	Aura	Headache	Postdromal
Duration	Hours-days	5-60 minutes	4-72 hours	Hours-days
Symptoms	Fatigue Poor concentration Neck stiffness Photophobia Phonophobia Irritability Yawning	Visual hallucinations Hemiplegia Hemihypoesthesia Dysphasia	Throbbing headache Photophobia Phonophobia Nausea/vomiting Otonomic dysregulation Allodynia	Fatigue Difficulty concentrating Gastrointestinal symptoms

Caroline Kinane, a chronic migraine sufferer, has had migraines since she was 16 years of age. She explained how migraines can have a debilitating effect on the day-to-day activities which many of us take for granted. She said: "They (the migraines) started in leaving cert year. Living and working can be challenging. Cooking dinner, answering e-mails and the telephone for example. They all set my head bananas – even thinking to be honest at the moment."

Like many migraineurs, Caroline tries to fight through the pain but anyone who has ever had a migraine will know that this is not an easy thing to do and recently she has had to take time away from work.

"I have suffered from migraines for many years," she said, "but since last March my migraines have become a nightmare affecting my every day life and work, making the simplest plans and tasks impossible to do, which leaves you feeling vulnerable and frustrated. It's my first time ever using a sick cert as I always struggled through, but just not able to this time."

Caroline's migraines last a few days and, while tiredness and pressure have historically been the culprits for triggering her migraines, hormones have started to play a part. She said: "For the past seven months I feel it's hormones which are my main trigger point. I just turned 50."

Whether you suffer with chronic migraine (15 or more migraines a month for three or more months) or episodic migraine (fewer than 15 migraines a month) there are several treatment options available. Traditionally, medication has been prescribed for migraines. More recently, psychological interventions have been considered. A variety of drugs in the level A category, which satisfy the FDA criteria for having established efficacy in two or more class one trials, include antiepileptic drugs such as Topiramate, beta-blockers such as Propanolol and triptans such as Frovatriptan.

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Other drugs which have been established as effective from one class-one trial or two class- two trials are anti-depressants such as Amitriptyline, and triptans suchasZolmitriptan.Theseare termed 'probably effective' by the FDA (Silberstein, Holland, Freitag, Dodick, Argoff & Ashman, 2012).

Only 22 per cent of people with chronic migraine use migraine specific medications and the remaining 78 per cent rely on opiates such as Tylenol or on barbiturates (Bigal, Borucho, Seranno & Lipton, 2009). There are two matters to consider in particular with this approach to treatment. One is the possibility of addiction to opiates and the second is the possibility of hyperalgesia – a condition where the pain killers actually make the pain worse because of increased sensitivity to pain.

For many, orthodox treatment has struggled to provide a complete and effective solution. Heavy duty drugs such as beta-blockers, anti-epileptic drugs and triptans are most often prescribed for migraine and sometimes they are effective. Unfortunately, they also bring complications. The known side-effects of beta blockers, for example, include tiredness, impotence and depression to name but a few. With anti-epileptic drugs, weight gain, difficulty concentrating, dizziness and nausea are just a few of the associated side effects.

Fortunately, there is an effective alternative option with no negative side effects – hypnosis. For centuries, hypnosis has been used to treat every type of pain condition imaginable (Pintar & Lynn, 2008). It is also effective. A meta-analysis of 18 studies found a moderate to large hypnoanalgesic effect of hypnosis for pain management (Montgomery, DuHamel & Redd, 2000).

"For many, orthodox treatment has struggled to provide a complete and effective solution"

These findings were valid for both clinical and experimental pain. Understandably, the preliminary focus of treatment is most often pain management but disability and pain catastrophising are also very often a major concern for migraine sufferers and are frequently neglected in migraine management programmes.

In my own PhD research, I designed, applied and investigated the impact of specific MP3s delivered online to address headache disability and pain catastrophising. Over 10 weeks, a control group and an intervention group were assessed on a weekly basis. The results were significant. A 48 per cent drop in headache disability and a 60 per cent drop in pain catastrophising after 10 weeks. Pain catastrophising refers to negative pain-related thoughts which are defined by rumination, magnification and helplessness (Sullivan, Bishop & Pivik, 1995). The intervention involved listening to the specifically designed hypnosis MP3s three times a week over the intervention.

Proponents of hypnosis will often report side-effects of complete relaxation, feelings of being more in control, reduced pain, and being more positive to name but a few. Some of the concerns people have about hypnosis include fears of being under another person's control, that they will say something they don't want to say and that there is a possibility of not coming out of trance. It is safe to say none of these things are going to happen. In a state of hypnosis you will hear everything that is being said, you will not say anything you don't want to say and you can come out of trance any time you choose to.

Nothing is a panacea for all ills and all individuals but the evidence-based research is certainly something to consider for those who have no desire for medication or who have found medication unable to provide the relief which they are seeking.

The prevalence of migraines and the disability that they cause demand that we sit up and take notice of them. An awareness of how others experience migraines can help shine a light on an otherwise lonely existence when one feels they have no recourse but to bury their head in a dark room for hours, and sometimes days, on end.

Armed with knowledge of the stages of migraine and the various treatment approaches, informed decisions can be made. ■

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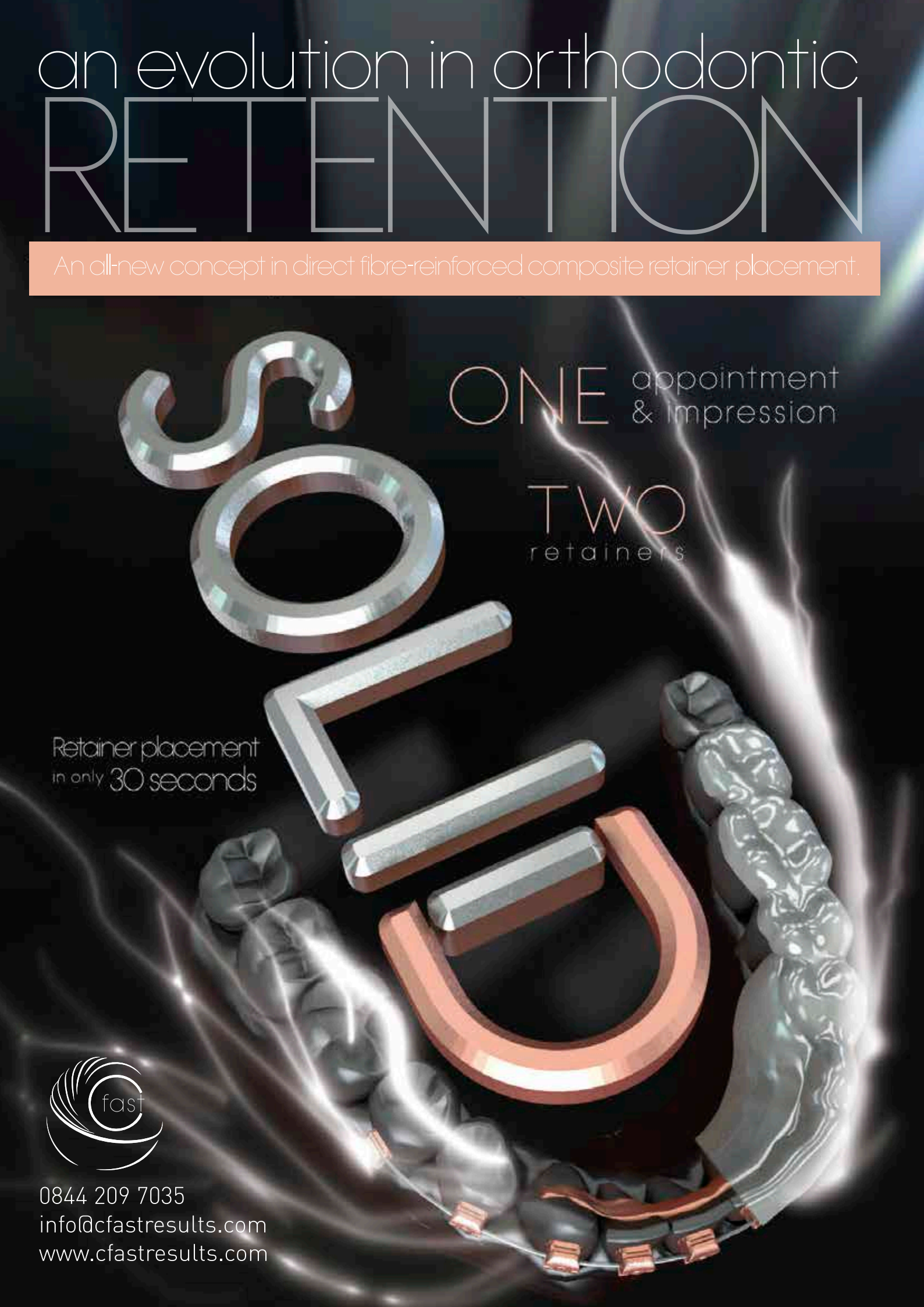
an evolution in orthodontic RETENTION

An all-new concept in direct fibre-reinforced composite retainer placement.



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An evolution in orthodontic retention

Dr Thomas Sealey discusses how he combined an invisible fixed-lingual retainer with a removable acrylic retainer to develop the world's only invisible dual-retention system

My focus of practice is cosmetic dentistry, using minimally invasive solutions for full-smile rehabilitations. I have been very impressed with how cosmetic tooth alignment systems can transform someone's smile in a relatively short space of time and that, when combined with composite bonding techniques, we have been offered the tools to achieve a true minimally invasive smile makeover.

This movement towards cosmetically focused treatment has encouraged me to develop my orthodontic practice and improve my composite bonding artistry. In the last few years, I have really focused on achieving high-end results, with completely invisible solutions where possible. I strive to create the ideal smile transformations that my patients request, without the need to drill and damage the teeth. This has driven my self-education towards new materials and techniques, which can achieve the desired results – making improvements on the more traditional and historical dentistry.

A key issue that challenges my clinical ethos has always been that, after months of orthodontics, the patient was left with only the choice of a fixed-wire retainer or a removable clear acrylic retainer. Both options have long been accepted as the standard after tooth realignment, but I have always had concerns. I have found that most of my patients who visit me for orthodontic corrections are those who already had braces when they were younger and failed to consistently wear their retainer, therefore their teeth drifted and their smile was detrimentally affected.

I also find it counter-intuitive to place a metal wire retainer onto teeth after spending so much time instilling the virtues of invisible tooth alignment, with both fixed and removable orthodontic solutions. It seemed nonsensical to be promoting 'invisible' and 'metal-free' dentistry only to place a wire onto teeth, especially when it is very visible on the lingual surface of the lower teeth when the patient smiles and talks.

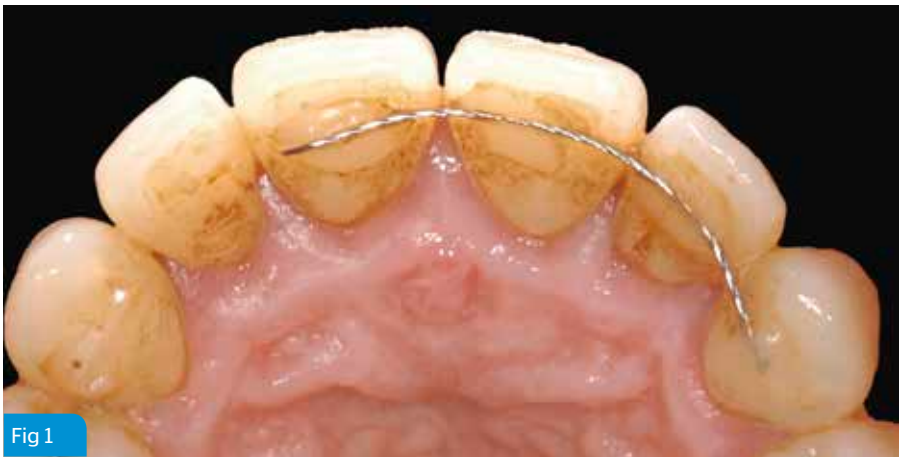

Fig 1

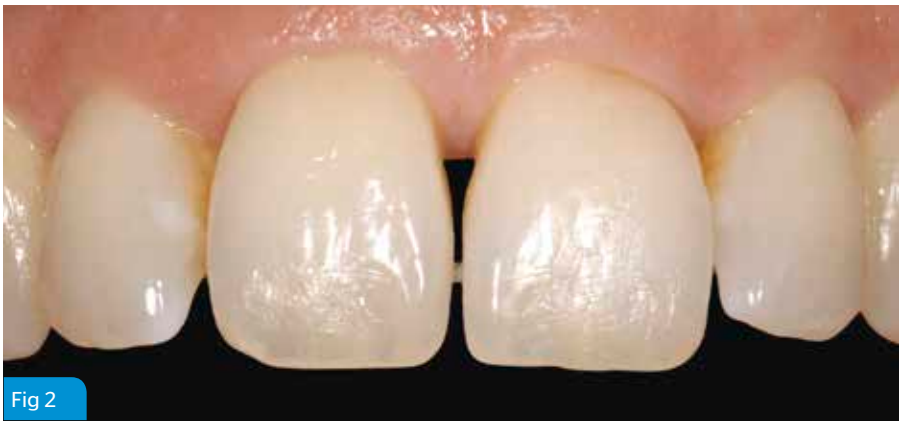

Fig 2

This led me to explore the various fibre retainers available. There was an array of different materials that all contained some form of glass fibre, impregnated within an uncured and unfilled methacrylate resin. What all these material had in common was their incredibly difficult and technique-sensitive application. With respect to preparation for bonding of the lower teeth, one is bombarded with patient challenges that complicate this procedure. The uncontrollable tongue, the sub-lingual saliva fountain, the inability to stop rapidly swallowing; it is always very difficult to apply these fibres on a tooth-by-tooth basis without any moisture contamination. Plus, after fibre application, one must place a second additional layer of composite to cover the whole fibre and to seal it. This second procedure, again, is incredibly challenging to quickly and effectively execute before the inevitable 'patient factor' ruins everything.

If you are successful, and manage to place a fibre-reinforced composite (FRC) retainer well, then it will outlast wire retainers. There is an abundance of evidence within the dental literature supporting the use of FRC retainers for post-orthodontic retention and their superior longevity. However, if something

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Fig 3

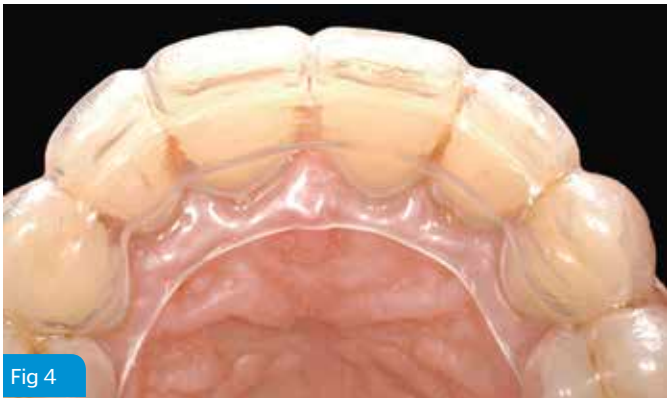
Fig 4

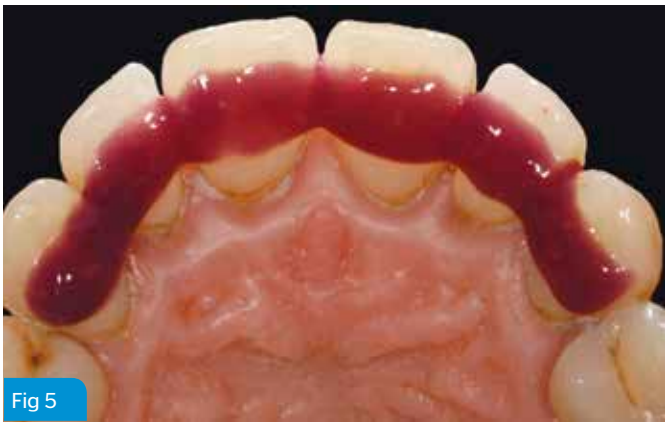
Fig 5

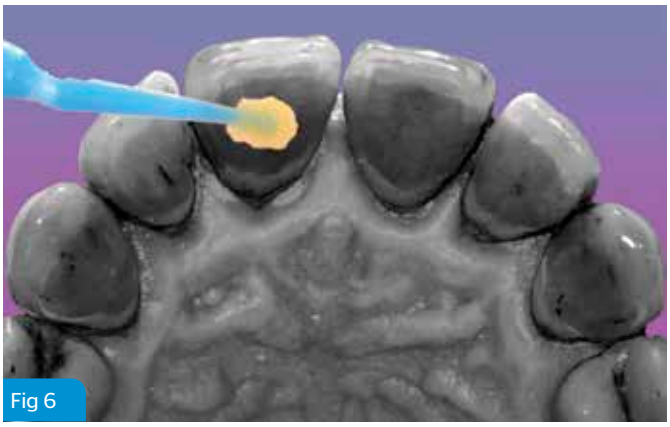
Fig 6

Continued »

went wrong mid-placement, then the whole process is ruined. I have placed many of these FRC retainers and love the patient tolerance and invisible aesthetics, but hate the long appointment time necessary and the difficult placement technique.

It dawned on me that there must be a simpler way.

After prototyping my idea on models cast from an impression of my own teeth, I finally perfected the design. The premise was to achieve a simple way to place a FRC retainer in a single, one-stage technique, which removed all of the technical difficulties that one usually faces with this type of retainer. Once I had established a technique that worked consistently with reproducible accuracy, I evolved my idea further to develop an impression technique and final product that also allows one to place the retainer while the fixed labial orthodontic brackets are still present on the teeth. I applied for a patent of the 'Sealey Retainer' and very shortly after this, Cfast Orthodontic Solutions began distributing the retainer as the SOLID Retention System. The SOLID Retention System stands for Single-visit Orthodontic Lingual and Invisible Dual Retention System, although understandably it has come to be known as the SOLID Retainer.

The whole retention system differs from any other available on the market as it is the only invisible FRC retainer which is fully stent-guided for placement, with which the stent-retainer then actually becomes a perfectly fitting Essix-style retainer. The SOLID retainer is delivered in a metal retainer tin and comes with a compule of composite, which is needed for its application and adhesion to the teeth. You receive the SOLID Retainer in a sealed pouch with a second 'try-in' retainer. The 'try-in' retainer is also made as an exact copy of the stent-retainer and, therefore, acts as the patient's second removable retainer.

"After prototyping my idea on models cast from an impression of my own teeth, I finally perfected the design"

And so, you have both types of retention – invisible-fixed and two removable retainers – from one product and from only one impression. As you can take the impression while the brackets are still on the teeth, you can be assured of no tooth movement before you fit the retainer. This is performed at the same visit as the bracket debond and, therefore, you save both chair-time and laboratory fees. The patient leaves with an invisible-fixed solution and two removable retainers to keep them in correct alignment for many years to come.

The following case study demonstrates nicely the stages for placement of the retainer and the aesthetic results that can be achieved. This case study shows that the retainer can be used for many applications, whether the patient is wearing fixed or removable orthodontics, or whether they have metal-allergies and when aesthetics are a priority to them.

This patient presented from another practice with a debonded upper palatal wire retainer. She had removed some of the loose wire herself and it was debonded from the central incisors (Fig 1). The teeth had begun to drift and the wire was visible through the midline diastema (Fig 2).

All that was necessary at this stage was a PVS (Poly-vinyl siloxane) impression. This was sent to Cfast and an upper SOLID was requested. Cfast can turn a SOLID around in a week and quicker if pre-arranged. If you have an intra-oral scanner, then you can take a digital impression instead.

After one week, we received the retainer tin that includes the sealed SOLID Retainer, a 'try-in' retainer and a compule of composite. Figure 3 shows what is included but the sealed pouch has been

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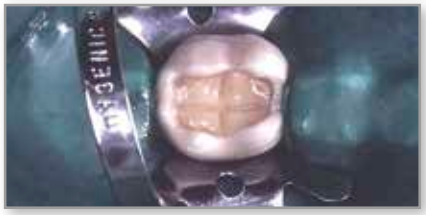


Prof. Paul A. Tipton

B.D.S., M.Sc., D.G.D.P., U.K.

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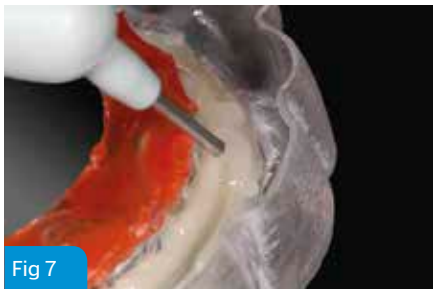
Fig 7

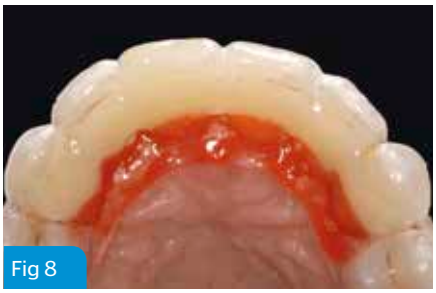
Fig 8

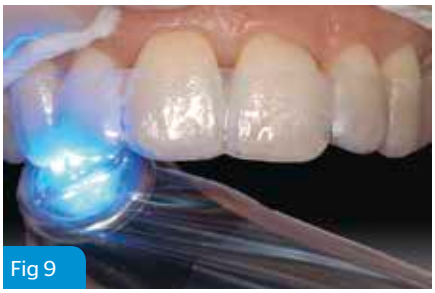
Fig 9

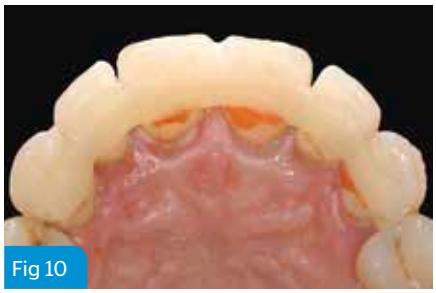
Fig 10

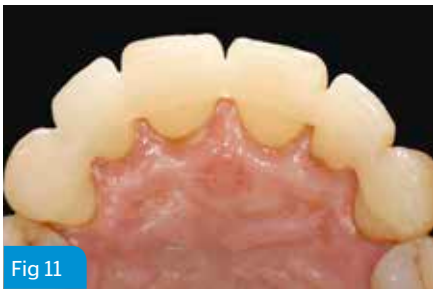
Fig 11


Fig 12

Continued »

omitted for illustration purposes.

Once the patient returned, the wire retainer and the old composite were removed from the palatal aspects of her upper teeth. At this stage, I placed the 'try-in' retainer to confirm a perfect fit (Fig 4). Although very rare, there is always the chance for an anomaly within the impression supplied by the clinician to be transferred along the manufacturing chain, which can result in an ill-fitting retainer. The purpose of the 'try-in' prevents the clinician from continuing further if there is a fitting problem with the retainer. If this were to occur, the clinician can still place the SOLID and we have full instructions on how to utilise the 'try-in' retainer, which is available on the Cfast website.

As the 'try-in' was a perfect fit, one can confidently prepare the teeth, knowing that the final SOLID Retainer will also be a perfect fit. To prepare the teeth, I air-abraded the palatal aspects with 27 micron aluminium oxide to remove any pellicle. The teeth were then etched for 30 seconds using phosphoric acid 35 per cent, being careful to keep the etch to the middle third of the palatal surfaces (Fig 5).

The teeth were bonded following enamel bonding protocol. Again, care was taken to keep the bond away from the gingival margins and the incisal edges (Fig 6). Up to this stage, all the preparation procedures are the same as for when bonding a wire retainer.

While my dental assistant cured the adhesive bond, I activated the fibre-part of the SOLID Retainer with the enclosed composite compule. A layer of composite flow is placed over the entire retainer FRC length. This will create the interface that bonds the FRC retainer to the palatal surfaces of the teeth. You will see from the close-up photos (Fig 7) that the retainer fibre is embedded into composite resin. All these materials have been specifically chosen for their elastic properties and flexural strength, which makes them well suited for the application as a retainer. As a side note, most of the FRC retainers that failed historically were due to the composite covering layer being made from a material that was too rigid and, therefore, couldn't compensate for normal physiological tooth micro-movements. With current material technology, I was able to choose materials that met the exact mechanical properties needed for application in this specific situation.

The SOLID Retainer is then placed over the teeth and secured into position with finger pressure (Fig 8). The red block-out wax fills into all of the embrasures and around the cervical margins of the teeth to prevent the composite from flowing into these areas – this means that the FRC retainer stays exactly where it is supposed to. While the dentist secures the retainer in position, the dental assistant will cure along the length of the retainer for 30 seconds (Fig 9).

The acrylic stent retainer can then be removed and the FRC retainer assessed for its full and complete placement (Fig 10). Any voids in the composite can be filled at this stage before a final 30-second cure. Best practice would be to place a gel over the retainer to allow full curing of the oxygen-inhibited layer of the composite.

The retainer can then be polished and the edges smoothed where necessary. Any composite flash that may have extended over the incisal edges is removed with a scaler, as there was no bond placed and, therefore, it does not adhere to the tooth. The final retainer is virtually invisible and incredibly smooth (Fig 11). The patient can easily clean through the embrasures with interproximal brushes. You will see from the final picture (Fig 12) that simply removing the wire retainer and applying the FRC retainer has closed the midline diastema and improved the aesthetics.

Finally, the patient is given both the 'try-in' retainer and the stent retainer, which now become their removable Essix-style retainers to be worn every night.

I save 10 minutes chair-time placing a SOLID Retainer when compared to placing a fixed-wire retainer. I also save one full appointment per patient by both removing the brackets, fitting the FRC retainer, and giving the patients the removable retainers to take home. Historically, one would have to fit the wire retainer and debond, take an impression and then recall the patient for an additional appointment. In addition, I am also able to charge more for the SOLID Retention System due to its invisible aesthetics, smoother feel and additional second removable retainer. ■

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An inspector calls

Getting everything in place for an inspection shouldn't be a last-minute exercise – get your ducks lined up well in advance

Since 2012, dental practices in Northern Ireland providing any form of private care and treatment have been subject to inspections from the Regulation and Quality Improvement Authority (RQIA), the independent health and social care regulator.

In line with the Care Quality Commission (CQC) in England, RQIA inspections have changed recently to become broader (previously they were topic specific) and now ask of a practice:

- Is care safe?
- Is care effective?
- Is care compassionate?
- Is the service well led?

When an inspector calls, stress levels inevitably rise, as everyone involved in the practice wants to pass the inspection, praying that the inspector doesn't find something that they may have inadvertently forgotten to do or overlooked.

Benjamin Franklin's adage that: "By failing to prepare, you are preparing to fail" has never rung truer than with RQIA inspections. In the weeks leading up to an inspection you will be hard pressed to sort out everything that you need to in time. Far better to get your ducks in a row well in advance of any inspection and make sure you have systems, processes and policies in place so you are on top and in control of the situation.

BDA members have a wealth of resources on hand to help. There is a guide to the RQIA registration requirements and links to other resources that will help you get to grips with the new inspections, all available online at bda.org/rqia

Members may also find the guide to the CQC's five key questions a useful starting point, as this details the policies you need, grouped under each of the CQC's questions, which are similar to the questions posed by the RQIA.

BDA Expert Members have exclusive access to all those policies and more through our complete online practice management solution, Expert Solutions, which provides you with everything you need to manage a dental practice: advice and guidance, the aforementioned template policies and protocols, links to external information sources and relevant *BDJ in Practice* articles.

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Hand care in practice

Dentisan technical director Peter Bacon describes the importance of hand hygiene in dental practices

According to the European Centre for Disease Prevention and Control, healthcare-acquired infections affect more than four million patients a year across Europe and cost around €7 billion in additional healthcare and direct financial losses. However, scientists and governments point to hand hygiene as one of the easiest and most cost-effective ways of preventing the spread of such infections.

Hand hygiene is a critical factor in reducing disease transmission and compliance is very easy. Hands should be washed thoroughly under warm running water, applying a mild liquid soap. Any jewellery, especially rings under which bacteria can colonise, should be removed, and in fact the World Health Organisation goes further and strongly discourages the wearing of rings and other jewellery during the delivery of healthcare as these can act as reservoirs and disseminators of infection. After washing, hands should be thoroughly dried using disposable paper towels as transmission of microorganisms is more likely when hands are damp, and inadequately dried hands are prone to skin damage.

It's commonly thought that hand hygiene is best carried out using an alcohol-based hand rub. However, although alcohol is an effective disinfectant for visibly clean hands, alcohol-based hand rubs will not remove dirt and organic matter, so visibly dirty or contaminated hands must still be washed with liquid soap first. Guidelines from the Dental Council states that "alcohol hand gels (concentration 70% – 85%) should only be used if hands are visibly clean. Soiled hands must be washed with medicated soap. Alcohol hand gels are not suitable for use after caring for a patient known or suspected to be infected with Clostridium difficile or with norovirus." In addition, regular use of alcohol-based products can severely affect the condition of the skin. If this is the case, dental workers now have the option of electing to use a non-alcohol disinfectant foam. ■

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During February 2017 get 30 per cent discount and free delivery when you buy one Diamond Carve Glass Ionomer Selection Kit at only £140.21 plus VAT. The Diamond Carve Selection Kit consists of five 10g powder and one 25ml liquid. There are seven shades to choose from.

Diamond Carve is designed for Class I and Class II restorations together with class V abrasion cavities. It can be used for restorations in deciduous teeth, core build up and amalgam repair. Diamond Carve begins to set in two minutes 15 seconds. Over time it develops a compressive strength of 350MPa which is far higher than any other comparable material. It also has a high resistance to edge chipping.

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New year, new resolution

New year is a time for resolutions, but what if yours is to create even sharper resolution digital images? Dürr Dental's imaging equipment will allow you to do just that and the company is so confident in the clarity of its images that they are running a competition throughout 2017 giving away an Apple Watch each month for the best images.

Moreover, the best three images from each category, intraoral X-ray, extraoral X-ray and intraoral camera, will also be awarded a brand new VistaCam iX HD package worth up to £4,776

If you're using Dürr equipment you're going to struggle choosing your best image, which is why the company is allowing each entrant to upload up to five images each month.

For more info or to start uploading, visit duerrdental.com/imagecontest.

Cochrane Review endorses infiltration with Icon

In the scientific world, there is no more stringent authority than the Cochrane Collaboration. In a recent Cochrane Review, caries infiltration with Icon was considered and it was favourably assessed. They concluded that infiltration treatment with Icon is effective.

The authors summarised that caries infiltration is a suitable micro-invasive treatment option, whose clinical success rate is at least comparable to that of the long-established sealers. There is also an emerging trend that this kind of infiltration is more effective than sealing with resin. Icon is able to function as a barrier and thus can effectively stabilise the lesion.

For an abstract of the Cochrane Review, visit www.onlinelibrary.wiley.com in the "Dentistry" area. For more about Icon call +44 (0) 1656 789 401, email info@dmg-dental.co.uk or visit www.dmg-dental.com

Take control

First there was Siri, then Hive, and more recently Amazon Alexa. The digital age certainly is pervading your home life so it is perhaps not surprising that you can digitally take control of your surgery too.

Tyscor Pulse, from Dürr Dental, ingeniously shows you the performance of your suction and compressor systems and is compatible with almost all Dürr suction and compressors units including the popular VSA 300s. Things such as current status, faults or maintenance messages, such as a prompt to change the filter, are immediately displayed on the monitor.

With Tyscor Pulse your practice equipment supply is always in view and can be accessed by engineers as well by you. .

For more information, visit www.duerrdental.com

LuxaCore Z-Dual

LuxaCore Z-Dual, DMG's premium composite for core build-ups, has once again received the highest possible 5+ rating by the professional journal, *The Dental Advisor* (vol. 32, no. 01).

LuxaCore Z- Dual's decisive advantage is its authentic dentine feeling because its mechanical properties are similar to that of the natural tooth. Consequently, Dentists cannot feel any difference in the transition from dentine to the material during preparation and their hands move smoothly from one to the other. This ensures controlled substance removal, as well as a precise preparation line.

In addition to this top 5+ rating, LuxaCore Z- Dual also received the title 'Preferred Product' – a selection of preferred, 'highly-rated' products that act as a decision-making tool for dentists worldwide.

Contact your local dental dealer or call +44 (0) 1656 789 401, email info@dmg-dental.co.uk or visit www.dmg-dental.com

Dental units with a difference

Planmeca's range of digital dental units combine the very best in ergonomics and innovative features designed to improve your workflow. From integration of true chairside scanning via Planmeca PlanScan to a smartly designed instrument console, plug-and-play instruments and touch-screen GUI, all Planmeca dental units are packed full of features.

Coupled with comprehensive and scientifically proven solutions for perfect internal and external infection control garnered from years of close collaboration with leading dental universities in the field of microbiology, you can be sure that Planmeca is delivering better care though innovation.

To experience the very latest in digital dentistry, without leaving the comfort of your practice car park, go to www.plandemo.co.uk to register your interest.

Beautiful and lasting results


Ian Creighton

One of the world's most established and fastest growing implant brands is set to take Ireland by storm

Quintess Denta are delighted to be awarded the exclusive distributorship in Ireland of the fastest growing implant system in the world, Neodent, a Straumann group brand.

Neodent is a Brazilian manufacturer of dental implants that was acquired by Straumann in 2012. It has been manufacturing implants for more than 22 years and is currently the fourth largest implant company in the world by volume of implants manufactured. Neodent is rapidly growing and the goal is to be the number one implant company by 2020.

The Irish dental implant market is becoming more and more competitive for dentists. Competition is driving down the cost of treatment for patients, so clinicians require less costly components to remain profitable. The Neodent implant is an affordable premium implant. Ideally, it will enable more patients to afford quality dental implant treatment while providing dentists with the confidence in knowing that the materials they place in their patient's mouths are still well manufactured and safe. Although new to Ireland, Neodent is a very established, very trusted brand that is huge in some countries.

The Neodent implants provide an outstanding ability to maintain and preserve bone around the connection, which gives patients beautiful and lasting results. A combination of the surgical protocol, morse taper connection, acid etched surface, thread design and abutment selection options, delivers exceptional results for dentists and their patients. Neodent customers have said that they rarely see cases of peri-implantitis with Neodent implants. Peri-implantitis is a very big concern in the industry. Neodent implants are packaged with a hydrophilic treatment to speed up the healing process.

As Neodent implants have been around for more than 23 years, the education on offer is also well established. There is a global course catalogue for Neodent customers that offers training at all levels of implant experience. The system itself is excellent for immediate loading – primary stability is a key feature of the design.

John Aiken, business development manager, Instradent UK, said: "Neodent is one of the few systems with a zygomatic implant. You don't produce a zygomatic implant if you don't know what you're doing, and we're finding that resonates with a lot of our customers. That zygomatic implant is the only one in the UK and Ireland with an internal cone morse connection too – other zygomatic implants here have an external hex, so it offers something genuinely different too. Not everyone uses them, of course, but it's important that the product line has something for everyone.

"We offer tapered implants or parallel walls, but there is just one restorative platform across the Neodent system so clinicians don't need to keep a host of different connections in stock. It's easy to use, from the surgery to the lab side – there's a simplicity built into the Neodent brand."

Tasked with growing this part of the business, Ian Creighton has been appointed implant sales manager with Quintess Denta, who have also just opened a new sales support office in Dublin. Speaking on his appointment, Ian said: "Over one million Neodent dental implants per year are chosen by dentists because of Neodent's 99.7 per cent survival rate, 150 clinical studies and its one prosthetic platform which makes Neodent an attractive offering.

"Neodent is suitable for all clinical indications from single tooth to full-arch immediate load. Neodent customers can avail themselves of clinical mentoring along with practice support. It is an exciting time for the team at Quintess Denta and I look forward to building the Neodent brand across Ireland."

Quintess Denta provide a range of global brands supported locally by a team of experts. ■

For more information or a free trial of the tried and trusted Neodent implant system, contact Ian on 00353 (0)1 691 8870 or email ian@quintessdenta.com

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