The magazine for dental professionals working in Scotland
June/July 2011

Scottish Dental magazine

AIMING HIGH: A Glasgow dentist's incredible bid to climb Iceland's highest peak
Page 8

ROUND TABLE TACKLES REGULATION
Our latest evening of discussion and debate
Page 16

EXCLUSIVE

Reality bites

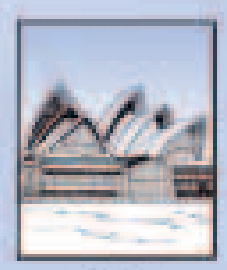
Join us as we follow one patient's remarkable journey through implant treatment, from planning to completion. Part one begins on **page 33**

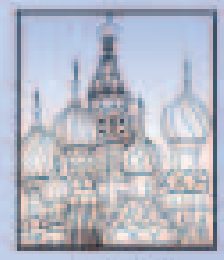
DID YOU KNOW? Your Scottish Dental magazine is available online with new and exclusive content **PLUS** regular news updates

BOOKMARK THIS LINK TODAY...
www.scottishdentalmag.co.uk


Rome


Paris


Sydney


Moscow


New York


London


Athens

There are many iconic cities...

but only one

ICONic® system

The difference between us and the rest is simple: WYSdom ICONic® is just so easy to learn and use. Utilising a sympathetic blend of immediately recognisable graphical images and standard dental symbols WYSdom's ICONic® charting promotes blisteringly fast and accurate treatment planning. To arrange a personalised live demonstration of ICONic®, for you and your staff, simply phone or email us today.

www.wysdom.co.uk

Leading Dental Practice Software
21 YEARS
For Over 21 Years

WYSdom
dental technologies

Make your practice ICONic®
Call 01908 324045 or email enqs@wysdom.co.uk

Now available in Northern Ireland

Welcome

Editor's desk

with Bruce Oxley

Social dentist?

For a highly-trained and multi-skilled profession, there is a surprising reluctance among many dental professionals to fully embrace the world of technology.

Computerisation is widespread among many practices – from digital imaging to practice management software – but there are still dentists out there who are reluctant to take on the challenge.

For those firmly in the luddite camp, it's going to be a long road getting them on board, but even among those who have embraced the ever-advancing technology in their clinical work, many still haven't got their heads around social media sites like Facebook or Twitter and how they can work for them on a professional level.

Scan this QR code with your smartphone to see all of our social media offerings

Now there are many out there who are already Tweeting to the masses, and updating their Facebook status on a regular basis, not least the editorial elves here at *Scottish Dental magazine*.

We use our social media outlets to interact with dentists and dental suppliers but also to point people to news, views and features on the site.

Facebook and Twitter, used smartly, can keep you updated on the latest happenings in the world of dentistry, celebrity or current affairs, but it can also get you direct access to your patients, new patients and even potential referring dentists.

If you handle it right, the possibilities are endless. ■

Bruce Oxley is editor of Scottish Dental magazine. To contact Bruce, email bruce@connectcommunications.co.uk Alternatively, find us on Facebook by searching for Scottish Dental, or follow us on Twitter @ScottishDental

Contents

June/July 2011

NEWS>
05 Column: Biting back with Spencer Wells
06 GDC quit storm rages on
11 Supplier withdraws whitening products
14 Dundee researchers win top awards

FEATURES>
16 Round table
20 Autism outreach
24 SDCEP – the art of distilling information

CLINICAL>
33 Live case study
39 Advances in lingual appliances
45 Peri-implantitis: definitions and treatment

Edinburgh Dental Specialists

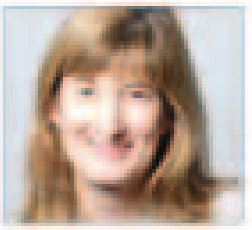
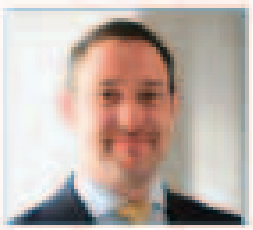
Edinburgh
Dental Specialists
Established 1994

What ever problem your patient may have we're here to help








Our team of specialists

Dr K A Lochhead BDS, MFGDP RCS(ENG),
Clinical Director and Specialist in Prosthodontics

Dr J Lello BDS,
MDS Specialist in Prosthodontics

Dr C A Bain BDS, DDS, MSc, MBA,
Specialist in Periodontics, Prosthodontics and Restorative Dentistry

Prof G Lello FDS RCS(ED and ENG), FRCS(ED), PhD,
Specialist in Oral Surgery and Maxillofacial Surgery

Dr C Tait BDS Hons, MSc, MFDS RCS(Ed), MRD RCS(Eng),
Specialist in Endodontics

Dr P Coli DDS, PhD,
Specialist in Periodontics and Prosthodontics

Dr N Heath DCR, BDS, MSc, MFDS RCS(Ed), DDRRCR,
Specialist in Oral and Maxillofacial Radiology

Dr P Hodge BDS, PhD, FDS RCS(Ed)
Specialist in Periodontics

Dr F Veldhuizen BDS, MFDS RCS(Ed), M Clin Dent, MRD RCS(Ed)
Specialist in Prosthodontics

Mr Martin Paley BDS, MB ChB, FFDRCSI, FRCS, FRCSEd(OMFS)
Consultant Oral & Maxillofacial Surgeon

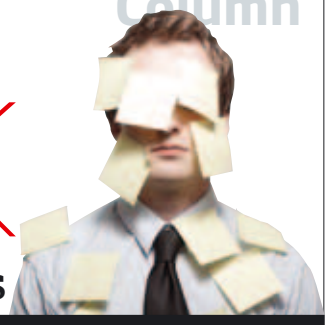
If you would like to discuss **referring a patient to the Practice** please contact our friendly reception team on **0131 225 2666** visit us online at **www.edinburghdentist.com**

Edinburgh Dental Specialists,
178 Rose Street Edinburgh EH2 4BA.
www.tele-dentist.com
www.allonfourscotland.com

Nobel Biocare

Biting back

with Spencer Wells



Holiday hell

A change is as good as a rest, so the old adage goes. So, is a holiday a change, a rest, or both? If you take a week off at home, it's neither, so it depends how you spend your time off.

At the time of writing I am just back from an Easter break, which combined rushing around with an almost equal amount of relaxation time, so that mix does it for me.

Holidays give you the gift of time, and release you from thinking about the daily grind, so why do I end up thinking about the practice when I am daydreaming on the plane? It isn't good, because I have occasionally come up with slightly hare-brained ideas for the practice.

A few years back, I returned to work having decided that we would have a team building away day (must have been suffering separation anxiety) and when I came back to work and waxed lyrical about my idea, it fell on ears which were deafer than a post. Talk about feeling deflated! I suppose paint-balling isn't up everyone's street, especially as everyone else in the practice are missing the all-important Y chromosome.

More recently, I decided that it was time to drag us into the 21st century and computerise the practice, which I had been considering for ages and never given myself the time to really think through, although I still haven't decided what system to use, so one step forward and a half step back.

Whenever I book time off, a silent signal seems to broadcast over the area and a certain subgroup of patients crawl out of the woodwork – you know the type, fail to attend/forget to pay their bill/always arrive late... and it absolutely dements me. It's the same story immediately before a holiday weekend, and there have been plenty of them lately!

I have bumped into patients on holiday a couple of times, which is nothing short of dire. I once took a cheap package deal during the school October week in Europe, and found to my utter horror that a particularly irritating denture patient was going to the same resort that week – I spent most of the time sidling into shop doorways any time I saw a white permed head, much to the annoyance of Mrs Wells, and thought I had escaped until we finally 'met' at the airport on the return journey. I couldn't help but notice that she wasn't wearing her new F/F, and if memory serves she never came back, so the cloud had a silver lining after all!

"I suppose paint-balling isn't up everyone's street, especially as everyone else in the practice are missing the all-important Y chromosome"

Of course, these days Florida seems to be the place to go for family breaks, so if you head to Chez Disney you are bound to come a cropper and get a tap on the shoulder. Take my advice and head to somewhere with a depressing historical background, or how about somewhere on the Foreign Office cautionary list? Even better – recommend such destinations to your nuisance patients, and kill two birds with one stone! ■

DETAILS AND CONTRIBUTORS

Editor
Bruce Oxley
Tel: 0141 560 3050
bruce@connect communications.co.uk

Senior sub-editor
Wendy Fenemore
Sub-editors:
Penny Murray,
Jim Byers

Design and production
Fiona Wilson
Paul McGinnity

Advertising Sales manager
Ann Craib
Tel: 0141 560 3021
ann@connect communications.co.uk

Subscriptions
Ann Craib
Tel: 0141 560 3021
ann@connect communications.co.uk

1 year, 6 issue subscriptions: UK £48; overseas £65; students £25. Back issues: £5, subject to availability.

ISSN 2042-9762

Scottish Dental magazine
is published by
connect publications
Studio 2001, Mile End,
Paisley PA1 1JS
Tel: 0141 561 0300
Fax: 0141 561 0400
enquiries@connectmags.co.uk

Smile Month charity backs Toddler Forum

PREVENTION

As National Smile Month comes to a close, the charity behind the awareness month has given its backing to the Infant and Toddler Forum in order to help achieve a major improvement in the dental health of children under the age of five.

The British Dental Health Foundation (BDHF) has already endorsed the forum's Ten Steps for Healthy Toddlers advice sheet and, during National Smile Month, the two bodies have produced a new factsheet called Protecting Toddlers from Tooth Decay.

The new sheet provides comprehensive advice on how to care for children's teeth – including fluoride, medicines, diet, snacking, tooth brushing and bottle-feeding.

Chief executive of the BDHF, Dr Nigel Carter, said: "Our relationship with the forum creates an excellent opportunity for us to share our experience and advice directly with the people and organisations that have the most influence on children in their formative years."

Lay member of General Dental Council appointed as interim chair

GDC quit storm rages on

The storm surrounding the resignation of Alison Lockyer from the General Dental Council (GDC) shows no sign of abating after the regulator appointed a lay deputy chair to man the barricades while a new chair is chosen.

Derek Prentice, currently the managing director of a consultancy firm and former assistant director of the Consumers' Association, will be the de facto leader of the GDC until a permanent chair is chosen in September. He has been a lay member of the council since 1999.

Elected to the role of chair in January 2010, Alison Lockyer resigned on 6 May, citing "issues that have caused me concern" but stating that she remains "passionate about the importance of protecting the public through professional self regulation".

The BDA responded by saying: "The BDA is seriously concerned at the suddenness of Dr Lockyer's resignation and the observation she has made in the statement. We are calling for the situation to be clarified as a matter of urgency. The profession's confidence in the regulator depends upon the integrity and robustness of the decisions it makes and it is important that the chair is elected by the council."

"The BDA is seriously concerned at the suddenness of Dr Lockyer's resignation"

BDA

Hugh Harvie, Dental Protection's head of Dental Services Scotland, said that Lockyer's resignation had "significance".

"For some time Dental Protection has been raising concerns about aspects of the GDC's work and procedures and these concerns have been reflected in the recent CHRE report which was critical of many aspects of the Fitness to Practise procedures," he said.

"It is important for the public, for patients and for registrants that the GDC is able to demonstrate that it has the knowledge and capacity and a willingness to focus on its remit and make appropriate changes to restore confidence in its processes and procedures."

NES must address hygienist shortfall, conference told

LOCAL DENTAL COMMITTEES EVENT

A demand for NHS Education for Scotland (NES) to address the "alarming shortfall" of dental hygienists in Scotland was one of the key motions passed by the recent Conference of Local Dental Committees (LDC).

The annual conference brought together LDC delegates and guests at the University of Stirling's Management Centre to hear a range of speakers and debate the issues of the day.

Several motions were proposed and passed by delegates at the conference, including the demand that NES "allocates adequate funding to train a substantial number of dental hygienists to address the current alarming shortfall".

Another passed motion stated that: "PSD (Practitioner Services Division) is reliant on an IT framework which is no longer fit for purpose. Practitioners cannot and do not have the confidence in its accuracy. This conference urges the Scottish Government Health Directorate to invest in IT for PSD which is fit for purpose."

The conference, chaired by Clydebank dentist Tony Coia, also heard talks from Jason Leitch, national clinical lead for Quality in Scotland and Margie Taylor, Scotland's chief dental officer. The pre-conference dinner also saw ex-Livingstone FC manager Jim Leishman entertain guests in his role of after-dinner speaker.

Dentist jailed for fake death insurance scam

A dentist who tried to cover massive debts by faking his death for a £1.85 million insurance payout has been jailed for five years

A dentist who faked his own death before changing his name, moving to Aberdeenshire and subsequently claiming £1.85 million in life insurance, has been jailed for five years.

Emmanouil Parisis (46), formerly of Barstaple in Devon, faked a car accident in Jordan and changed his name to Neil McLaren upon starting his new life in Peterhead.

McLaren's wife Stilliani (41) – who later changed her name to Anabella – appeared in the dock alongside her husband at Plymouth Crown Court to admit seven counts of fraud. She was sentenced to 16 weeks for her part in the affair.

The court heard that he was driven to stage his death after racking up debts of £395,000 and living under the threat of losing his GDC registration following a string of complaints from patients.

After faking his death he hid in Greece for two months and eventually found work at Peterhead's Queen Street Dental Centre, where he worked for two and half months before his arrest in June last year.

McLaren's four children were unaware of their father's scheme and for three months they believed he was dead, until being reunited on moving to Scotland.

The court heard how he subsequently claimed from a raft of financial institutions, but was caught when they became suspicious and hired private detectives to check his story. Although he claimed £1.85 million, most didn't pay out and he only netted £51,092.

"The truth was more prosaic. You had massive debts and no way of paying them other than claiming against insurance policies"

Summing up, Judge Darlow told McLaren: "These fraudulent claims were made having gone to some considerable lengths and with some preparation and sophistication to fake your own death.

"You tried to justify your actions because you said your family threatened your life because you had changed your faith. That is as much a slur on the Muslim faith as on those members of your family you said were complicit in this threat and who you said left you with no alternative.

"The truth was more prosaic. You had massive debts and no way of paying them other than claiming against insurance policies."

Appeal for painting

ART ACQUISITION

The British Dental Association (BDA)'s Museum is close to acquiring an oil painting by one of the famous Glasgow Boys to add to its collection.

Painted in 1929 by Sir John Lavery, The Dentist is the only known accurate depiction of an early 20th century dentist in a surgery, and by one of the leading portrait painters of the time.

Set in dentist Conrad Ackner's Welbeck Street practice in London, the painting depicts Ackner treating his patient, the artist's wife Lady Lavery. It reveals aspects of the clinical environment including an early X-ray machine and headlamp, examples of which are in the museum's collection already.

Plans are in place to mount an exhibition including a scrapbook compiled by Ackner's staff, which lists the King of Norway and actress Marlene Dietrich among his patients. The Lavery painting was kept at Ackner's London practice for more than 25 years before being put on display at the Royal College of Surgeons and then the BDA.

The BDA is now appealing for donations to acquire the painting and make it a permanent part of its collection. It is has been independently valued at £60,000 and, while funding has already been sourced through the Art Fund, the MLA/V&A Purchase Grant Fund, the BDA itself and private donations, a shortfall of £9,000 remains before the list price is met.

Scottish practice manager appointed president

MANAGERS' ASSOCIATION

A practice manager from Kilwinning has been appointed president of the British Dental Practice Managers' Association (BDPMA).

Jill Taylor (34), of Botanics Dental Care in Glasgow, was voted in by members at the association's AGM held at the BDA's Dental Conference and Exhibition in Manchester.

The former dental nurse said she was delighted to have been appointed to the role. "It is an honour to become president of the BDPMA," she said. "I am very much looking forward to my two years in office. There are some exciting changes taking place within the organisation, which will be revealed in more detail at the BDTA Showcase in October."

From munro to volcano

Glasgow dentist Pat Toland to embark on a fundraising climb to Iceland's top peak

For most people the idea of scaling an Icelandic volcano – dormant or otherwise – wouldn't exactly be their holiday of choice, especially with the much-publicised ash clouds the country has been producing of late.

But, for Glasgow dentist Pat Toland, it is the realisation of a long-held ambition and one that could raise vital funds for a charity that is close to his family's hearts.

Pat will set off for Hvannadalshnúkur, the highest point on the island and situated in the north-western rim of the Öræfajökull volcano, on 30 June. He will join a group of ten intrepid climbers and attempt to reach the top in one day, a climb

that could last up to 15 hours.

A keen hill walker, Pat has scaled many munros and peaks around Scotland and the UK, but as well as being a personal ambition he has a more altruistic motivation willing him on; he is raising money for the National Autistic Society as his oldest son, Matthew (15), is on the autism spectrum.

Pat explained that Matthew, who has high performance autism, often struggles to relate to people and finds it hard to make friends easily. Asked what his son thought of his trip to Iceland, Pat replied: "Not a lot to be honest! You find that kids with autism are wrapped up in their own wee world sometimes, they tend to be introspective. But he knows I'm doing it and he thinks it's a good idea."

Pat has already reached his fundraising target of £2,000 thanks to generous friends, family, patients and suppliers but people can still donate by visiting uk.virginmoneygiving.com/pattoland

While visiting Iceland is a long-held ambition for Pat, he does have some concerns about his fitness. He said: "I have wondered in the build-up 'Am I fit enough to do it at my age?' I'm 54 now and I'm nowhere near as fit as I used to be. But a lot of hill walking and mountaineering is to do with stamina and experience as well, so I should be okay on that score."

The Wilsons to come home

BRIDGE2AID

The BDA Conference brought a number of notable announcements from dental charity Bridge2Aid.

Following the launch of its new website and updated logo, founder Ian Wilson announced that he and his family were moving back to the UK after nine years living and working in Tanzania.

Edinburgh graduate Ian explained that the organisation in Mwanza, which includes 40 Tanzanian personnel and has trained more than 170 clinical officers to date, had grown to a point that he felt he could step back. He and wife Andie have moved back to Leeds and will still be heavily involved in the charity from the UK, networking and looking for partners to run the successful Dental Volunteering Programme in other countries.

Paul and Beth Brind will be relocating to Tanzania in June to work at the Hope Dental Centre and work on the Dental Training Programme.

For more information, visit www.bridge2aid.org

New president says BDA well placed to offer skills support

BDA CONFERENCE

A record attendance of more than 4,500 dental professionals were in attendance at the British Dental Association's (BDA) British Dental Conference and exhibition in Manchester recently.

The event, which featured a keynote speech from Secretary of State for Health Andrew Lansley, saw Janet Clarke MBE take over from Amarjit Gill as president of the BDA. In his opening address the outgoing president said that dentistry was going through a time of major change and highlighted the need for the profession to respond to the challenges it faced.

Upon handing over the presidency to Janet Clarke, the new president stated that it was an exciting time to be taking over and highlighted her belief that the BDA was well placed to help equip dentists with the knowledge and skills that are going to be essential in the reformed NHS.

Highlights of the conference programme included a talk from Baroness Tanni Gray-Thompson, who spoke of her personal journey overcoming adversity to become an 11-time Paralympic gold medal winner. And, as well as the ever-popular conference dinner at the Radisson Edwardian Hotel on the Saturday night, the previous night there was a VDP Ball at the Palace Hotel and a Friday Night Party for everyone else at Tiger Tiger in the city.

New president Janet Clarke mingles with delegates

LittleSister

If you expect the best why take a chance when you can enjoy complete confidence with the Little Sister QTW1, approved by NHS Scotland* as the leading washer disinfector for quality and performance, product support and overall value for money.

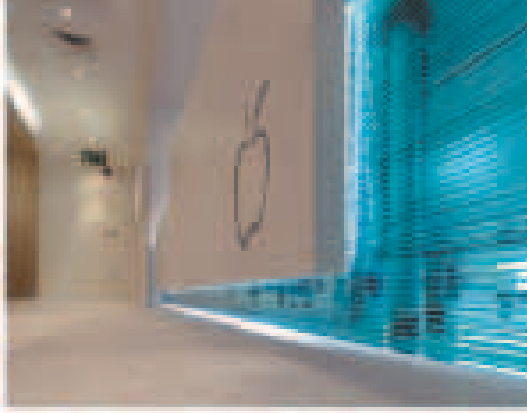
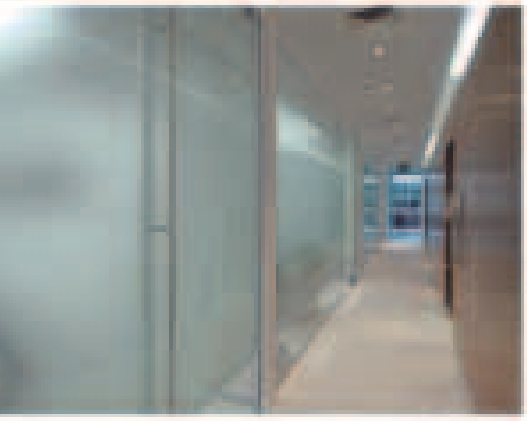
*NHS Scotland Framework Agreement DP/13/08

To order your Little Sister Washer Disinfector call EschmannDirect on: 01803 875707

LittleSister from EschmannDirect.co.uk

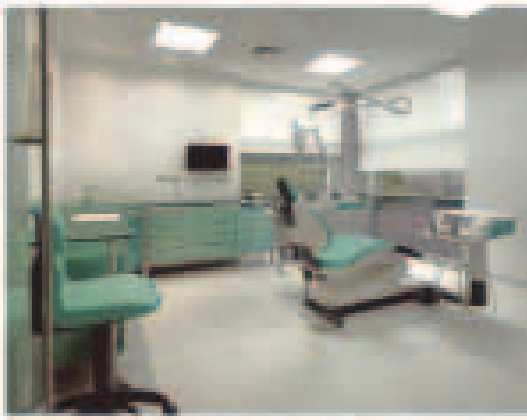
ESCHMANN

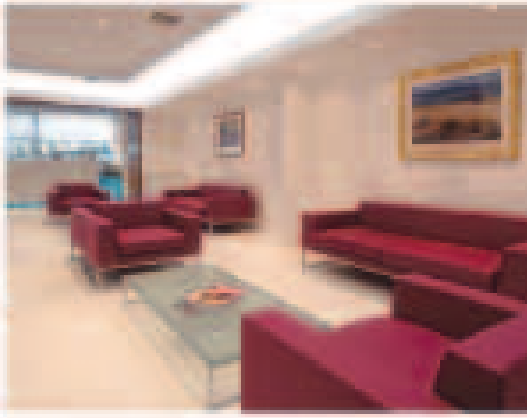


A FRESH APPROACH TO DENTAL DESIGN & CONSTRUCTION





Whatever your requirement, large or small, we'll work with you to develop the ideal solution. We'll also handle every aspect of its realisation from start to finish, so you can stay focused on what matters, your patients.

Our services include:

- Complete Architectural & Construction Package
- Bespoke Solutions, individually Tailored to your Requirements & Budget

Our expertise covers:

- CDU's, Surgeries, Reception & Waiting Areas
- Interior Design, Custom-made Cabinetry & Furniture
- Lighting, Ventilation, IT & AV Design & Installation

From consultation to handover, we make the journey as painless as possible

Call us on:
0141 959 8752

www.nvdc-dental.co.uk

NVDC
Architecture | Design | Construction

Major supplier stops selling whitening products

The Dental Directory forced to cease sales of two kits by Trading Standards

The 'blind eye' policy adopted by Trading Standards on tooth whitening products has seemingly been withdrawn after one of the major suppliers of whitening products ceased sales of all products with immediate effect.

Following legal advice, The Dental Directory released a statement to dentists in which sales and marketing director Mike Volk said: "It is fair to say that the 'blind eye' policy adopted by Trading Standards for the past four or five years on tooth whitening regarding the implementation of the Consumer Protection Act 1987 – The Cosmetic Products (Safety) Regulations 2008 has been withdrawn."

Volk continued to explain that, in January, a member of the public made a complaint to Hull Trading Standards that a home whitening product containing 10 per cent hydrogen peroxide had been prescribed by her dentist. Under the official regulations the maximum strength permitted is 0.01 per cent.

As The Dental Directory had sold the kit to the dentist in question, they were visited by Essex Trading Standards, in April and May this year. On one of the visits they were issued with an immediate Suspension Order under the Consumer Protection Act 1987 – The Cosmetic Products (Safety) Regulations 2008 on the two WY 10 Professional Home Kits.

The Company Secretary at The Dental Directory has subsequently been cautioned and it is understood he will be interviewed under this caution. Volk continued by saying: "I profoundly apologise for any inconvenience this may cause. However, it has been made clear to us, that it is highly likely that Hull Trading Standards will be taking this matter forward to court."

BDA calls for intervention

TOOTH WHITENING

The British Dental Association (BDA) has called for government intervention following a Trading Standards' investigation into tooth whitening products.

Stuart Johnson, chair of the BDA's Representative Body, said: "The BDA urges trading standards officials to focus enforcement action and resources on the serious matter of unqualified, untrained, non-GDC registrants, who put the public at risk by providing tooth whitening services.

"In relation to the dental professions, the BDA would like to see the low-key approach advised by LACORS and adopted by trading standards authorities to be re-instated and 'breaches' treated accordingly."

Primary school kids miss out, according to figures

Dental stats reveal dental check shortfall

Thousands of primary school children are missing out on routine dental checks according to the latest figures from ISD Scotland.

Targets set under the 2005 Dental Action Plan aimed for every primary one and primary seven pupil to receive a basic inspection under the National Dental Inspection Programme.

However, the statistics released by ISD show that only two health boards – NHS Orkney and NHS Shetland – met the P1 target with a further five within ten per cent. That left the remaining nine boards missing the target with the average being 88.6 per cent, a slight increase on the 2009 figure of 84.9 per cent.

In P7 the picture was even worse with only NHS Western Isles making the target and Orkney coming within ten per cent. The average across Scotland was only 83.2 per cent, up from 80.3 per cent in 2009.

Andrew Lamb, the British Dental Association's National Director for Scotland, told *The Herald* that parents failing to give permission and pupils refusing to open their mouths for the dentists has contributed to the figures.

He said: "The parents need to give permission and the child needs to be in school on the days the dentist comes, but I suppose the main reason [for missing the target] is that the child does not co-operate."

It wasn't all bad news – 11 NHS boards met the target of 60 per cent of P1 children to be decay free and 10 boards met the same target at P7 age. Also, across Scotland, 94.4 per cent of nursery schools were participating in toothbrushing schemes, with six boards reporting 100 per cent compliance.

ADI President hails successful event

TEAM CONGRESS

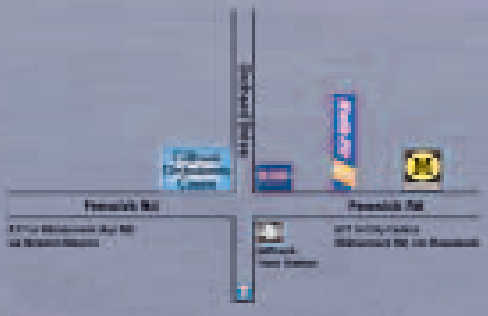
In his role as President of the Association of Dental Implantology, Bearsden dentist Stephen Jacobs revealed that if delegates took just one thing away from the recent Team Congress in Manchester, he would be a happy man.

He said: "With the array of speakers that we have, you are never going to please all the people all the time. But if the delegates here can take one thing away then it has been worthwhile. And whether that is something from the exhibition, the main auditorium or even in a discussion with a colleague in the bar, if they weren't here then they wouldn't have got that little nugget."

CELEBRATING 25 YEARS IN BUSINESS

Giffnock
Orthodontic Centre

- All orthodontic referrals are welcome from the dental profession
- Full NHS orthodontic treatment for children and adults
- First orthodontic consultation is free
- No waiting list
- Wide range of aesthetic appliances available (Ceramic, Invisalign & Lingual)
- Practice is easily accessible by public transport
- Ample free parking for patient use



1 Orchard Drive, Giffnock, Glasgow G46 7NR
t: 0141 638 4150 f: 0141 638 9988
e: info@giffnockorthodontist.co.uk
www.giffnockorthodontist.co.uk

Capital partnership

CLINIC OPENING

Two dental specialists from Edinburgh have joined forces to open the capital's latest state-of-the-art referral clinic.

David Offord, a registered specialist in oral surgery, and Grant Mathieson, a registered specialist in prosthodontics, will open Vermilion on 13 June.

The new clinic has been purpose-built by NVDC and features five surgeries, a seminar room, LDU and OPG room. The men said that the driving force behind the clinic is to collaborate with referring practitioners to build genuine clinical partnerships.

For more information, visit www.vermilion.co.uk

Dundee researchers win top awards

International accolades go to two academics

Two dental researchers from the University of Dundee have picked up prestigious awards.

Professor Nigel Pitts (pictured), director of the Dental Health Services and Research Unit, and Dr Nicola Innes, clinical lecturer in paediatric dentistry, were recognised at the International Association for Dental Research Awards in California.

Prof Pitts won the IADR Distinguished Scientist Research in Dental Caries Award for his research into the detection, assessment and preventive treatment of caries and the implementation of findings on an international basis.

This success makes Professor Pitts one of the very few researchers to hold two IADR Distinguished Scientist Awards, following an earlier prize.

And Dr Innes won the IADR/Unilever Hatton Competition Senior Clinical Research Prize for her paper 'Sealing Caries in Primary Molars: Hall Technique RCT five-year Results'. This was a clinical trial carried out by Dr Innes with Dr Dafydd Evans.

Professor Pitts said: "It is very gratifying to have this international recognition of the impact, over an extended period, of the caries research undertaken by the team in Dundee."

Dr Innes said: "Being awarded this international prize is a great achievement for all those who were involved in this clinical trial, and a further boost to the University's reputation as a centre for clinical research."

Another expert when it comes to compressed air

Up to 3 Years guarantee

The heart of the surgery: Compressors from Dürr Dental

Outstanding! A whale can exchange up to 98% of its lung volume in a single breath. It is therefore one of nature's unrivalled compressed air experts. When it comes to compressed air in dental medicine, Dürr Dental is also an expert. Thanks to their high performance values and excellent quality – oil-free, dry, hygienic – compressed air systems from Dürr Dental has firmly established them as one of the market leaders. More information under **www.duerr.de**

DÜRR DENTAL (Products) UK Ltd., 14 Linnell Way · Telford Way Industrial Estate, Kettering Northants NN16 8PS, Tel. 01536 526740, email: info@duerr.uk.com

DÜRR DENTAL

Round table

IS BROUGHT TO YOU IN ASSOCIATION WITH DENPLAN

Denplan
At the heart of dental care

Regulation in th

Opinions on over-regulation, peer review, skill-mix in dental practice and whether there should be a core service were all under discussion

The thorny topic of regulation, and in particular whether dentistry is over-regulated, was top of the agenda for the dentists who attended the recent *Scottish Dental* round table event.

The latest evening of dental discussion and debate was chaired by Roger Matthews, Chief Dental Officer of Denplan, and he wasted no time in getting down to brass tacks, asking: "Are we over-regulated? And is regulation proportional to the risk?"

Irene Black, GDP from Glasgow as well as being an Assistant Director in NHS Education for Scotland's National Decontamination Support Team and a Dental Practice Advisor for NHS Greater Glasgow and Clyde, was the first to comment on the new era of regulation. She said: "There is a difference between regulation of a service provider and regulation of the individual. Problems could arise when an individual practitioner with difficulties impacts on continuance of the service and vice versa."

Aubrey Craig, Head of Dental Division at MDDUS, was in agreement and pointed out that dentistry in 2011 is now more than simply treating patients. "Of course the patient is the central hub to all this," he said. "But from that are numerous spokes that feed into various different elements that you as a dentist have to carry responsibility for, both personally and if you are running a practice, as the provider."

Irene Black then pointed out that any regulation has to have the patients' best interests at the centre. "I think we are in danger of losing sight of that," she said. "Every aspect that is scrutinised as part of an inspection has to be underpinned by the question: 'Is what we're being asked to demonstrate always going to improve patient care?'"

With the advent of the Care Quality Commission (CQC) in England and the newly-founded Healthcare Improvement Scotland (HIS) north of the border, Aubrey Craig called for simplification of the whole process. He said: "It would be great to have one document, one inspection, one process that would tick all of the boxes."

Margie Taylor, Chief Dental Officer for Scotland, argued that steps are being taken to simplify the whole area of practice inspections. She said: "It seems to me that we have to avoid inspection fatigue. You have vocational training inspection, practice inspection, and potentially whatever HIS agrees to introduce. So it is a good opportunity just to try and bring them all together. We've done the first bit of doing the VT and health board inspections and trying to bring them together. We just have to, now that HIS has formed, work with them."

Janet Clarke, GDP from South Queensferry, argued that private practices should be treated the same as NHS practices in terms of inspection. She said: "I think the danger is that if you are a purely private practice then nobody need go into your practice, and that is a concern. There are very few of those in Scotland but there are still some purely private practices."

Margie Taylor then said: "Well we do have the opportunity, with HIS just beginning to have a look at it, to introduce something as sensible as we possibly can. I think they are willing to speak to us about it."

"You will still encounter practices where the attitudes are a bit questionable"
Hugh Harvie

But Hugh Harvie, Head of Dental Services Scotland for Dental Protection, highlighted the possibility that the standards recorded during an inspection might not be carried forward. He said: "It requires diligence, it requires effort by the practice owners and the dentists and staff working in the practice

e spotlight

Above: Guests at the latest *Scottish Dental* round table get down to business

to ensure that everyone is aware of the importance of these issues and, more importantly, that they are trained in the techniques etc.

"But you will still encounter practices where the attitudes are a bit questionable."

Aubrey Craig said he believed it was a training issue that practices needed to invest in, especially since the registration of DCPs. Irene Black argued: "This is about behavioural change. You can educate people until you are blue in the face but there has to be something that drives change. No matter how much you regulate or inspect, there will be some individuals who will not accept that change is necessary, for various reasons."

Roger Matthews explained that at Denplan they came to the conclusion that observing clinical procedures wouldn't add a great deal to the detailed clinical records audits and radiographic audits that they carried out.

Irene Black agreed that you can learn a great deal from dentists' record keeping but said: "I think the experience from vocational training, where people are watching each other on a regular basis, an element of peer review raises the stakes and makes you think more about what you are doing."

The conversation then turned to the pros and cons of peer review with Hugh Harvie arguing that he believes communication between colleagues can be very beneficial but that: "I think it is very difficult for people to raise these issues within practices and that's unfortunately where relationships break down, because it can lead to suspicion, uncertainty and unhappiness. Instead of opening up and talking about it, resentment grows and communication stops."

And Irene Black then pointed out: "We've identified a specific problem with the whole of dentistry here, in that we don't communicate with each other particularly well. It may be because we feel we are in competition with our neighbouring practices and other colleagues. There is always that psychological issue about hanging on to your own patients. We take it as a personal slight if they decide to move down the road.

"So there's a strange kind of attitude of not opening up to our

Continued »

MEET THE PANEL

Roger Matthews
Chief Dental Officer, Denplan – chairman

Steve Anderson
Denplan Area Manager for Scotland

Irene Black
GDP from Glasgow

Janet Clarke
GDP from South Queensferry

Aubrey Craig
Head of Dental Division at MDDUS

Hugh Harvie
Head of Dental Services, Scotland for Dental Protection

John Gall
GDP from Edinburgh

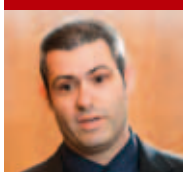
Aiden McKenna
GDP from Westhill, Aberdeenshire

Chris Ross
GDP from Scone, Perthshire

Rashmi Shah
GDP from Dunfermline

Margie Taylor
Chief Dental Officer for Scotland

Bruce Oxley
Editor, Scottish Dental magazine



Continued »

colleagues and that is perhaps the market place we work in."

However, Janet Clarke revealed that she is a great advocate of peer review. She said: "We've recently implemented in the practice team meetings with the dentists once a month. Just getting the dentists together on a regular basis to talk clinically about cases is such a big deal. I just think it's great to be able to do that."

Asked if she would do the same with the practice down the road, she replied that she would be more than happy to. "I've always done that, but whether everybody else would is a different matter," she said.

The conversation then turned to the competitiveness that seems to be ingrained into many dental students to be the best at specific procedures at undergraduate level and then, once graduated, to be more successful than your peers – making the most money in year one, etc. There was general agreement that this is a particularly destructive mindset.

Margie Taylor asked if that mindset was down to feeling threatened and, if peer review was in a non-threatening environment, might it be more widely adopted? John Gall, GDP from Edinburgh, replied by saying: "I think peer review can be that though. I've been in a peer review group for about 17 years and it is exactly like that. Maybe the five or six people in that group have worked particularly well together, but we talk totally openly about our practices and our clinical work as well.

"I'm a huge advocate of peer review. I think it was put aside for audit when audit became the big thing and I think peer review was sadly neglected, or has been."

"It seems to me that we have to avoid inspection fatigue"
Margie Taylor

Above: Aubrey Craig puts a point across to the group

"But audit is something you can do on your own," countered Hugh Harvie. "There is no reason whatsoever that you can't audit your own work. Peer review is something you do with someone else and that requires building confidence. But both audit and peer review are powerful engines for driving up standards individually and collectively."

Roger Matthews then asked whether "a team approach to dentistry, and successfully utilising the skill mix, could possibly provide some kind of solution to this professional hubris that we have been talking about?"

Irene Black ascertained that part of the problem with utilising the skill mix is the protectiveness of dentists over their own patch. "But I think there is a bigger issue about not utilising them at all. In terms of therapists or other DCPs that could potentially be utilised, it could be fear of the unknown and how they can work for us effectively."

And Janet Clarke said: "I think as dentists we are not very good at asking other people. You come back to thinking that everyone else knows what they are doing and perhaps I don't. Actually most of us can learn from everybody else."

Steve Anderson, Denplan Area Manager for Scotland, Northern Ireland and northern England, said: "I think it comes down to managing your own business. You've got these resources and it is about how you make the best use of these resources. It should also be about delegation, so you are not having to do everything yourself as a practice owner. "And that's why I'm a great advocate of having practice managers. There are fewer practices with practice managers than I would like to see. A PM is very often a fantastic support to the practice owner."

John Gall then said: "I would have thought that the natural way for things to go is that, as dentists become more and more trained at the higher end, that is what they should be doing.

"Dentists shouldn't be doing scale and polish with a hygienist in the practice. In fact, the way things go, it should mean fewer dentists and a lot more hygienists and therapists. If we learn to use them properly."

Chris Ross, GDP from Scone in Perthshire, pointed out that patient education also comes into it. She said: "It's not just getting dentists used to how to incorporate therapists into practice. We've just spent many years getting our patients used to why they are actually seeing the hygienist and that the hygienist does do her job much better than we do, because she has had more training in it. That's her speciality. It will probably take another few years for them to fully understand what the therapist does."

"We live in an age of choice," said Hugh Harvie. "If I go along to my dentist, am examined and found to require a restoration on one of my teeth, should I not be given the option of having that restoration placed by the dentist or by a therapist if one is working in the practice?"

Aiden McKenna, GDP from Westhill in Aberdeenshire, said: "I'm a great fan of hygienists, and we have four or five in the practice, but in a private dental practice setting I can't see patients being happy with me passing the restorative treatment onto a therapist."

And John Gall then said: "I think that is a problem in our heads. We managed it with hygienists 20 years ago and I just think it is only a matter of time with therapists. But I think it will happen."

But Irene Black agreed by saying: "On the whole I believe that hygienists are far better at motivating patients and providing periodontal care than I am. At the moment most of us don't have the intrinsic belief that the therapist provides a better level of service than dentists."

And Chris Ross added: "Because we don't have enough experience of what their abilities are."

The question was then put to the table as to whether there should be a core service available on the NHS, with anything over and above that being charged for. Irene Black was the first to respond by saying: "Because we can't do items such as posterior composites or bonded crowns on molars as part of NHS treatment, NHS practitioners run an element of core service already. When patients want these items provided, and if it is appropriate to their needs, we can say honestly: 'I'm sorry I can't do that on the health service, but I can provide it privately and this is how much it would cost.'

"I wouldn't wish to see us trying to provide a fully comprehensive NHS service that provided implants and the whole gambit. We could provide a good core service and give patients choice."

Aiden McKenna signalled his scepticism by saying: "People have been talking about this for years. In my view it is too much of a political football, it will never happen."

Roger Matthews indicated that Denplan has long considered a product that would complement public provision but that the definition would have to come from both sides of the fence, whether it would be a top-up service, grant in aid, voucher scheme or something else. He continued: "I wouldn't say it is impossible, that's just not true, because you just have to look around western Europe to see examples of how public provision and private insurance works."

Rashmi Shah then said: "I would say that, in times of austerity, I think it probably makes sense for NHS dentistry to provide a core service. It would give patients the option of going to see their NHS practice for the bare essential, core service treatment, but if they want something more than just core service dentistry then they go to a private practitioner and the two things should be working together. As opposed to the NHS trying to provide everything and the funding not there for practices to do that."

The table were then asked what could constitute a core service, to which Rashmi Shah proposed: "Maybe your core service should consist of examination, limited restorative work and periodontal work. Anything else the patient should pay for in full. You have your NHS treatment limited to a get-you-out-of-pain service and we'll take your teeth out for you, but if you want a root treatment, then you will have to pay for that appropriately.

"I feel that the fee scale should be a very basic fee structure."

Chris Ross argued that more emphasis needs to be put onto prevention, especially in the health service. And Hugh Harvie then said: "Maybe this provides the opportunity to look at it afresh and have a root and branch reform of the whole thing. What is it we are seeking to do? It is no longer a National Health Service as there are now variations in the various countries due to devolution. There is already rationing, if you like, within the system at the moment. Patients are opting to have teeth extracted rather than have root treatments done on grounds of costs. So we have got to recognise the realities of life and provide a system which meets patients' needs and demands."

"Most of us don't have the intrinsic belief that the therapist provides a better level of service"
Irene Black

"You just have to look around Europe to see examples of public provision and private insurance"
Roger Matthews

And Irene Black responded by saying: "This is about patient education, but you have about 50 per cent of the population who don't attend at the moment so do we have a two-tier system already? The care we provide depends on the patient base and perhaps where we work. Patients in different areas have different demands and can all be difficult in their own way.

"The difficulty in all of this lies in areas of real deprivation, where people have chaotic lifestyles and are not regular attenders. This is the patient base that has to have a safety net. The difficulty you have is excluding them from the opportunity to have something that is going to perhaps improve their life at the end of the day.

"So it has to be dealt with sympathetically. Most of us here are working in a population who are already educated as to the benefits of what we can provide and will seek our care regularly. Whereas a significant proportion of the population in Scotland still only actively seek dental care in emergency situations." ■

With thanks to Denplan and the Apex Waterloo Place Hotel, in Edinburgh.

Looking to brighten a **daunting world**

For children with autism, a trip to the dentist can be a terrifying experience. But now two senior NHS health employees are looking to change that. Chris Fitzgerald met them to find out how

Imagine a world in which you struggle to make sense of the mass of people, places and events you encounter on a daily basis and, as a result, suffer from considerable anxiety.

This is a world inhabited by the majority of people with autism, a lifelong condition that causes problems understanding and relating to other people, as well as taking part in everyday family and social life.

And, if everyday life poses a problem, it can only follow that a trip to the dentist must rate as terrifying.

Now, however, two senior NHS health employees are looking to make a difference in the way children with autism are treated.

Debbie Connelly and Lyndsay Ovenstone are looking to remove the fear factor associated with visiting the dentist via a pioneering new project.

Lyndsay is a Senior Dental Officer with the Salaried Dental Service and currently heads a paediatric dental service, incorporating student outreach, based within Bridgeton Health Centre in the east end of Glasgow.

She had noticed there was an increase in the number of children with autism attending the service, something she felt presented a number of challenges, as the service was not especially equipped for children with this condition.

PHOTO: GAVIN YOUNG

Lyndsay Ovenstone (left) and Debbie Connelly use cuddly toys to help ease children's anxiety

"I've been working at Bridgeton for over five years," Lyndsay told *Scottish Dental magazine*. "We had noticed an increase over this time, but it was an anecdotal observation. We've generally sought to promote our service since I started in the post and it could be that the parents of these autistic children may have experienced difficulty in accessing care elsewhere."

Autism's spectrum is wide and Lyndsay said some autistic children find dental care easier to accept than others.

"In general, autistic children like routine and find unfamiliar settings and experiences very stressful"

Lyndsay Ovenstone

"In general, however, autistic children like routine and find unfamiliar settings and experiences very stressful," she said.

"They tend to experience a sensory overload in a dental surgery as they cannot process the sheer volume of incoming visual and auditory information.

"They can react in different ways, but may try to block out the stressful stimuli by covering their eyes and ears, or by rocking. They may also attempt to physically escape the unfamiliar setting. Many do not like their face to be

A MEETING OF MINDS

Lyndsay and Debbie's coming together was not mere chance. The pair worked together many years ago in the west of Glasgow, before "defecting" to the east. "We work very well together in developing projects," Debbie said.

"With this particular project, we also received expert advice from staff within the Child Development Centre in Bridgeton, such as health visitors and occupational therapists.

"My background goes back a long way – 30 years in total – serving the dental profession.

"I trained and qualified as a dental nurse and progressed to oral health educator, then oral health promoter and finally a health improvement senior.

"In addition, up until two years ago, I co-facilitated the teaching at the Glasgow Dental Hospital in the National Certificate in Oral Health Education for Dental Nurses."

Lyndsay is a Senior Dental Officer for the Greater Glasgow & Clyde Salaried Dental Service. The Oral Health Directorate, Greater Glasgow & Clyde Health Board, manages this service.

"I'm responsible for the provision of a preventive-based children's dental service, from Bridgeton Health Centre, incorporating student outreach," she said.

"The service is situated within an area of high deprivation and is provided for those who would otherwise find it difficult to access appropriate care."

touched and are averse to bright lights.

"I have no formal training on autism, although I have attended postgraduate courses and have direct experience of providing care for autistic patients. I have always had an interest in this patient group and felt that we could make our service more accessible for them.

"The experience of visiting the dentist can be hugely challenging for these children and their parents, and we felt that, although we have a number of autistic patients registered, there were likely to be many more that are simply not accessing care."

These fears were confirmed by discussions Lyndsay had with staff from Bridgeton Child Development Centre, so she next got in touch with Debbie, who is a Health Improvement Senior for Oral Health, and part of a wider health improvement team that works closely with the community. Together the pair started to look at developing a solution.

"We looked at sensory equipment to make the surgery more user-friendly and in addition we wanted to explore developing the service to meet the needs of children and their carers," Debbie said.

The project itself was funded by money from the Oral Health Action Team. This is ring-fenced money from the Scottish Government that is distributed via health boards to develop local projects for a positive oral health gain. In total, the whole cost of the project is estimated to be around £3,000.

"Overcoming communication barriers for treating children with autism is crucial," said Debbie. "With the money, we've now developed talking picture books of the service and the dental team as a way of preparing children in advance of their visit.

"This is an innovative development, which should make a visit to the dentist less stressful for families and children with autism."

The new talking books contain pictures of the health

Continued »

"Poverty and deprivation are indicators of poor general health and in poor dental health."

Debbie Connelly

Continued »

centre, staff and surgery. The books provide a narrative to accompany each picture as the child works through the pages. These are given to children prior to their first visit to help them learn about what they can expect at the surgery.

"Autistic children tend to respond best to familiarity and the talking books help to prepare the child for the forthcoming experience, so it seems less 'new'," Lyndsay explained.

"Parents might also be concerned their child will not be welcome at a dental surgery and may not take them for routine care. The books help ensure that parents know they can access our service, as our facilities and experience make it more likely we will be able to meet the needs of their child."

But treating children with autism and special needs requires patience and a lot of investment in time by staff, according to Debbie.

"Depending on the child's communication and ability, it can be a stressful time for families and staff alike, especially if the child is in pain," she said.

Lyndsay added: "These children tend to be acutely sensitive to sensory stimuli and this can potentially influence their dental experience in a negative or positive way.

"Our aim is to provide positive sensory stimuli. For example, light patterns and shapes fascinate some children, so we now have a laser projector that produces lights on the ceiling. Other children are obsessed by cartoon characters, so we have a ceiling-mounted DVD player. We also have various toys and resources, such as rainmakers, that were recommended by a colleague who has considerable experience of autistic children."

There was also a general feeling that the overall layout of the surgery needed to change in order to better accommodate patients with autism.

"Children with autism don't like clutter – things on worktops, or pictures and posters on walls. We've removed these things from view," said Debbie. "We've also changed the colours of the walls to make them less clinical. Children with autism particularly like footprints on the floor too, so these have been purchased and fitted in the centre. Footprints are a form of signage used in hospitals and clinics. Again, this adds to the overall child-friendliness of the environment."

Outreach

In addition to the surgery receiving a physical revamp, students from the Glasgow Dental Hospital, who provide a service to the community as part of their on-going teaching and training, are also helping out.

"Student Outreach provides the opportunity for fourth and final year dental undergraduates to provide clinical care, under the supervision of an experienced clinician, in a primary care setting," Lyndsay explained.

"Bridgeton Community Dental Service offers preventive-based care for children who might otherwise experience difficulty accessing appropriate care.

"The students are given the opportunity to treat a variety of paediatric patients, including those with special needs such as autism. The aim is to enable undergraduates to develop the skills and confidence needed to provide appropriate care for a wide range of paediatric patients.

"A minority of patients are unsuitable for treatment by undergraduates and are appointed to non-teaching sessions."

As Debbie and Lyndsay have now established, dealing with autistic children is a

AUTISM EXPLAINED

Unless you've read Mark Haddon's excellent novel *The Curious Incident of the Dog In The Night-Time*, or know someone with the condition, chances are the everyday challenges associated with autism will be something of a mystery to you.

The National Autistic Society describes the condition as a lifelong developmental disability that affects how a person communicates with, and relates to, other people, while also affecting how they make sense of the world around them.

It is a spectrum condition, which means that, while all people with autism share certain difficulties, their condition will affect them in different ways. Some people with autism are able to live relatively independent lives, but others may have accompanying learning disabilities and need a lifetime of specialist support. People with autism may also experience over- or under-sensitivity to sounds, touch, tastes, smells, light or colours.

Asperger syndrome is a form of autism. People with Asperger syndrome are often of average or above average intelligence. They have fewer problems with speech, but may still have difficulties with understanding and processing language.

Haddon's novel explores living with autism through the eyes of his young protagonist. Although autism is never explicitly mentioned in the story itself, the cover blurb does say Haddon's lead suffers from Asperger syndrome.

While Haddon's character is of above average intelligence for his age, he lacks the required empathy for other people that is needed to function in a 'normal' society.

Haddon famously said he regrets mentioning Asperger in the blurb, as he is now inundated with requests for advice on the condition – a condition he claims to know nothing about!

A wall-mounted DVD player shows cartoons to help relax the children

challenge in itself, but when these children come from deprived backgrounds, it seems the situation is further exacerbated.

"There is evidence to support the fact that Bridgeton Health Centre serves a population that resides in an area of severe deprivation – in other words reports from Depcat and the Scottish Index of Multiple Deprivation (SIMD)," said Debbie.

"Poverty and deprivation are indicators of poor general health and in particular poor dental health. These chaotic lifestyles and social circumstances present a number of challenges to the medical and dental profession."

Lyndsay agreed, saying: "Socially disadvantaged children are likely to have a higher incidence of dental disease, they are likely to have much higher treatment needs, are less likely to come from dentally motivated families, less likely to comply with preventive advice and are more likely to have irregular attendance patterns."

To address these challenges, Debbie said the revamped service now offers a host of welcoming features.

For example, children unsuitable for treatment in mainstream General Dental Service can now be referred into the specialised paediatric dental service at Bridgeton.

Lyndsay has also developed a questionnaire, where the parent or carer is asked about their child's communication skills in advance of their visit.

"We'll give parents a pre-visit leaflet, which requests some information about their child's likes, dislikes and dental experience to enable us to tailor their visit accordingly," she said.

"We'll also suggest multiple short visits.

"I have no direct involvement in the diagnosis of autism though. If I was concerned that a parent was unaware of, or in denial about, their child's condition, I would refer them to their GP for advice or onward referral. We would, of course, continue to offer dental care and support."

The new service was launched on 11 May to coincide with National Smile Month and both Debbie and Lyndsay now hope their work will leave a smile on the faces of both children with autism and their carers alike. ■

The art of distilling information

The SDCEP looks to condense the latest thinking in dentistry into user-friendly guidance documents. Bruce Oxley talks to the key people to find out how

With upwards of 500 dental journals covering every single aspect of dentistry, and more than 2,000 articles written every month – of which 150 are randomised controlled trials – information overload is a genuine problem for the average dentist in Scotland.

To keep up to date with every single paper and trial of relevance would be more than a full-time job and leave no time for the actual business of dentistry.

So, what is the answer? A quick flick through the journals in a lunch break every month or so, a visit to a conference once or twice a year to hear the latest thinking? If only there was an internationally-renowned organisation on our doorstep that could distil that information into user-friendly guidance documents...

Six years ago the National Dental Advisory Committee (NDAC), which advises the Chief Dental Officer on issues of national importance in Scottish dentistry, identified a need for just such an organisation, and thus the Scottish Dental Clinical Effectiveness Programme (SDCEP) came into being. With Professor Jan Clarkson as Director, SDCEP works within the dental directorate of NHS Education for Scotland (NES).

"It evolved from discussions

within the profession about a perceived lack of clarity for people in practice as to where they get advice and guidance about a range of issues, from clinical activity to other aspects of running practices," said Dr Doug Stirling, SDCEP's Programme Manager.

"Decontamination is a case in point: there has been a host of information on decontamination out there but it has not been, from a dental team's point of view, easily accessible. And, even when they could find it, it may not necessarily have been in a form that was readily understood."

Doug, who was employed at the inception of the programme along with an administrator, was handed seven topics that had been identified by the NDAC and tasked with working out a process of guidance development. As a result, a guidance development group was formed for each topic, consisting of dental professionals with a particular interest or experience in that specific area.

Overseeing all the activities of SDCEP is a steering group, made up of representatives of each guidance group and the major dental institutions. Doug continued: "We have a number of general dentists on the steering group because we realise how vital it is to have end user representation in everything that we do.

"At the end of the day what we profess to do is produce user-friendly guidance and so we have to ask the users how it is working for them. Having them involved at every stage, from scoping through the development of the guidance itself, is crucial."

For each of the topics the programme development team carry out a consultation whereby a draft copy of the guidance is made available on the website (www.SDCEP.org.uk) and sent out to interested individuals and organisations, as well as a random selection of dentists for their comments. "This is really important for all sorts of reasons, not least the credibility of the guidance," said Doug.

"We are the only dedicated programme that is developing guidance for the dental profession"

Professor Jan Clarkson, Director of SDCEP

And that credibility is further enhanced through SDCEP's sister programme TRiaDS (Translational Research in a Dental Setting) which aims to evaluate the impact of guidance within practice. Dr Linda Young, Research and Development Manager, explained: "We have learned from research that guidance alone isn't always sufficient to change practise if a change is actually needed. The area that I am involved in is the implementation of the guidance and supporting dentists and their teams in translating recommendations into practice.

"Throughout the guidance process we investigate the gap between current practise and what the guidance recommendations are likely to say, and what the barriers are to following the guidance recommendations.

"Where there are barriers, then we can develop interventions to help support dentists implement the guidance and test them in an experimental way to inform decision makers. This is where working within NES is particularly beneficial because of the important role of educational interventions in supporting the implementation of the guidance."

Doug continued by saying: "I think other bodies who are involved with this kind of thing – and I'm thinking of the likes of SIGN in Scotland and NICE south of the border – are all acutely aware of the implementation aspect of what they do. There's a recognition that if a change is necessary then it is unlikely to happen – or happen to the extent you would want it to – by just giving out information, there is more to it than that."

And once the guidance is published and distributed, the onus shifts to keeping it as up-to-date as possible, as Doug explained: "We are committed to updating the guidance because they are living documents, so to speak. They are based on information that changes, so it is important that we do revisit the topic within a reasonable timescale to determine whether it is still current, if there is something new that makes the guidance out of date, or if there is just a minor change that needs to be made."

What sets SDCEP and TRiaDS apart, not just in the UK, but around Europe and the world, is the fact that they are unique. There is no equivalent body or organisation working in the dental field today and that is something that should be celebrated.

Professor Jan Clarkson, who as well as being the Director of SDCEP and TRiaDS is Programme Director for the Dental Health Services Research Unit at the

Continued »

"What we profess to do is produce user-friendly guidance and so we have to ask the users how it is working for them"

Dr Doug Stirling, SDCEP's programme manager

Continued »

University of Dundee, paid tribute to her colleagues by saying: "I think it is significant that, on an international stage, we are the only dedicated programme that is developing guidance for the dental profession. It is important because already we are providing guidance that dentists value and are using.

"We have an international best seller in the drug prescribing guidance and the caries guidance for children is being used by many dental schools throughout the UK.

"The research programme of TRiaDS is an exemplar across healthcare in the world, and there is an awful lot of interest in how we are trying to underpin the best use of the guidance that is being produced.

"I genuinely believe dentists think that we are working to provide them with something that is useful, not only for them but for the whole team. And I think that we produce a very high quality product." ■

SDCEP GUIDANCE PROJECTS

Topic Area	Status
Conscious Sedation	2006
Decontamination – Part 1 Cleaning of Dental Instruments Part 2 Sterilization of Dental Instruments	published 2007 publishing 2011
Drug Prescribing	published 2008 publishing 2nd Edition in 2011
Emergency Dental Care	published 2007
Dental Caries in Children	published 2010
Practice Support Manual	Six topics published 2010. Publishing further topics in 2011
Oral Health Assessment and Review	published 2011
Patients Prescribed Bisphosphonates	published 2011
Management of Acute Dental Problems	In development, consultation in 2012

Advancing Implant Knowledge Through High Quality Courses

"An excellent thorough grounding for any budding implantologists or experienced operators, with evidence-based references. The course is provided by two experienced and enthusiastic implantologists, in a first class facility." KC Chan, Dental Practitioner, Glasgow

The **GIFT Continuum** teaching programme is an on-going series of specific dental implant based topics that can be attended in any order, delivering units of information that combine to form the building blocks of a course that may be expanded to a postgraduate degree.

Regional and International Training
Training is delivered via a network of regional and international teaching centres. Facilities are appropriate to the practice of implant dentistry, providing the highest quality teaching environment and standard of clinical training.

Theoretical and Clinical
This course is ideal for those practitioners who wish to incorporate implant treatment into their practice, to advance their implant knowledge or consolidate existing expertise, but who are unable to commit to a degree programme. This does not preclude the delegate from following the degree programme at a later date and credit will be given towards the University of Warwick MSc and diploma courses in Implant Dentistry. Both MSc and diploma are registerable with the GDC as additional professional qualifications.

Scottish tutors (Aberdeen) Jacqueline Fergus and George Glover both hold a Master of Science in Implant Dentistry and are experienced GIFT regional tutors and mentors running courses from their state of the art facility in Aberdeen.

GIFT

For further information on Gift Continuum, visit www.gift.org.gg

Tel: 07738 737879 Email: aberdeenimplants@btinternet.com

Lab to lectures

George McDonagh is sharing his unrivalled knowledge of decontamination procedures with students at the University of Glasgow's Dental School. Tim Power caught up with him for a chat about his work and why it is so important

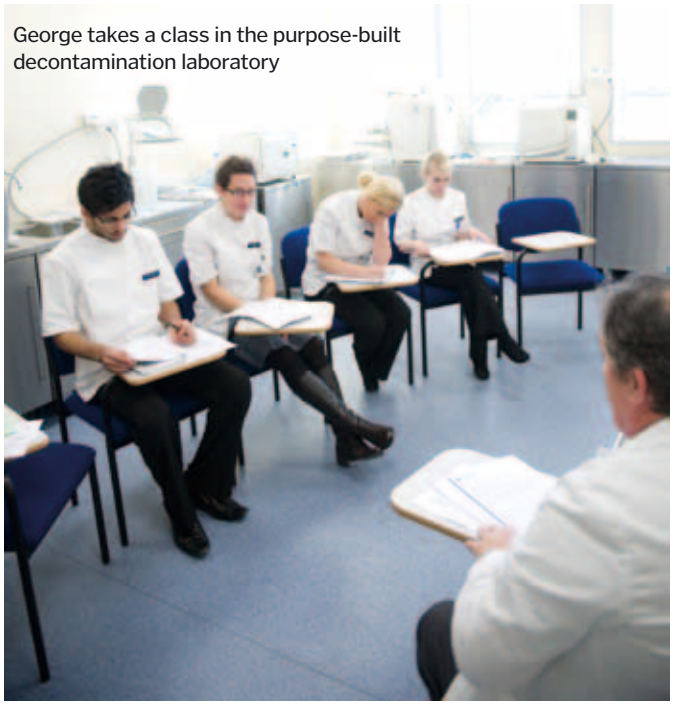
When it comes to dental decontamination knowledge, students at the University of Glasgow's Dental School not only have the UK's best equipped decontamination teaching laboratory, they've also got a lecturer with more than 20 years' industry experience under his belt.

George McDonagh, who joined as a full-time lecturer in Decontamination Sciences in 2008, has spent much of his working life as a validation test engineer checking the quality of decontamination equipment within the central sterile services units of hospitals in the west of Scotland.

George teaches third, fourth and final-year dental students and gives them sufficient knowledge and practical hands-on skills to allow them to manage the local decontamination unit within a dental practice.

He described the new role as a great opportunity: "I'd been a engineer for more than 20 years repairing and validating every type of decontamination machine you can imagine, so I was happy to hang up my tools and join the school as a lecturer so that students could benefit from my experience."

George's appointment, which is financed by NES, came at a time when dental decontamination came under the spotlight regarding the potential transference of Variant CJD (Creutzfeldt-Jakob disease) during dental surgery. Research showed that the prions comprising the disease were able to survive traditional decontamination techniques.



George takes a class in the purpose-built decontamination laboratory

He explained the importance of his role in teaching good decontamination procedures: "You have to remember that, before 2007, there was no formal training for dental students and their only experience of instrument decontamination was what they picked up on the clinics, from others who had very little or no training themselves.

"At the University of Glasgow, with support from the Chief Dental Officer for Scotland, Greater Glasgow Health Board and NES, we are leading the way in the teaching of instrument decontamination for others to follow."

Final-year students are given a two-week intensive course, which includes practical work in the use of manual washing, ultrasonic cleaning, automatic washer disinfector and benchtop steam sterilisers, both vacuum and non-vacuum.

And helping make the teaching as real as possible is one of the best-equipped decontamination labs in the UK.

On one wall of the demonstration lab is a bench comprising the traditional equipment found in a dental surgery such as a wash sink, ultrasonic bath, rinse station and non-vacuum steam steriliser. The other houses the more modern units, including a washer disinfector and a vacuum steriliser.

George said the traditional equipment is fine for decontamination as long as it is used properly, for example ensuring the sonic bath is changed regularly otherwise you'll end up with 'soup' at the end of the day!

However, George says the traditional sterilisers are not suitable for sophisticated three-dimensional instruments like handpieces. "The steam is unable to properly penetrate the internal structure of canulated or lumend instruments such as handpieces. For these, you really need a washer disinfector to clean the internal structure and then finish with a vacuum steriliser.

George often gets asked why dentists should use a vacuum steriliser rather than a non-vacuum unit. He explained: "A vacuum steriliser is preferable because it can sterilise through lumened devices such as handpieces. It has the power to penetrate all surfaces whereas the non-vacuum steriliser is only capable of sterilising solid instruments.

And it also gives users the option of packaging the instruments on site thereby ensuring that they are definitely sterile at point of use," he added.

Disinfectant washers and vacuum sterilisers are expensive pieces of equipment, but George said financial help

"A vacuum steriliser is preferable because it can sterilise through lumened devices such as handpieces"

was still available from NHS boards to provide funding for dental surgeries.

In addition to teaching best practice on the use of equipment and decontamination processes, George also takes his students through the validation process for this type of equipment so that they understand how to keep the units working as effectively as possible.

He said: "I can show students the process of validating the equipment so when an engineer calls they will be familiar with what they should be doing and can confirm the validation from the data presented on the engineers laptop.

"Validation is another cost for the dentist so it's important that dental staff know they are getting value for money from their engineer."

George enjoys being able to pass on his knowledge to students and is sometimes surprised by their enthusiasm for the subject. "I occasionally bump into old students in town and they'll often tell me how they've tried to change or questioned decontamination procedures at the dental surgeries they are now working at – so I must have made some impression!" ■

BIOGRAPHY: George McDonagh

- Steriliser Test Engineer/ Validation Engineer lecturer at the University of Glasgow Dental School
- Member of IHEEM (Institute of Healthcare Engineers and Estate Managers)
- Recently gained his post graduate Certificate in Academic Practice.
- For the last 20 years, George has worked in hospital CSSDs (Central Sterile Services Department).

Monthly Offers

Manufactured in Heidelberg, Germany, our extensive array of products ranges from dental hand instruments through to instruments for dental surgery and implantology.

Visit us at:

BDTA
DENTAL SHOWCASE
20-22 October 2011
NEC Birmingham

Dental A2Z™

Quality Dental Supplies, Affordable Prices®

Dental A2Z Limited is EN ISO 13485:2003 certified dental manufacturing and distribution company based in Highland Perthshire. Call us now to open your practice account with us.

Dental A2Z Limited, Unit 11, Pitlochry, PH18 5TL, Perthshire

FREEPHONE 0800 04 33 503 WEB: www.dental2z.co.uk

PLANMECA

Exceptional

3D

Imaging

in the most minute detail

FREE FOR 10 MONTHS* !!!

From £46,990 including 3 year warranty!!!

Freephone **0800 027 9599**

www.planmeca.com equipment@planmeca.co.uk

Plandent

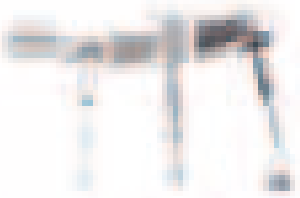
PLANMECA

Mini Implants...Maxi Profits

Vega Dental using the Intra-lock System

presented by **Todd E.Shatkin, DDS, Buffalo, New York,United States**

President of International Academy of Mini Dental Implants



1. One-step Delivery
2. Convert-Over Abutments
3. Multiple Thread Design
4. Bio-active Surface

For Dentist in Practice:
Make your money in your own Practice with your own patients... no referrals

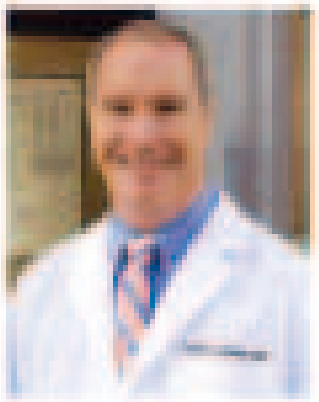
For your own Patients:
Secure loose dentures and replace missing teeth at 30% less for the patient

INTRA-LOCK SYSTEM

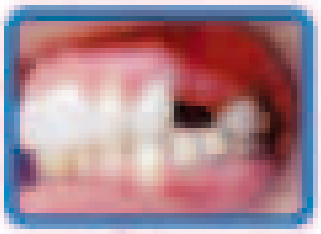
Less Work
With Shatkin F.I.R.S.T. Technique there is Immediate Loading. Patients will appreciate not waiting 6-12 months for their final restorations, and the fact that treatment is one third less expensive. Patients walk into Surgery and leave an hour later with an Implant and a Crown or Denture that is fixed and is permanent.

Less Hour in Chair-Less Work in Laboratory
Shatkin F.I.R.S.T Laboratory (1 only authorized Shatkin F.I.R.S.T lab in UK and Europe) will supply you with the patented Shatkin F.I.R.S.T Technique stents, crowns and dentures.

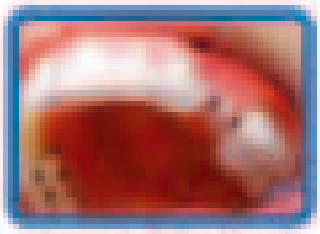
Less Surgery
Using Intra-Lock MDL and MDO Implants with DRIVE LOCK Technology, the "OSSEAN" coated implants promote osseointegration within three weeks of placement.



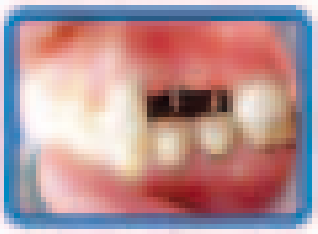
Dr Todd E Shatkin



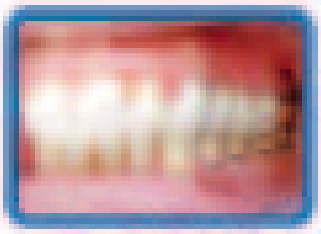
Before



Stent & Pilot Hole



Implant Placed



After F.I.R.S.T.®

Forthcoming date and venues

Cost: Dentists £350, Staff £150

RNCE

Course Worth 7 CDP Credits

Saturday 20th August 2011
Heathrow Holiday Inn, London. For room reservations call Reena Sherchan: +44(0)20 8990 0111 or email reenasherchan@holidayinnheathrow.co.uk

Monday 22nd August 2011
Hyatt, Birmingham. For room reservations call Rebecca Lamb: +44(0)121 6431234 or email rebecca.lamb@hyatt.com

For further information or to reserve a space call Vega F.I.R.S.T. on +44 (0)1481 824302

E-mail: info@vegadental.com, **Website:** www.vegadental.com

www.vegadental.com www.intra-lock.com www.shatkinfirst.com

CONTACT STEPHEN AT: stephen@dentalfx.co.uk

Stephen Jacobs, principal dentist at DentalFX in Bearsden, has taken on the challenge of documenting a course of implant treatment as it happens, and publishing his findings along the way

An implant restoration **in real time**

Over the last 30 years there has been increasing evidence supporting the provision of dental implant-supported restorations, as the predictable long-term treatment of choice in the replacement of missing teeth. During this period we have witnessed many changes in decision-making rationale and protocols of treatment, including many paradigm shifts of opinion as to the efficacy of different approaches to a variety of clinical situations.

A combination of evidence-based decision making, biologically-based techniques and experience-based complication management are vitally important in the treatment planning of our patients and their overall care.

The hierarchy of evidence is topped by randomised controlled trials (RCT), of which relatively few valid ones have been published – according to Marco Esposito, one of the most experienced researchers of systematic reviews and Cochrane type publications.

Below the RCTs, further down this list, are the published case series from which we can extract much information, but without the solid science that is demanded by our academic clinical colleagues, or 'academicians' as they are now descriptively known in the United States.

Below the case series, we have case reports, of which, over the years, there have been an abundance published in magazines, journals and industry-sponsored publications. The reports are often dismissed as anecdotal and lacking relevance when trying to apply information contained within these articles, to our own clinical practice.

One argument is that these case reports are usually written and published with the treatment completed and final result determined, irrespective as to whether the case produced a successful outcome or highlighted a complication; in other words, a retrospective view. Admirable though the latter may be, the case report still has the tendency to allow the author to write up the diagnosis, treatment plan, treatment details, together with all the thought processes involved, amidst the luxury of knowing the eventual outcome.

"The reader has my word that every relevant detail will be reported, warts and all!"

Over the next several issues of *Scottish Dental magazine*, I will be presenting a case report, but with a difference.

I was recently approached by an acquaintance and friend, with the proposition of carrying out a course of implant treatment, writing it up and publishing it in this magazine, in 'real time'. In other words, we shall take the reader through this course of treatment, describing every aspect of it, the planning, the delivery of the treatment itself, together with the after-care and follow-up, including any complications that may arise during and after treatment completion.

This naturally is a challenge, and while it may well have been done before, I have certainly never seen it presented in this way. Furthermore, the reader has my word that every

Continued »

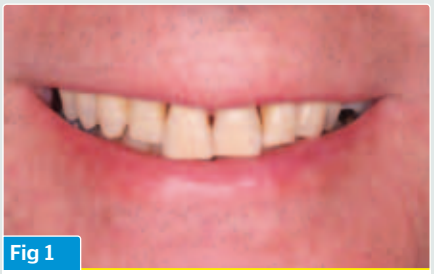


Fig 1
Photo showing the medium smile line

Fig 2
Teeth in occlusion. Note the pus around the gingival margin of 11

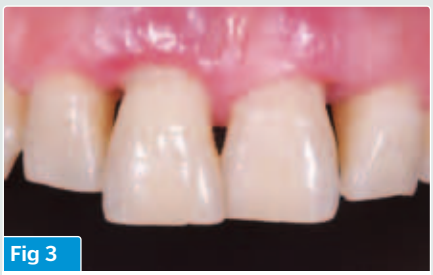


Fig 3
Close up of the central incisors highlighting the drifting and extruded 11

Continued »

relevant detail will be reported, warts and all! All clinical photographs will be genuine and without alteration, enhancement or use of any photo-editing software, except for cropping and adjusting lighting and contrast.

In addition, the patient, who has a journalistic background, will write up his aspect of the treatment, thereby giving the treatment details from both the clinician and patient perspective; we shall also bring in the laboratory and technical viewpoint at the appropriate time.

Further, and as will be apparent when looking at this case, it is far from straightforward and I would expect us to have some issue that need to be resolved and some decisions to be made along the way.

So, here goes...

First visit

Our patient, a male aged 54, who shall be known as NC, presented complaining of mobile and unstable upper central incisors, 11 and 21.

Medical history

His medical history revealed nothing untoward, with the exception of a mental illness that lasted for approximately a year and a half, but resolved approximately 18 months ago. All medication had now ceased, he was back at work and life had returned to normal.

There was a history of cigarette smoking for three years while NC was in his 20s.

Dental history

This revealed a history of periodontal disease that was essentially under control via regular plaque control from his dentist. However, NC did point out that it was during his illness that he noticed the deterioration of the central incisors. Prior to the illness, he attended his dentist on a routine basis.

Patient examination

On examination, there were no signs of submandibular lymphadenopathy, with an absence of TMJ symptoms and problems. Intra-orally, the soft tissues were healthy and no signs of pathology could be seen.

His oral hygiene was satisfactory, but with areas that required improvement. There was minimal bleeding on probing, these areas being associated with a small number of increased probing depths, restricted to a few molar teeth. The lower arch was largely unaffected.

The occlusal incisal relationship was class I, and no wear facets could be seen, indicating that parafunction was not a significant factor. There was a medium smile line with a normal gingival tissue biotype.

The two upper central incisors were grade III mobile, and upon probing and palpation, a significant amount of pus exuded from the gingival margins of both. Further, it could be seen that both had drifted with 11 being extruded from its socket.

"As I say when I am teaching, lecturing and mentoring, it's the discussion time where we all learn the most"

Radiographic examination

Intra-oral radiographs revealed some generalised vertical bone loss, the anterior periapical view revealing that 11 and 21 were the worst affected with approximately 80 per cent bone loss.

Diagnosis

NC was diagnosed as suffering from chronic periodontitis as a result of having a susceptibility to the disease, that may be genetically written, coupled with periods where the oral hygiene measures were not as effective as they could or should have been.

In the absence of general tooth mobility, most areas of the mouth could probably be brought under control and stabilised by a course of hygiene phase therapy. However, the prognosis of the upper central incisors was very poor and their extraction was the only treatment option that could be considered.

Bruce Hogan, the patient's dentist, had stabilised the periodontal condition with such success that the upper central incisors were really the only truly active areas within the mouth, that required radical treatment at this stage.

Treatment options

NC was anxious to avoid the provision of a partial denture, especially as a long-term solution. Even the thought of wearing one as a provisional restoration was not to be relished, although he accepted it to be the provisional restoration of choice.

Conventional fixed bridgework was discussed, but in view of the amount of tooth preparation required to sound tooth structure, coupled with the susceptibility to periodontal disease, we decided that this was probably not the best approach.

Adhesive bridgework was also discussed, but its lack of predictability in a case like this being the excluding factor.

Two implant-supported crowns were discussed and decided to be the optimum method of replacing the two upper centrals. However, it was explained that it was important to ensure that there was no active periodontal disease in other areas of the mouth, and that this must be treated prior to the provision of dental implants.

With this in mind, the following provisional treatment plan was devised:

- Hygiene phase therapy, eliminate periodontal pockets and reinforce oral hygiene. This would require an initial four visits, each of one hour duration followed by a period of monitoring and assessment of the stability and success of this phase.
- Extract 11 and 21, fitting an immediate partial acrylic denture.
- Cone beam CT scan to determine bone volume, four weeks post-extraction.
- Two months after extraction, place two dental implants, carrying out simultaneous guided bone regeneration, to increase palato-labial bone thickness.
- Following a suitable healing period, a sub-mucosal connective tissue graft, if deemed necessary. This has the effect of boosting the tissue biotype.
- Second stage surgery to uncover implants, confirm osseointegration and connect temporary healing abutments.
- Fabrication of screw-retained composite provisional crowns, to shape the marginal tissue and develop the interdental papillae.
- Final ceramic or zirconium crowns, cemented on CAD/CAM zirconium abutments.
- Regular reviews and maintenance, ensuring good oral hygiene measures.

Discussion with patient

At this stage, it is important to discuss the following:

- Treatment options
- Rationale behind the treatment and all the proposed stages of the treatment plan
- Sequencing of treatment, highlighting the likely number of visits and the length of time of treatment
- Procedures involved, including the surgical phases and aftercare
- The bone augmentation aspect, including the use of bovine and/or porcine biomaterials, if these are planned
- The importance of attending routine follow-up visits for monitoring the implant and peri-implant health
- The link of previous periodontal disease with future peri-implant disease, and the known risk factors
- This has to be backed up by contemporaneous notes and informed consent obtained.

Conclusion

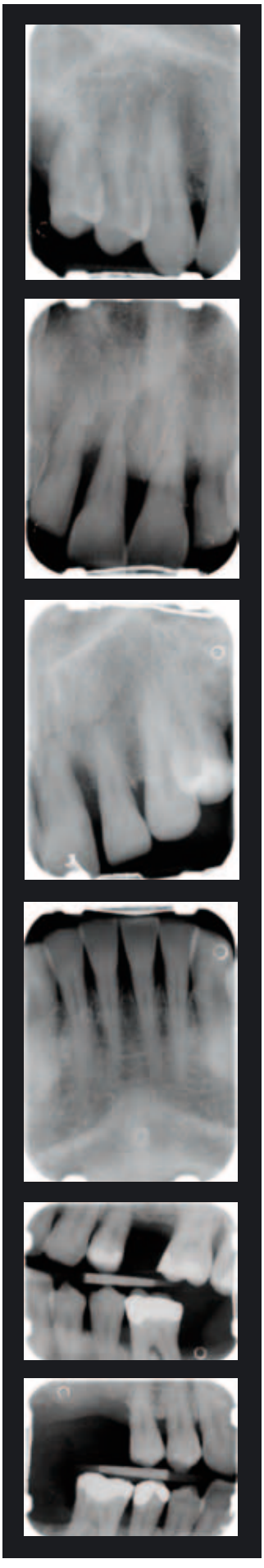
At the time of writing, the intensive hygiene phase therapy was nearing completion, with encouraging results, and impressions had been taken for the provisional denture.

Over the ensuing months, I will describe the treatment in detail, including my personal thoughts on how it is progressing, together with as much background information and references as I can provide.

As I have said, this case is far from straightforward, with some vertical bone loss at the time of presentation. We also have the history of periodontal disease, so we may have some ongoing peri-implant issues to deal with, but I would regard these problems as part and parcel with a busy implant practice, where a multitude of cases with a variety of presenting problems and complicating factors are treated.

I hope that the reader enjoys this journey with me, hopefully learning plenty and being able to apply some of this knowledge to their own clinical practice. I welcome any questions or queries by email to me. As I say when I am teaching, lecturing and mentoring, it's the discussion time where we all learn the most.

In the next issue, I will report on the early stages of treatment, together with some of the details of the treatment planning process. ■



As he embarks on his restorative journey, patient NC gives us an intriguing insight to the hopes, and fears, of an implant patient

The miracle of hope

The patient's perspective

About ten years ago, I read an interview by a – then – famous politician who was discussing his sense of his own mortality. It had only just struck him, at 52, that his life was actually going to end at some point. And it might be soon, how would he know?

The rather pleasant, if self-deceiving, notion that most of us have for most of our lives that, basically, it'll never end, is usually brought to a juddering, alarming halt by an event of cataclysmic proportions close to our own lives. Everyone over a certain age will, in truth, be able to tell you his or hers, if you press hard enough.

Now, if you find it too depressing to have someone bring the ultimate and inevitable shedding of the mortal coil into sharp relief, then there is a lighter side. It lies in the fact that my own moment of realisation burst through the morass of my indifference in a rather more mundane form: tooth loss!

It went something like this: "Oh Lord, does that really mean another one has to come out? There won't be many left soon.

"Is this actually the beginning of the end? The end itself?"

I would like to say that I lingered on that thought for a long time, debating endlessly with myself what, at 54, I would do with the rest of my life. If it all were about to end – because of my inherent and almost certainly hereditary periodontal problems – what would I do to truly enjoy my last days on the planet: golf, golf, more golf and perhaps, if I was lucky, a tiny bit of sex?

But I didn't. I panicked about what I would look like without my two front teeth – another Joe Jordan in the making (for those of you who know your football). How would I ever again bite into a really crusty French baguette, or explain to my long-suffering and particularly elegant wife that she was going to have to sleep with someone who put his teeth in a glass at the bedside every night. There goes the tiny bit of sex I might still have held out some hope of!

So, when the possibility arrived that there might be a solution to the problem, it came as an outrageous relief. I wasn't going to die after all! A miracle. Please understand that that is the extent of the emotion that can be generated when your dentist says: "I think I can fix this." Even if it's only a qualified "think", it's enough. There's hope.

"How would I explain to my particularly elegant wife that she was going to have to sleep with someone who put his teeth in a glass at the bedside every night"

All the excellent work that my own dentist – the talented and unrivalled gentleman that is Dr Bruce Hogan – did to stabalise the periodontal issues, could actually be followed up with implants that would maintain my limited appearance and, much more importantly, my dignity.

Now, I didn't present my dentists with the easiest challenge. Both my parents had lost virtually all their teeth at a fairly early age. Much of this had been put down to gum disease. This, I have almost certainly inherited.

Then there were the years of taking a particularly cavalier approach to oral hygiene (there we go, back to the "it'll never happen to me" thought process) and then, of course there was the small matter of a rather distressing – as they tend to be – nervous breakdown and the 18 months of very heavy duty anti-depressants and anti-psychotic drugs that were being shoveled down by the handful. I'm told that this can have an exacerbating effect on the problematic and significant periodontal and bone loss issues I have experienced. But I'm no scientist.

So, when DentalFX's Stephen Jacobs tells you that he thinks – but can't guarantee – he can replace the your two upper front teeth with implants, there is a tendency to forget your discussion with God about your future and replace the Almighty in your affections with this calm and assured surgeon.

Somehow, at the first consultation, the good doctor was able to gently relate the extent of the problem without it resulting in a return to ten milligrams of diazepam. He eases you through the process, giving this layman just enough technical information to feel 'included' in the process. It is my mouth after all.

It cannot be over-stated that for me, his well-balanced level of communication at the start of the journey was a vitally important factor in giving me the confidence that this relatively invasive procedure would work. After that, you relax – relatively speaking when someone's going to 'yank' out your two front teeth – and accept that there is a solution and it's here in the light and airy surroundings of this Bearsden surgery.

This is just the start but there is a sensation returning that I just might have few good years left in me. I'll report back after my next visit, at which I will have the teeth removed and a temporary plate fitted – which I dread... oh, Lord, where's that medicine cabinet? ■

A-dec 200

Durability. Performance. Assurance.

The latest addition to the A-dec range offers no compromise and real A-dec value.

Invest in reliability. Focus on the patient. Express your style. From the people who build the most dependable dental equipment in the world, A-dec 200™ provides you with a complete system to secure a successful future.

Discover how you can gain assurance with A-dec 200. Contact your authorised A-dec dealer today.

a-dec
reliablecreativesolutions

Chairs
Delivery Systems
Lights
Monitor Mounts
Cabinets
Maintenance
Infection Control

To learn more, contact A-dec at 0800 233 285 or call your local authorised A-dec Dealer. Visit our website: www.a-dec.co.uk

A-dec Dental UK Ltd
Austin House, 11 Liberty Way, Nuneaton, Warks. CV11 6RZ. Tel: 024 7630 0901 Fax: 024 7634 5106 Email: info@a-dec.co.uk

SAS SHOPFITTERS LTD

Dentistry Solutions for the 21st Century

WHAT WE OFFER

- Fully Health Board Approved
- Full Practice Design & Installation
- De-contamination Rooms
- Custom Made Reception Area / Surgeries
- Specialist Floorcoverings
- Information Technology
- Air Conditioning
- Complete Project Management
- Finance Available
- Planning and Building Warrant Applications

For more information call
Derock direct on: 07831 199 823
or Tony on: 07900 893 567

SAS Shopfitters Ltd.
Mootyett Farm, Howieland Road,
by Lanark. ML11 9PY.

CALL US ON 01555 896 999
OR FAX US ON 01555 896 989

With a history of complex treatment mechanics and patient discomfort, Ross Jones reports on the rebirth of lingual appliances

Advances in lingual appliance technique

Lingual orthodontic appliances have been in use for around 40 years. The first lingual orthodontic appliances were developed by two orthodontists working independently in Japan and the United States of America with the first treatments being carried out in the 1970s.

Dr Craven Kurz of the University of California, Los Angeles School of Dentistry, along with his co-workers developed the Kurz/Ormco lingual brackets and during the early 1980s there was an initial surge in the popularity of lingual orthodontics mainly using this system.

Many orthodontists found the new lingual technique difficult to master with a steep learning curve and it failed to take off as imagined. Treatment mechanics were more complex and technically demanding compared to labial appliances. In addition, a high bond failure rate and difficulties accurately rebonding brackets resulted in increased chairside time and poor clinical efficiency. Many clinicians became frustrated with the technique and would often abandon treatment and complete cases with traditional labial appliance systems due to difficulties in finishing cases.

Clinicians were also put off by problems associated with back pain due to the postural challenges of the lingual technique. Around the mid 80s many orthodontists had given up using the technique. From a patient's perspective lingual appliances were uncomfortable with tongue discomfort and speech problems due to the bulky stock lingual brackets.

In 2004 the Incognito lingual appliance system became available and it was designed to overcome many of the drawbacks associated with previous techniques *(Figure 1)*. Patient comfort was addressed by the use of state of the art CAD/CAM technology allowing customisation of each individual bracket to the patient's tooth surface. The thickness of the bracket body has been reduced by up to two thirds. Bond failures have been reduced due to the bracket base being larger and customised to fit perfectly to the lingual tooth surface of each individual tooth. The problems associated with finishing cases have been overcome with the use of wire bending robots which very accurately produce customised archwires to the patient's archform.

A closer look at the Incognito System

The main difference from all other bracket systems is that all the components are custom made for each individual patient. To begin an Incognito therapy it is necessary to take a two-phase PVS impression. High quality impressions are extremely important to ensure a high quality appliance.

The plaster models produced from the impressions are used to prepare an individualised therapeutic setup that is created by cutting the teeth and setting them up in to the ideal position.

Next a high-resolution optical 3D scanner is used to allow non-contact scanning of the therapeutic setup. The result of the scan is a 3D digital representation of the teeth consisting of many thousands of minute triangles that can be documented and processed in the computer.

Specialised CAD/CAM software is used to design and build customised brackets. The process begins with the creation of the bracket base being customised to the lingual surfaces of the patient's teeth. Because of the extreme accuracy of the scan, the bases mold precisely to the teeth. Large pad surfaces provide greater bond strength and make them easy to place on the teeth for bonding and re-bonding *(Figure 2)*.

"The problems associated with finishing cases have been overcome with the use of wire bending robots"

Continued »

Fig 1 The Incognito appliance system

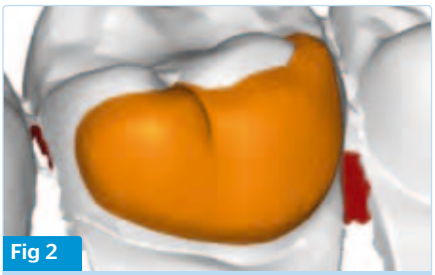


Fig 2 An individual pad base is virtually designed

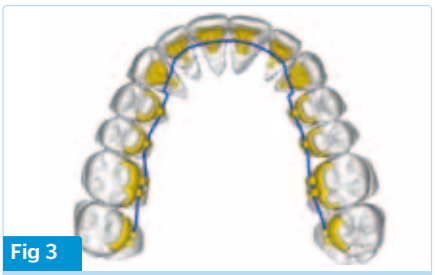


Fig 3 Complete set of brackets on a virtual upper arch and on a virtual malocclusion model

Fig 4
Brackets after investment casting

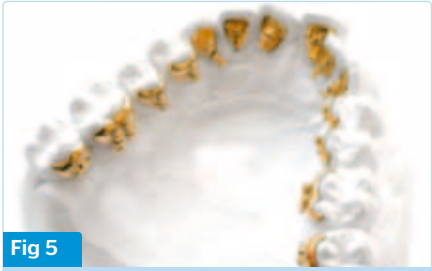


Fig 5
Gold brackets are placed on the original malocclusion model

Fig 6
Indirect bonding trays are made from the model

Continued »

After the design of the bracket bases, the appropriate bracket bodies are selected from the digital archive and arranged by the software. The vertical height, angulations and torque are preset into each bracket. In this way the patient's individual prescription is designed into the brackets *(Figure 3)*.

Once the brackets have been created digitally they are transferred into the real world by using rapid prototyping machines which create wax patterns of the customised brackets. The patterns are then placed in an investment cast, burned out and a dental gold alloy is poured into the cast to create the brackets. After casting, the brackets are polished until they are smooth to ensure high patient comfort *(Figure 4)*. The brackets are bonded to the original malocclusion model and an indirect bonding tray is constructed to aid the orthodontist at bond up *(Figures 5 and 6)*.

"The clinician should not be fooled into thinking that anyone without the appropriate training can use this system"

The final process is to construct the customised archwires. The wire geometry is calculated by the CAD/CAM program and then sent to a wire bending robot. Each wire in the sequence has the same geometry targeted to the final ideal position of the teeth.

Clinical use of the Incognito appliance

Thanks to the new techniques

Continued »

THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF GLASGOW

triennial conference

SETTING STANDARDS, ACHIEVING EXCELLENCE

The Royal College of Physicians and Surgeons of Glasgow 2nd Triennial Conference for Physicians, Surgeons, Travel Medicine Practitioners, Nurses, Dentists and associated professionals

DENTAL SYMPOSIUM

10 - 11 NOVEMBER 2011, AT THE SECC, GLASGOW

The Dental Symposium brings together some outstanding opinion leaders from a number of backgrounds to challenge the thoughts of the whole dental team on Setting Standards and Achieving Excellence, at national, local, personal or practice level.

Highlights include:

- TC White Invitation Lecture: Achieving Excellence in Implant Dentistry, *Mr Paul Stone, Edinburgh*
- The Future of NHS Dentistry, *Professor Jimmy Steele, Newcastle*
- Setting Standards for Dentistry, Thinking outside the Regulatory Box, *Mr Gavin Leask, Dental Protection Ltd*
- Alternatives to Litigation, *Professor Sheila McLean, Glasgow (Core CPD)*
- Setting Standards - Necessary but not Sufficient, *Dr Jason Leitch, Scottish Government*
- Achieving Excellence in:
  - Dental Radiography, *Dr Donald Thomson, Dundee (Core CPD)*
  - Managing Medically Compromised Patients, *Dr Michael Escudier, London (Core CPD)*

FOR A FULL PROGRAMME AND FURTHER INFORMATION PLEASE VISIT: WWW.RCPSGAC.UK
EMAIL TRIENNIAL@RCPSGAC.UK

Supported generously by the William & Elizabeth Dewar Foundation Trust

Fig 7 Fig 8

Intra-oral pictures showing before and after upper arch-only Incognito orthodontic treatment. (The appliance is still bonded in place in the after photograph)

Fig 9

The Incognito bracket

Continued »

and technological advances of the Incognito appliance system a new generation of orthodontists have now adopted lingual appliances. The system overcomes many of the problems associated with the lingual appliance technique and it is certainly much easier for the clinician. The clinician should not be fooled into thinking that anyone without the appropriate training can use this system. It is the orthodontist who formulates the treatment plan and is responsible for the final treatment result and the appliance is merely a means of delivering the desired treatment outcome.

In the author's experience, patient acceptance of the Incognito appliance has been excellent with them adapting quickly to the appliance with very minimal and short-lived interference with speech and minimal discomfort.

Figures 7 and 8 show before and after pictures of a patient who underwent upper arch-only Incognito appliance treatment. The patient is still wearing her appliance in the after photograph. Treatment time was under 12 months and the patient was very happy with the aesthetic improvement.

The appliance system can be used to treat the most complex malocclusions and treatment times are the same as labial appliances. The clinician needs to learn new techniques and appliance adjustments are more complex compared to labial appliances as access is more difficult. The extra effort is worth it as it is professionally very satisfying being able to provide invisible orthodontic treatment to meet your patient's aesthetic demands. ■

ABOUT THE AUTHOR

Mr Ross Jones, BDS (Hons), BMSc (Hons), MFDS RCS (Edin), M Orth RCS (Edin), MSc, FDS RCS (Edin) is a consultant and specialist in orthodontics. He is available at the Scottish Centre for Excellence in Dentistry for referrals for orthodontic treatment.

For more information please contact Molar Ltd on 01934 710022, email info@molarltd.co.uk or visit www.molarltd.co.uk

MOLAR
The oral hygiene supplier

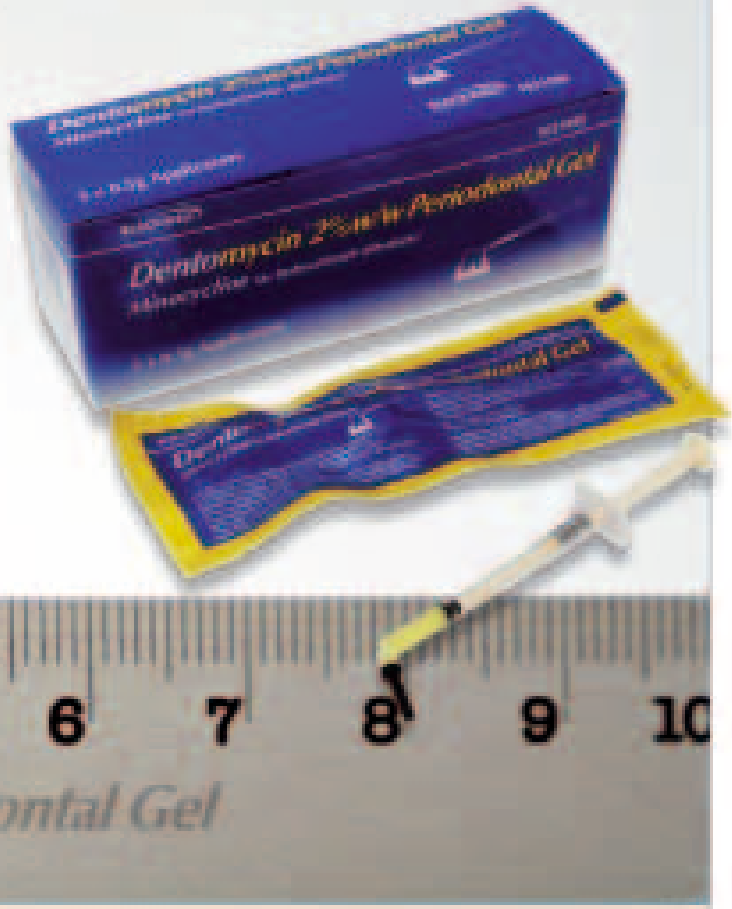
Periodontal Disease

How do you measure success?

Dentomycin offers:

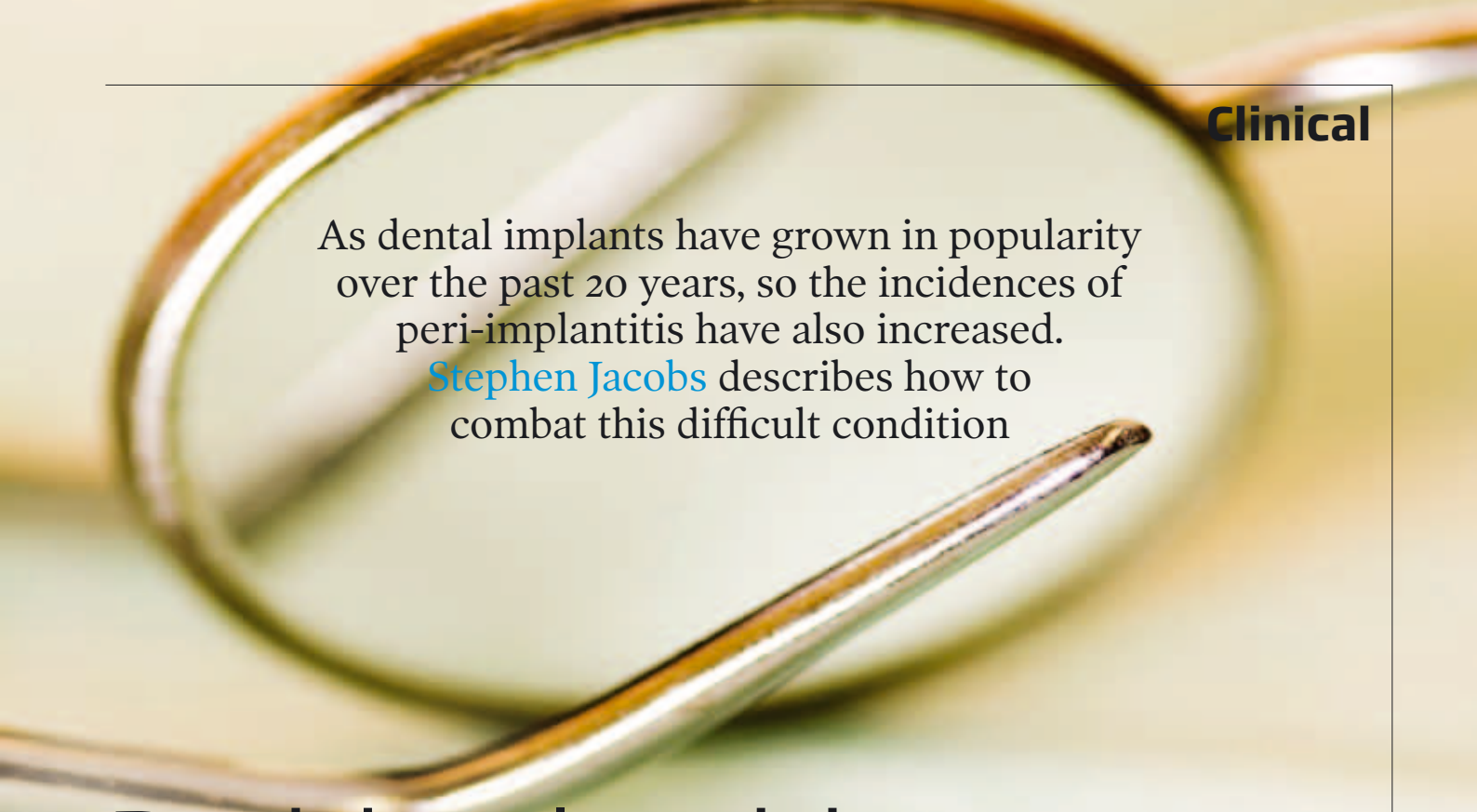
- **42%** reduction in pocket depth after 12 weeks[1]
- **broader spectrum** of antibacterial action[2] with greater all round activity than metronidazole or tetracycline
- **conditioning of the root surface**[3] and enhanced connective tissue attachment[4]
- **improved healing** through inhibition of degradative collagenases[5]
- **effective treatment** of chronic periodontitis which has been associated with cardiovascular diseases[6-9]

1. van Steenbergne D, Bleeny P, Kohl J, et al. Subgingival minocycline hydrochloride ointment in moderate to severe chronic adult periodontitis: a randomized, double-blind, vehicle-controlled, multicenter study. J Periodontol 1993;64:637-44.
2. Slots J and Rams TE. Antibiotics in periodontal therapy: advantages and disadvantages. J Clin Periodontol 1990;17:479-93.
3. Rompen EH, Kohl J, Nusgens B, Lapiere CM. Kinetic aspects of gingival and periodontal ligament fibroblast attachment to surface-conditioned dentin. J Dent Res 1993;72:907-12.
4. Rifkin BR, Vernillo AT, Golub LM. Blocking periodontal disease progression by inhibiting tissue-destructive enzymes: a potential therapeutic role for tetracyclines and their chemically-modified analogs. J Periodontol 1993;64:819-27.
5. Somerman MJ, Foster RA, Vorstag GM, et al. Effects of minocycline on fibroblast attachment and spreading. J Periodontal Res 1988;23:154-9.
6. DeStefano F, Anda RF, Kahn HS, et al. Dental disease and risk of coronary heart disease and mortality. BMJ 1993;306:688-91.
7. Joshipura KJ, Rimm EB, Douglass CW, et al. Poor oral health and coronary heart disease. J Dent Res 1996;75:1631-6.
8. Mattila KJ. Dental infections as a risk factor for acute myocardial infarction. Eur Heart J 1995;14 Suppl K:51-3.
9. Morrison HI, Ellison LF, Taylor GW. Periodontal disease and risk of fatal coronary heart and cerebrovascular diseases. J Cardiovasc Risk 1999;6:7-11.



Information about adverse event reporting can be found at www.yellowcard.gov.uk Adverse events should also be reported to Blackwell Supplies,Medcare House, Gillingham, Kent ME8 0SB or by telephone: 01634 877535

Dentomycin abridged prescribing information. Please refer to the Summary of Product Characteristics before using Dentomycin 2% w/w Periodontal Gel minocycline as hydrochloride dihydrate. **Presentation:** a light yellow coloured gel containing minocycline as hydrochloride dihydrate equivalent to minocycline 2% w/w. Each disposable application contains minocycline HCl equivalent to 10mg minocycline in each 0.5g of gel. **Uses:** Moderate to severe chronic adult periodontitis as an adjunct to scaling and root planing in pockets of 5mm depth or greater. **Dosage:** Adults – Following scaling and root planing to pockets of at least 5mm depth. Gel should fill each pocket to overflow. Applications should be every 14 days for 3-4 applications (e.g. 0,2,4 and 6 weeks). This should not normally be repeated within 6 months of initial therapy. Use only one applicator per patient per visit which should be wiped with 70% ethanol between applications to each tooth. Avoid tooth brushing, flossing, mouth washing, eating or drinking for 2 hours after treatment. Elderly – As adults, caution in hepatic dysfunction or severe renal impairment. Children – contraindicated in children < 12 years. Not recommended in children > 12 years. **Contraindications:** Hypersensitivity to tetracyclines, complete renal failure, children under 12 years. **Precautions:** Closely observe treatment area if swelling, papules, rubefaction etc. occur, discontinue therapy. Safety in pregnancy and lactation not established. **Side-effects:** Incidences are low and include local irritation and very rarely diarrhoea, upset stomach, mild dysphoria and hypersensitivity reactions. **Storage:** 2°-8°C. Legal category: POM. **Presentation and cost:** Disposable applicator in an aluminium foil pouch. Each carton contains 5 pouches. Carton £105.00+VAT. **Licence No:** PL 27850/0001 PA1321/1/1. **Product Licence Holder:** Henry Schein UK Holdings Limited, Medcare House, Dartford Close, Gillingham Business Park, Gillingham, Kent, ME8 0SB. Telephone 020 7224 1457 Fax 020 7224 1694 **Distributed by:** Blackwell Supplies a division of Henry Schein UK Holdings Ltd, Medcare House, Gillingham Business Park, Gillingham, Kent ME8 0SB Tel 020 7224 1457 Fax 020 7224 1694 **Date of preparation:** February 2011 ®Registered Trademark BLA/DEN 18



As dental implants have grown in popularity over the past 20 years, so the incidences of peri-implantitis have also increased. Stephen Jacobs describes how to combat this difficult condition

Peri-implantitis: definitions and treatment

Introduction

The provision of dental implant-supported restorations has increased exponentially during the last twenty years and in particular the last ten years. During this time we have also seen the increasing prevalence of problems associated with the use of implants, one of the most common being a condition called peri-implantitis.

Before I discuss this in detail, it is important to appreciate that we are still learning about this condition and the presenting factors, together with the diagnosis and recommended treatment regimes.

Furthermore, there can be some confusion over the relevant definitions and terminology that are applied when discussing the condition among both colleagues and patients. The Academy of Osseointegration in the United States is planning a consensus conference next year – which I shall attend and where hopefully some clarification can be given – and which I hope will result in some kind of algorithm that will give guidance to the implant clinician as to how to manage a given situation.

It is pertinent to add that it was not even ten years ago that I heard experienced clinicians and academics claiming at major meetings that the condition was either extremely rare or did not even exist!

I had the honour of chairing a one-day focus meeting on peri-implantitis last year in London, where four clinicians – Tord Berghlund, Stefan Renvert, Andrea Mombelli and Niklaus Lang, all leading researchers in this field – presented to over 400 dentists and hygienists, shedding much light on this condition.

It is also important to note that there is no implant type or brand that is immune from peri-implant disease and anyone who has placed and/or restored a significant number of implants will be familiar with the occasional presentation of inflammation and bleeding around an implant or even a discharge of fluid when palpating the peri-implant tissues over a restoration. So, for the purposes of this article, we shall refer to two main conditions, peri-implant mucositis and peri-implantitis.

The conditions

Peri-implant mucositis can be defined as inflammation around the marginal tissue at the neck of an implant-supported

Continued »

PROTOCOL FOR TREATING PERI-IMPLANT MUCOSITIS

1. Mechanical scaling of implant surface with plastic, titanium or carbon fibre instruments. The implant insert for the Cavitron is also useful.
2. Applying to any exposed implant surface, gauze strips soaked with chlorhexidene (0.2 per cent).
3. Sub-mucosal circumferential irrigation of the implant pocket with 5ml chlorhexidene (0.2 per cent).
4. Application of 2 per cent minocycline gel (Dentomycin, Blackwell supplies Ltd).

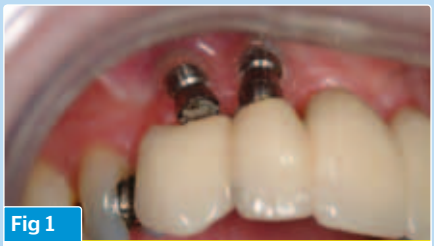


Fig 1
Peri-implant mucositis around 12-year-old tissue level implants

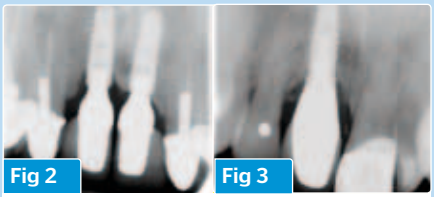


Fig 2 Fig 3
(2)Periapical radiograph showing two implants, placed at the same time uneventfully, behaving very differently. (3) Proximal bone levels appear satisfactory, not revealing the labial bone loss

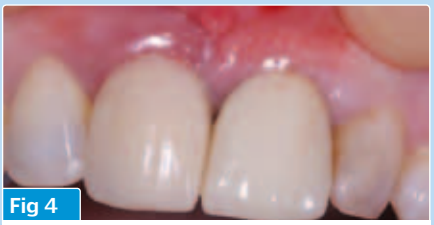


Fig 4
Inflammation around implant-retained crown at 11, note the purulent discharge mesio-buccally

Continued »

restoration and is associated with oedema, redness and bleeding on probing.

Peri-implantitis is considered as a more advanced form of the disease and presents with a purulent discharge associated with marginal bone loss around the implant itself.

The prevalence of peri-implantitis has been shown to be as much as 29 per cent in partially dentate patients and among these, up to 56 per cent of patients had more than one implant affected. Berghlund et al showed greater than 3mm bone loss around implants at ten years in 28 per cent of patients. This, therefore, is a common disease in the implant patient.

There appears to be a link with periodontal disease in that the bacteria found in peri-implant defects are similar to those found in deeper periodontal pockets and that the risk factors are similar in that it is more common in genetically susceptible patients, with secondary factors being smoking and poor oral hygiene.

For several years, I have had much success with the following protocols for managing the disease in both a non-surgical and surgical manner for peri-implant mucositis and peri-implantitis respectively.

Peri-implant mucositis

One of the reasons that the condition has only been widely documented over the last ten years or so appears to be because of the trend to have the textured surface roughened up to the top of the implant, as opposed to a machined surface or a hybrid design.

As stated earlier, it is characterised by oedema and profuse bleeding on gentle probing and has been shown to be related to inflammatory markers identifiable within peri-implant sulcular fluid. There may also be some horizontal bone loss and gingival recession (Figure 1).

In these cases a non-surgical approach can be applied with a combination of mechanical debridement, sub-mucosal decontamination and antimicrobial therapy. The treatment should be repeated three times within a ten to 14 day period.

Peri-implantitis

Peri-implantitis tends not to be associated with recession, but with a deep peri-implant pocket that becomes colonised by anaerobic periodontal pathogens. It presents with a purulent milky exudate on palpation or probing, together with vertical and crater shaped bone defects (Figs 3, 4 and 5).

Like mucositis, it is an inflammatory mediated condition as evidenced by the presence of inflammatory markers within the sulcular fluid.

The condition is site specific rather than pathogen specific as it does not necessarily affect neighbouring implants in a similar manner. Figure two is a periapical radiograph of two implants at 11 and 21 placed four years ago into good bone and with uneventful healing. Tooth 11 shows a crater like vertical defect, whereas 21 has optimal proximal bone levels. It is relevant to note that clinically, 11 has a milky crevicular exudate on palpation, as compared with healthy marginal tissues at 21.

Historically, the macro-rough surfaces such as titanium plasma spray, hydroxyapatite and porous coatings have been implicated in a severe aggressive form of peri-implantitis which led to implant failure. In contrast, the newer micro roughened implant surface texture, popular in many current brands, shows excellent long-term data; however it is unquestionable that the very common placement of implants in the partially dentate patient

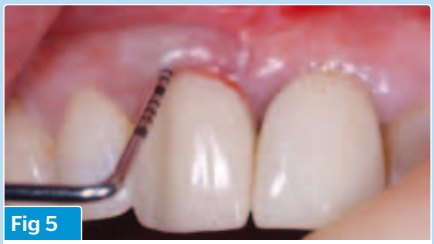


Fig 5
Increased probing depth on facial aspect

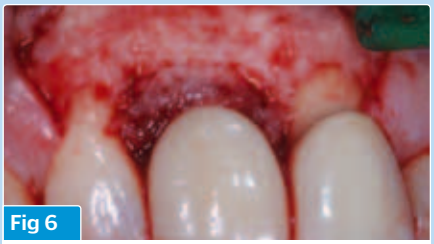


Fig 6
Flap raised showing infected granulation tissue in defect on cervical aspect

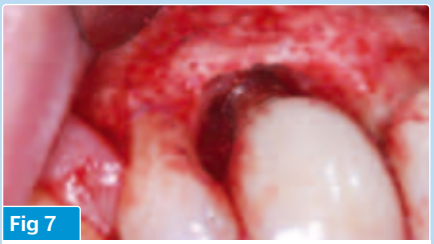


Fig 7
Area thoroughly debrided down to fresh bone revealing large crater defect

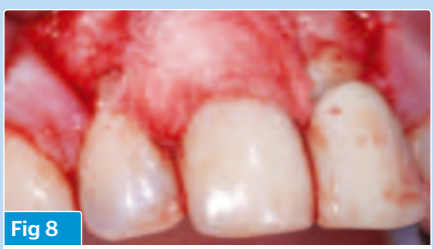


Fig 8
Decontamination commences by bathing area in chlorhexidene infused gauze strips

Fig 9
Tetracycline solution made up by dissolving 1g of crushed tetracycline tablets in 20ml sterile saline, filtered and drawn into syringe for irrigating defect

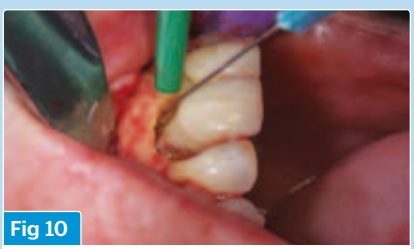


Fig 10
Site irrigated with tetracycline solution

Fig 11
Hydroxyapatite bone mineral, BioOss (Geistlich), rehydrated in tetracycline solution

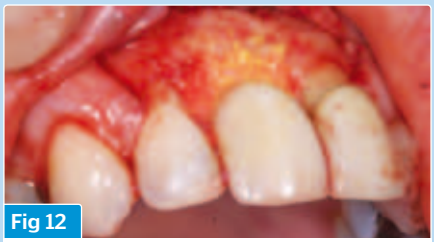


Fig 12
Defect packed with xenograft

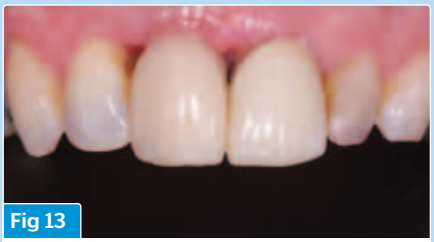


Fig 13
One week post-op following closure with '6-0' Vicryl Rapide (Ethicon) sutures

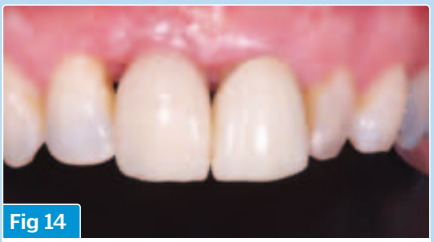


Fig 14
Six months post-op; a fully healed site free from disease

is leading to higher incidences of cross infection into the peri-implant tissues.

Many treatment modalities have been advocated but most lack predictability, such as the polishing of the roughened implant surface, removing the implant threads, the use of CO_2 lasers and application of various acids.

The suggested protocol in this article, and one with which I have achieved much success over the years, focuses on mechanical direct debridement coupled with systemic and local anti-microbial therapy, and I am grateful to Michael Norton who originally gave me these protocols. Tetracyclines are recommended because they chelate to hydroxyapatite within bone from where they can mediate their effect. High doses of antibiotics are recommended as the pathogens in the peri-implant biofilm form a 'protected niche', and low doses will contribute to host resistance.

It is usual, even sometimes desirable, to expect some recession of the hard and soft tissues which exposes the implant surface, and in the same way as gingival recession following treatment of periodontitis will eliminate pockets thus aiding ongoing mechanical cleansing, this occurrence can improve the medium to long-term prognosis of the implant(s). It does however place the implants at future risk of peri-implant mucositis and as such, regular follow-up with the occasional decontamination for mucositis is to be recommended.

Further, I advise the following points should be considered:

- Always probe implants in order to determine their health
- Taking peri-apical radiographs will indicate the status of the proximal bone levels, but do not show the facial, palatal or lingual bone – these being the sites commonly affected by peri-implantitis. Figure three illustrates this point, as this is the case highlighted in the clinical images in this article
- CBCT imaging can also be unreliable due to the scatter usually seen around the metal

Continued »

Continued »

implant, not to mention IRMER and justification issues

• Always treat peri-implant mucositis to prevent it developing into peri-implantitis, which is more difficult to treat.

The progression of implant design, from machined surfaces through to the micro-textured biologically active surfaces, has seen the survival rates of dental implants soar to levels in excess of 96 per cent, even in risk groups such as smokers. But this has to be tempered by the fact that this progress has also seen the increased prevalence of peri-implant disease.

The possibility of future remedial care of their implants must be discussed with patients prior to commencing treatment, especially those with the known risk factors such as genetic susceptibility and smoking, and all this assumes that good oral hygiene is a given.

Torsten Jemt, a member of the original Branemark Clinic team and a clinician with over 35 years of documented data, suggested somewhat controversially, at the recent ADI Congress, that if we wanted long term predictability for an implant in a young patient with a long life expectancy, free from peri-implant disease, maybe we should consider a machined surface implant! These implants are not even available for purchase nowadays!

In conclusion, in my practice, we have seen increasing numbers of cases presenting, ranging from implants that I have placed some time before, to those referred from worried colleagues. While I have traditionally treated them cautiously and conservatively, I am now intervening in a more aggressive manner because there is now undisputable evidence that peri-implant mucositis, if left untreated, will develop into peri-implantitis. Without doubt, we are going to be treating this condition with increasing regularity for the foreseeable future. ■

Stephen Jacobs is the principal dentist at Dental FX in Bearsden, Glasgow, where he is happy to take referrals for the management of peri-implant disease and other implant issues. Stephen is also the current President of the Association of Dental Implantology.

PROTOCOL FOR TREATING PERI-IMPLANTITIS

1. Systemic antibiotics for three days pre-operatively and five days post-operatively. Advise a combination of amoxycillin (500mg tds) and metronidazole (200mg tds).
2. Pre-operative two minute mouthwash with chlorhexidene (0.2 per cent).
3. Full thickness muco-periosteal flap extending beyond the infected site to healthy tissues.
4. Thorough debridement and curettage down to healthy bone, combined with mechanical cleaning of the implant surface with titanium or plastic tipped instruments.
5. Pack gauze strips soaked in chlorhexidene (0.2 per cent) around implant, into defect and under the flap. Leave in situ for five minutes.
6. Remove gauze and irrigate thoroughly with tetracycline solution (1g in 20ml of sterile saline).
7. If possible, graft defect with hydroxyapatite bone mineral of either allogenic or xenogenic origin, rehydrated in tetracycline solution.
8. Once again, if possible, apply a resorbable collagen barrier membrane.
9. Closure of flap and regular reviews.

Adapting with nature

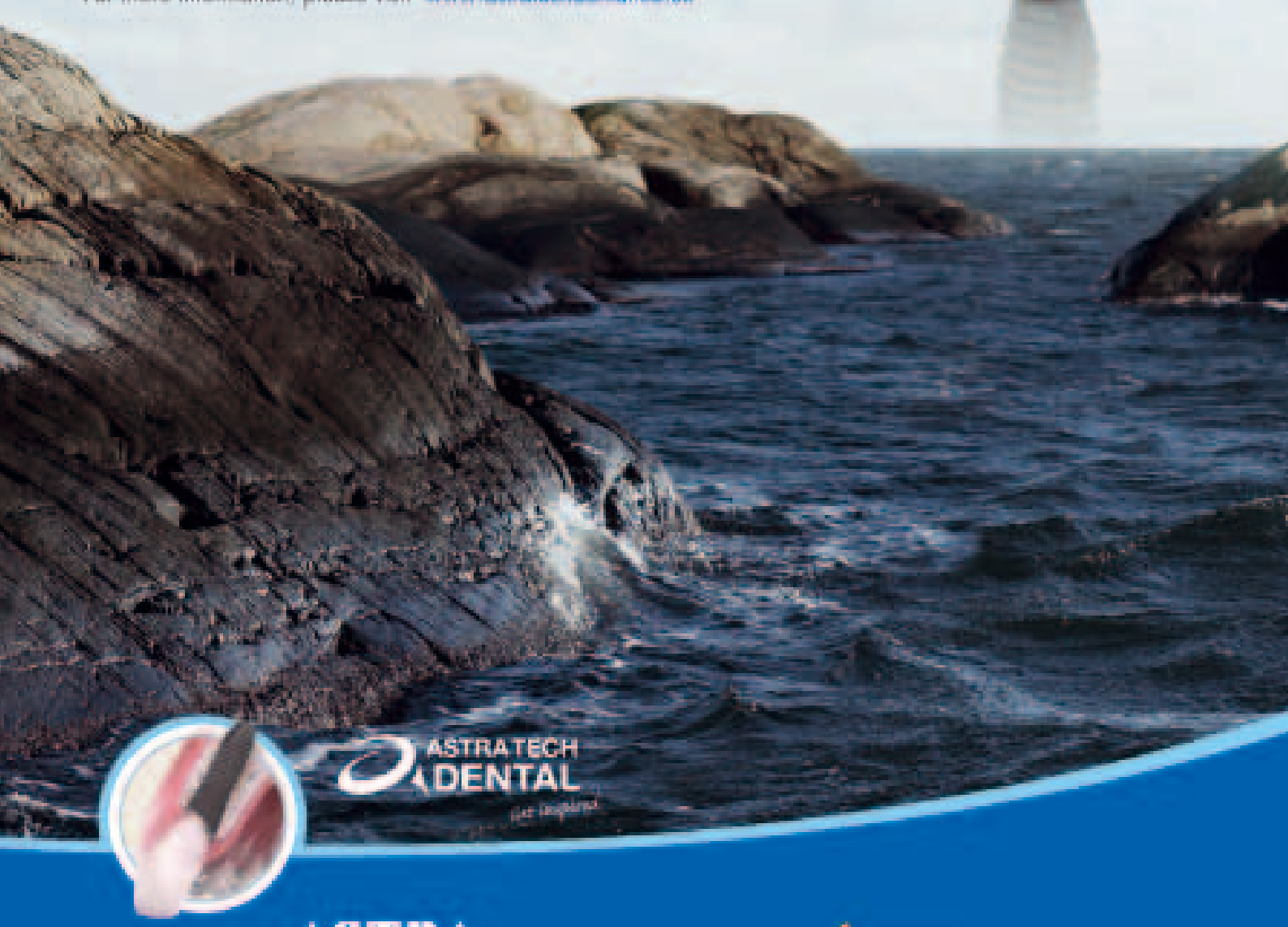
OsseoSpeed™ TX Profile – anatomically designed implants for sloped ridges

Imagine being able to achieve 360° bone preservation around the implant, even in cases with sloped ridges. Now you can.

With OsseoSpeed™ TX Profile – a uniquely shaped, patented implant, specifically designed for sloped ridge situations – you no longer have to choose between buccal and lingual marginal bone preservation and esthetics, you can have it all – 360° around the implant.

As with all Astra Tech implants, OsseoSpeed™ TX Profile is based on the documented key features and benefits of the Astra Tech BioManagement Complex™. Used in combination with patient-specific Atlantis™ abutments, you and your patients can look forward to long-term function and esthetics.

For more information, please visit www.astratechdental.co.uk



ASTRA TECH DENTAL

ASTRA TECH

A company in the AstraZeneca Group

Astra Tech Ltd, Brunel Way, Stonehouse, Glos. GL10 3SX. Tel 0845 450 0686. Fax 01453 791001, www.astratechdental.co.uk

Breathing in the history

Janet Pickles of RA Medical explores the development of nitrous oxide sedation in clinical dental practice

The history of nitrous oxide use for sedation and associated equipment is a fascinating one. Many leading names have played a significant part in the journey and this article will attempt to explore some of the facts associated with nitrous oxide since its discovery.

Statement

Nitrous oxide is manufactured by heating ammonium nitrate to 250 degrees centigrade.

Mechanism of action

Nitrous oxide produces analgesic and anxiolytic effects. The exact mechanism of action through which these effects are perpetuated is unknown. However, the most widely accepted theory is that the analgesic effect is mediated through interaction with the opioid receptors. These are the same receptors activated by morphine and heroin.

This stimulation occurs in the midbrain leading to activation of the descending inhibitory pathways, which alters pain processing in the spinal cord. The anxiolytic effect is mediated through interaction with the GABA-A receptors. The mechanism of action closely resembles that of ethanol. GABA is an inhibitory neurotransmitter that inhibits the pre-synaptic cells from transmitting, thus decreasing nervous system activity.

History

The discovery of both oxygen and nitrous oxide is credited to Joseph Priestley somewhere around the period 1771-1777. However, Humphry Davy seems to be the person who initially promoted the inhalation of nitrous oxide.

In order to continue with his experiments, in 1779 James Watt built a portable gas chamber (Fig 1) for the purpose of Davy's nitrous oxide inhalation experiments, which at one point were combined with wine to judge the efficacy of nitrous oxide as a cure for hangovers (his laboratory notebook indicated success).

Despite the popularity of the gas among Davy's friends and acquaintances and his copious notes about the ability of the gas to entirely take away the sensation of pain, Davy seems never to have considered the

Continued »

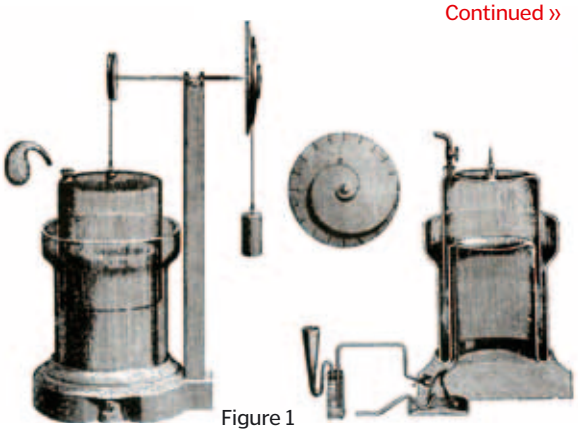


Figure 1

Continued »

use of nitrous oxide as an anaesthetic, missing a huge opportunity. Anaesthetics would not be regularly used in medicine or dentistry until decades after Davy's death

On 10 December 1844, American Horace Wells and his wife Elizabeth attended a stage-show laid on by 'Professor' Gardner Quincy Colton. After watching an acquaintance, store-clerk Sam Cooley, injure his leg without batting an eyelid, Wells recognised that nitrous oxide might prove a godsend to surgical medicine as well as popular entertainment.

Wells decided that the first guinea pig should be himself. An erupting wisdom tooth had been troubling him for some time. This seemed the ideal occasion to remove it. Both Colton and Wells' partner Dr Riggs were initially reluctant to contemplate using the higher dosages of nitrous oxide needed to induce insensibility rather than intoxication and euphoric excitement. But Wells insisted and the extraction was a success. Wells then enlisted Colton's help in teaching him how to manufacture and administer nitrous oxide to his patients.

The technique was crude, yet it seemed safe and effective. With the assistance of Riggs, Wells administered nitrous oxide from an animal bladder via a wooden tube into the patient's mouth while his or her nostrils were compressed. A curious but sceptical John Collins Warren acted as surgeon. After performing more than a dozen extractions under nitrous oxide anaesthesia over the next month, Wells felt ready to share his discovery with a wider audience.

His ex-business partner (1842-3) and former student, William Morton, encouraged Wells to stage a public demonstration with John Warren acting as surgeon. In an article in the Hartford Courant (9 December 1846), Wells explained what happened on the appointed day: "A large number of students, with several physicians, met to see the operation performed, one of their number to be the patient. Unfortunately for the experiment, the gas bag was by mistake withdrawn much too soon, and he was but partially under its influence when the tooth was extracted.

Figure 2

"He testified that he experienced some pain, but not as much as usually attends the operation. As there was no other patient present, that the experiment might be repeated, and as several expressed their opinion that it was a humbug affair (which, in fact, was all the thanks I got for this gratuitous service) I accordingly left the next morning for home."

Badly emotionally bruised, Wells didn't give up. He continued his attempts to promote nitrous oxide anaesthesia, even travelling to Europe in the hope of finding a more receptive audience. The Paris Medical Society took a sympathetic interest in his work and recognised his claim to priority. But by the time Wells returned to the USA, the surgical scene had shifted dramatically. Ether anaesthesia was well established and chloroform anaesthesia was vigorously under investigation too; nitrous oxide had been eclipsed.[1]

In the early 1860s a resurgence of nitrous oxide emerged and it was the same Dr Colton who had assisted Wells in 1844 who was responsible. Colton insisted that nitrous oxide was safe and he could prove it. Between 1864 and 1897 he documented 193,000 cases with no fatalities thus establishing the first recorded safety record involving the use of nitrous oxide. In 1968 Paul Bert developed a unit for administration of both oxygen and nitrous oxide, however this proved impractical due to the size and immobility of the equipment.

An interesting note is that the use of nitrous oxide analgesia for cavity preparation dates back to 1889 in Liverpool. At this point, gas machines had improved somewhat and oxygen had been added to the nitrous oxide administered. By our current standards the machines were crude and gases often far from pure – indeed, many dentists used to manufacture their own![2]

Moving forward to the twentieth century and dentistry was the primary health discipline to use nitrous oxide. However, due to unreliable equipment and lack of established technique, nitrous oxide use was almost non-existent, seeing only two periods of interest in nitrous oxide; 1913-1918 and 1932-1938. The loss of interest was occasioned by high failure rate of administration – probably caused by lack of suitable equipment and technique.

The 1940s saw a renewed interest in the use of nitrous oxide sedation and Harry Langa in the US began

"Wells recognised that nitrous oxide might prove a godsend to surgical medicine as well as popular entertainment"

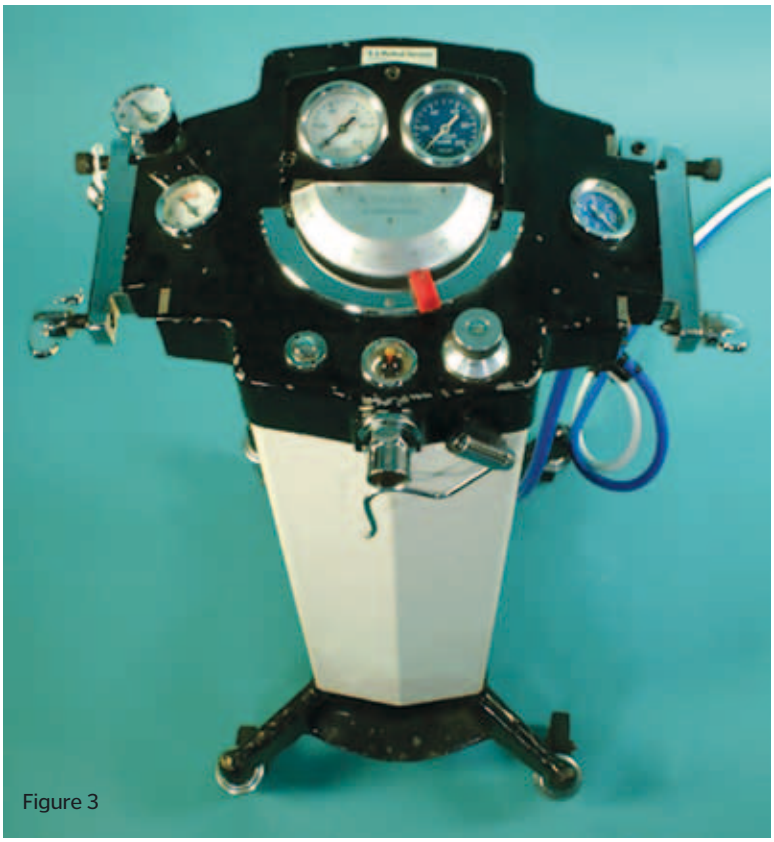


Figure 3

postgraduate dental education in 1949, training more than 6000 dentists in nitrous oxide sedation. Langa also published a classic textbook *Relative Analgesia in dental practice: inhalation analgesia with nitrous oxide* published in Philadelphia 1968 by W B Saunders. This became a classic reference book, the second edition being published in 1976.

Dental schools in the States began teaching the concepts of inhalation sedation in the late 1950s, early 1960s and, in 1962, guidelines for teaching pain and anxiety control in dentistry were established by the American Dental Society of Anaesthesiology. Nitrous oxide continues to be very popular in the USA with over 50 per cent of general dentists and 88 per cent of paediatric dentists using it on a regular basis. This is a far higher percentage than currently employed in the UK and Ireland although numbers are continuing to grow.[3]

The situation in Europe was somewhat different but encountered more difficulties due to legal restrictions placed on the administration of inhalational anaesthesia by dentists. In the USA there were no such restrictions, therefore reflecting the current usage of nitrous oxide sedation to this day.

Even now, the attitude towards inhalation sedation differs greatly from country to country. While it is well accepted in the UK, Italy, Israel, Switzerland and Scandinavia for example, it is not even licensed in countries such as Greece. Germany is minimal and France only allows the use of 50 per cent/50 per cent premixed oxygen/nitrous oxide (or what we would describe as Entonox) for dental application.

We are fortunate in the UK that Cyprane, based in Keighley, West Yorkshire, did so much to promote the safe and acceptable use of sedation from the late 60s onwards. (Cyprane was also responsible for the design and production of the Tec Vaporizer series which were temperature compensated vaporizers, including the Drawover Vaporizer commonly used with a MDM or AE Gas Machine, for example, to administer dental anaesthesia. It is not for nothing that Keighley was known as the 'Anaesthetic Capital of the World' at one time!

UK Equipment types

Harry Langa, in his first edition, lists the following unit types: NCG Dental Analgesia unit, McKesson Analor, Ormco, Foregger analgesia machine and the Quantiflex R A *(Fig 2)* (this is the early Mark I type manufactured by Fraser Sweatman Inc). This latter unit was first manufactured in the UK in the late 1960s, under license from Fraser Sweatman, by Cyprane, West Lane, Keighley.[4]

By the time that the second edition was published in 1976, the list had added the following units: Sedatron analgesia machine and the Quantiflex R A and MDM flowmeters. The latter were also manufactured at Cyprane in the late 1960s to early 1970s under license. The Quantiflex R A was known in the UK as the Mark II and is still in production at Hatfield, Philadelphia.

The Analogue MDM is currently the most popular model used in the UK to date. The Langa chapter concludes by mentioning that there are analgesia machines manufactured in other countries, but all function on the same principle – being continuous flow types.[5]

Figure 4

Flowmeters seen since the 1960s on the UK marketplace include Airmed, Ormco, Medrex, McKesson Analor and Simplor, McKesson 882, 883 and Mc1, Walton V, A E Gas Machine *(Fig 3)* and the Quantiflex range: Mark I, Mark II and MDM. Perhaps the A E gas machine is worthy of note here. The Anaesthetic Equipment (AE) Company was a Cyprane Company, and this dental machine was designed for more accurate supply of known percentages of oxygen and nitrous oxide incorporating a three-stage pressure reduction.

This was an intermittent flow machine, working on a different principle from the Walton V or McKesson and was very popular. They could be used for GA with the addition of an anaesthetic vaporizer and remained in constant use by diverse sites from dental hospitals to high street dental surgeries. Their demise was gradual as plenty of spare parts were available. The Amendment to the National Health Service (General Dental Services) Regulations 1992 issued in 2001 was responsible for the discontinuation of use – but they were missed by their faithful owners. There are examples in several museums, including the Sheffield Museum of Anaesthesia.

Since the 1990s, other types have emerged: Porter C2000 MXR and C3000 MXR, Matrx Digital Centurion, Matrx Digital MDM and Accutron Ultra and Newport. Of all these, only the following are still in common usage in the 21st century – Quantiflex Mark II, MDM *(Fig 4)*, DMDM *(Fig 5)*, Porter C2000 MXR, C3000 MXR, McKesson Mc1 and Accutron Ultra. The three manufacturers involved are: Porter Instruments in Hatfield, Philadelphia, USA, Accutron Inc in Arizona USA and Cestradent/McKesson based in Chesterfield, Derbyshire, UK. All types are dedicated sedation flowmeters with minimum 30 per cent oxygen and maximum 70 per cent nitrous oxide.

Porter Instruments has been a sedation flowmeter manufacturer for many years. It currently makes the Analogue MDM, Digital

Figure 5

"The Analogue MDM, first seen in the UK in the late 60s- is reliable and consistent in performance, clearly a machine design ahead of its time"

Continued »

"Sedation equipment has come a long way from the James Watt machine of the 1700s to the digital flowmeters of the 21st Century"

Continued »

MDM and the C3000 MXR having purchased the Matrx Nitrous Oxide Sedation Division in November 2008. Accutron no longer have a UK distributor and Cestradent/ McKesson is the only remaining UK manufacturer of a dedicated sedation flowmeter at present time. Of all the unit types listed above, the most popular and widely used models are the MDM, DMDM and C3000 MXR with the MDM taking the title as most commonly encountered.

This unit type, first seen in the UK in the late 60s – having undergone very little in the way of design change over the years – is reliable and consistent in performance, clearly a machine design ahead of its time. The proof is the undeniable fact that many MDMs labelled Cyprane are still in daily use requiring little more than an annual OEM service – 40-plus years on from the date of manufacture. Not many pieces of anaesthetic equipment can hold that title!

Sedation equipment has come a long way from the James Watt machine of the 1700s to the digital flowmeters of the 21st century. ■

REFERENCES

1. Extracted from www.generalanaesthesia.com
2. H Langa Relative Analgesia in Dental Practice; Inhalation Analgesia with Nitrous Oxide 2nd Ed. W.B. Saunders 1976 p17
3. A Clark, A Brunick Handbook of Nitrous Oxide and Oxygen Sedation 2nd Ed. Mosby 2003 p13-14
4. H Langa Relative Analgesia in Dental Practice; Inhalation Analgesia with Nitrous Oxide. 1st Ed. W.B. Saunders 1968 p92-103
5. H Langa Relative Analgesia in Dental Practice; Inhalation Analgesia with Nitrous Oxide 2nd Ed. W.B. Saunders 1976 p331-347

FIGURE LIST:

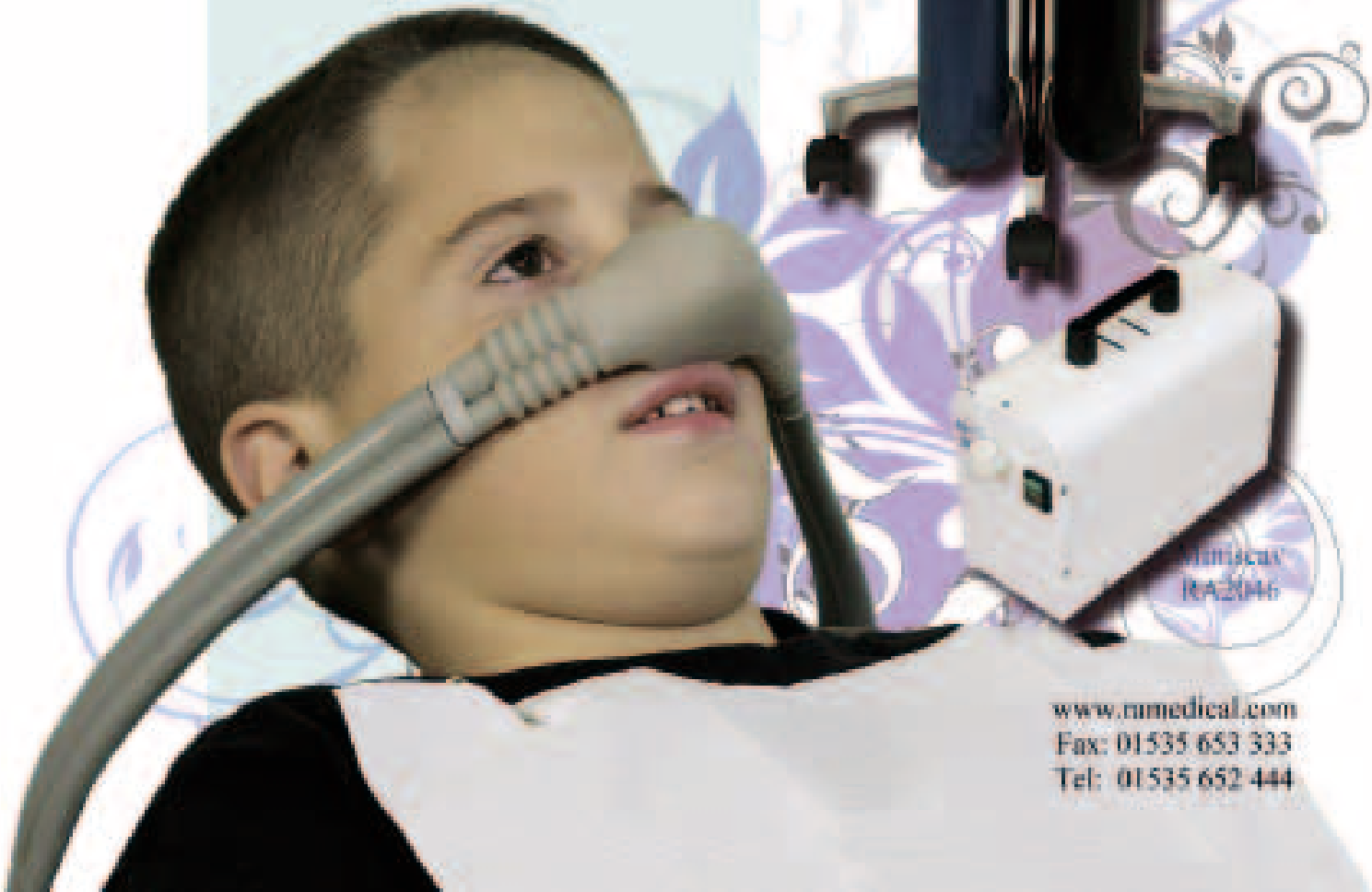
1. Humphry Davy's Gas Machine (constructed by James Watt)
2. Quantiflex R A Machine – known in the U.K. as Mark I (Fraser Sweatman)
3. A E Gas Machine (Cyprane)
4. Analogue MDM (Monitored Dial Mixer) (Matrx)
5. Digital MDM (Monitored Dial Mixer) (Matrx)

RA Medical Services Ltd

Inhalation Sedation Specialists

Relative Analgesia is fast becoming the more natural choice for many dental practices performing sedation at chairside.

The transition from complete IV to RA & other Sedation techniques is closer than it has ever been.
Indeed, many practices have realised that R.A. can dramatically dispel patient's fears of complex treatments.



www.rmmedical.com
Fax: 01535 653 333
Tel: 01535 652 444

Programme Highlights

Pre-Congress
Evidence-based treatment guidelines to optimise aesthetic outcomes in partially edentulous patients

Main Congress
The Congress theme is 'Implants in Practice' with a focus on the following topics:

- Restoring dental implants in general dental practice
- Is my patient ready for implants?
- Restorative success - from theory to practice
- Digital dentistry

Faculty

There is an impressive line-up of international speakers:

Urs Belser, Switzerland
Daniel Buser, Switzerland
Alessandro Devigus, Switzerland
Ian Hutton, Canada
Frauke Müller, Switzerland
Marc Quirynen, Belgium
Frank Schwarz, Germany
Daniel Thoma, Switzerland
Daniel Wismeijer, The Netherlands

Parallel Sessions

The parallel programme includes sessions especially for dental technicians, CDTs and the dental team of nurses, receptionists, practice managers, hygienists and therapists.

For information on the ITI National Congress UK & Ireland, please visit:
www.iti.org/congress-uk-ireland

ITI – Committed to education and research in implant dentistry

An independent academic organisation, the International Team for Implantology – ITI – unites professionals from every field of implant dentistry and related tissue regeneration. Committed to research and education, the ITI provides the highest level of research funding for implant dentistry among non-governmental organisations worldwide – to date more than USD 30 million.

As a leader and innovator in the field of implant dentistry education, the ITI demonstrates its commitment through events such as the ITI World Symposia and the ITI Consensus Conferences, which represent the foundations for the gold standard in implant dentistry treatment guidelines. It also delivers publications such as the immensely successful ITI Treatment Guide series as well as individual support in the form of fellowships for promising young clinicians to train for a year with an experienced mentor is one of the ITI's 22 scholarship centres.

www.iti.org

ITI
Congress UK & Ireland
Liverpool
December 1-3
2011

Implants in Practice

Involving the patient in the process

Stuart Campbell BDS, MFDS, RCS (Edin), describes how he used a modified approach to replace a patient's missing maxillary central incisor

The replacement of a missing maxillary central incisor in a patient with diastemata can be problematic for the restoring dentist. To achieve a successful outcome, a modified approach to treatment may be necessary.

This case report describes a 53-year-old male with chronic periodontal disease, a moderate gag reflex and diastemata who presented in general practice with a missing upper right central incisor, 11. This tooth had exfoliated secondary to a combined periodontal and endodontic lesion *(Fig 1)*. An unsuccessful attempt had been made to treat the lesion with endodontic and periodontal therapy *(Fig 2)*.

The patient had brought the exfoliated tooth with him which revealed an intact exfoliation.

The patient's medical history was unremarkable. The smile line revealed the entire surface of the upper incisors and around 1mm of attached gingivae. Intra-oral examination revealed a moderate gag reflex which could be triggered during routine examination.

Further examination revealed a moderately restored dentition with multiple spacing or diastemata. The dentition was intact with the exception of the recently exfoliated upper right central incisor. The patient had chronic generalised periodontitis with moderate to severe bone loss. There was moderate loss of tissue volume secondary to periodontal disease and exfoliation of 11.

There was right group function and left canine guidance with protrusive contacts noted on the upper and lower incisors. No posterior protrusive interferences were noted. The teeth adjacent to the missing incisor were unrestored, exhibited Grade I+ mobility[1] and responded positively to vitality tests. The patient requested that his diastemata were preserved.

The treatment options for the replacement of the missing central incisor are well documented and are as follows:

- do nothing
- dental implant
- removable prosthesis
- fixed conventional bridge
- fixed adhesive bridge.

Do nothing

In order to obtain informed consent, the option of no treatment should always be offered to the patient[3]. In this case, the patient declined to have no treatment and requested the missing tooth was restored.

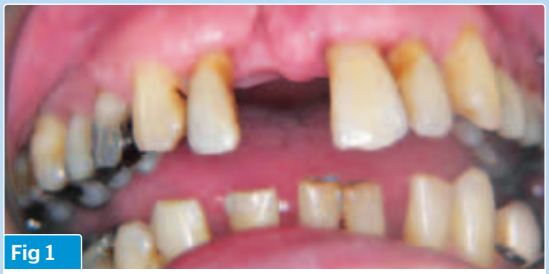


Fig 1
Presentation

Fig 2
Radiograph prior to tooth loss

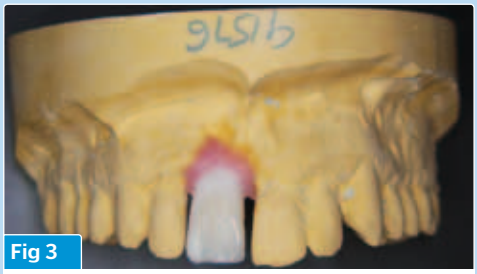


Fig 3
Diagnostic wax up

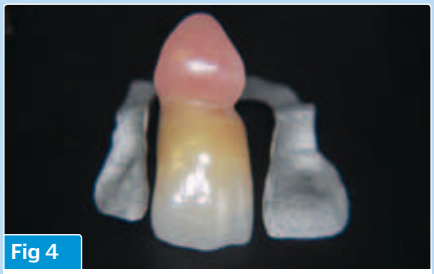


Fig 4
Manufactured Appliance

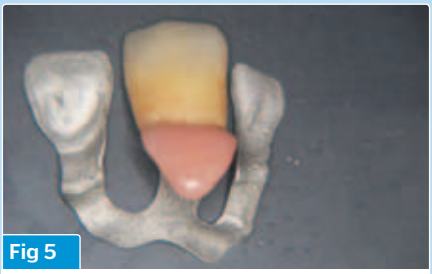


Fig 5
Manufactured Appliance

Fig 6
Occlusal adjustment at try-in

Dental implant

The well-documented success rates of dental implants[4] has led to these restorations being described as the most effective replacements for single missing incisors[5,8].

However, dental implants are not suitable for all patients and may be contraindicated due to cost, smoking, systemic health problems such as osteogenesis imperfecta, bisphosphonate therapy, radiotherapy and severe diabetes[6]. In this case the use of dental implants would be ill-advised due to the presence of active periodontal disease, which can negatively affect osseointegration[7].

Removable appliance

A removable appliance is a cheap, relatively straightforward way to replace a missing tooth and can provide excellent aesthetics[8]. However, in this case such an appliance was inappropriate due to the patient's gag reflex.

Fixed bridgework

The successful use of fixed adhesive and conventional bridgework to restore patients with compromised periodontal support is well documented[9,10].

The problem in this case was the size of the edentulous space. Neither the options of a very wide pontic or the re-distribution of space through conventional preparation of all of the maxillary incisors or with orthodontics was considered desirable.

Planning

After discussing the options it was clear that the patient favoured the use of minimal preparation adhesive bridgework to restore the space.

A conventional bridge design was inappropriate because of the patient's desire to maintain his diastema. With the conventional design, the pontic and retainer are soldered together, leaving no space for preservation of diastema. This issue was addressed by planning a modified spring cantilever adhesive bridge as described by Gibson[11].

It was considered appropriate to keep the length of the spring cantilever arm short, to avoid triggering the gag reflex and to increase the rigidity of the prostheses. For these reasons, together with aim of being minimally invasive, a conventional spring cantilever bridge was dismissed.

Treatment

Impressions were taken for study casts. The use of modified stock trays and distraction techniques were used to manage the patient's gag reflex[12,13]. Study casts were articulated with the aid of a facebow registration and the technician was instructed to perform a diagnostic wax up.

A fixed/fixed bridge design was proposed on units 12, 21 and shown to the patient with the aid of the diagnostic wax up. This design was considered to minimise rotational forces on the pontic during protrusion and prevent future drifting of the abutments[2]. Pink porcelain was planned to replace the lost tissue volume which was visible during smiling. The wax-up revealed the need to further augment the pontic with pink porcelain to ensure symmetry (*Fig 3*).

"To achieve a successful outcome a modified approach to treatment may be necessary"

An alternative design may have been to use tooth 13 as the retainer, however the patient considered the splinting effect of the fixed/fixed design to be advantageous. After patient approval of the bridge design,

Continued »

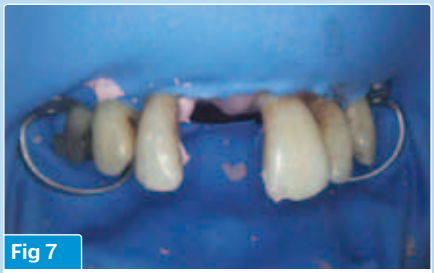


Fig 7
Split dam isolation

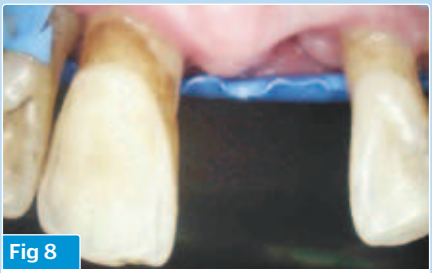


Fig 8
Split dam isolation

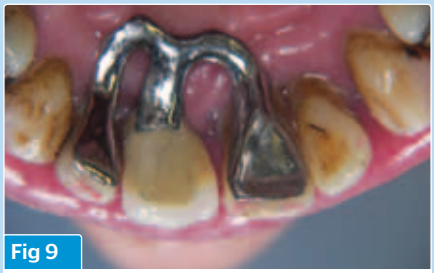


Fig 9
Cemented bridge

Continued »

operative treatment was planned. Minimal preparation of the palatal surfaces of 12 and 21 was carried out using the speed increasing handpiece without local anaesthetic.

The preparation involved supragingival chamfer margins and parallel slots to increase resistance and retention form. Definitive Impressions were taken in modified stock trays using Polyether. The gag reflex was again managed with distraction techniques.

"This case illustrates the importance of giving consideration to all treatment options while involving the patient in the decision making process"

The technician was instructed to make a three-unit fixed/fixed spring cantilever adhesive bridge with pink porcelain to restore lost tissue *(Fig 4, 5)*. The shade, characteristics and texture of porcelain for the pontic were prescribed. The shade of pink porcelain was chosen using a customised shade guide supplied by the dental technician. At the patient's request no provisional restoration was provided.

Following laboratory manufacture, try-in of the appliance was carried out and an accurate fit of the framework was

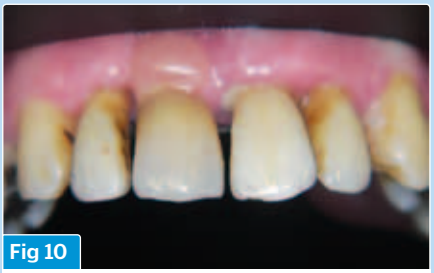


Fig 10
Cemented bridge

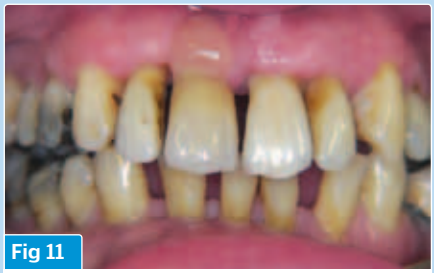


Fig 11
Cemented bridge

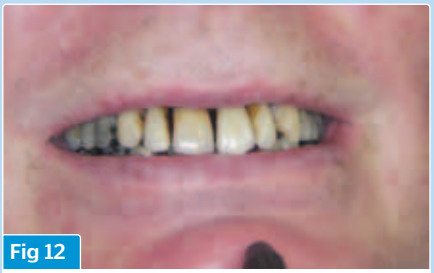


Fig 12
Natural smile

observed. Occlusal excursions were checked and adjustments were made to minimise protrusive contacts on the pontic *(Fig 6)*.

Following try-in, the fit surface of the bridge was sandblasted using 50□m alumina in a chairside air abrasion system (Prophy-mate Neo NSK).

The use of rubber dam is considered essential for adhesive bridge cementation (14) A three-dimensional rubber dam system with anatomical frame was applied using the split dam technique *(Fig 7, 8)*.

Once isolation was achieved, the abutment teeth were cleaned with prophylaxis paste. The bridge was cemented using adhesive cement and excess cement was removed. Metal margins were burnished to the tooth structure using fine diamond burs in the air-rotor. The use of copious water spray during finishing procedures is recommended to avoid the generation of excessive heat which can negatively affect the strength of the composite bond to both tooth and metal[14]. Oral hygiene instruction was provided and review appointments were arranged. The patient was satisfied with the final result *(Figs 9, 10, 11, 12)*.

Discussion

Replacing a missing maxillary anterior tooth in a spaced dentition is a challenge for the

Continued »

ABOUT THE AUTHOR

Stuart Campbell qualified from University of Dundee in 2001 and is a vocational trainer and partner at Loanhead Dental Practice. He is currently studying for an MSc in Implant Dentistry at the University of Central Lancashire.

Continued »

restoring dentist. This case illustrates the importance of giving consideration to all treatment options while involving the patient in the decision making process.

The use of the adhesive spring cantilever bridge provided this challenging patient with a satisfactory outcome while preserving tooth tissue. This design may be considered by restoring dentists when faced with similar cases in practice or as a provisional appliance prior to implant restoration. ■

Acknowledgements:
All clinical dentistry was carried out by Mr Stuart Campbell, Loanhead Dental Practice,Midlothian. Laboratory work carried out by Mr Kenneth Scott, A-Plus Dental Laboratory, Dundee.

REFERENCES

1. Wise M.D. **Occlusion and Restorative Dentistry for the General Practitioner Part 1- Preliminary Considerations and Examination Procedure.** *Br Dent J* 1982; 152:117-122.
2. Wise M.D. **Occlusion and Restorative Dentistry for the General Practitioner Part 3- The Clinical Significance of the Examination Findings.** *Br Dent J* 1982; 152:197-202.
3. Faculty of General Dental Practice. **Clinical Examination and Record-Keeping Good Practice Guidelines.** London: The Royal College of Surgeons of England; 2009. p.76-78
4. Lindhe T, Gunne J, Tillberg A et al. **A Meta-Analysis of Implants in Partial Edentulism.** *Clin Oral Implants Res* 1998;9:80
5. Jivraj S, Chee W. **Rationale for Dental Implants.** *Br Dent J* 2006; 200:661-5
6.Bornstein M.M, Cionca N, Mombelli A. **Systemic Conditions and Treatments as Risks for Implant Therapy.** *Int J Oral Maxillofac Implants* 2009;24:12-27
7. Searson L.J, Gough M, Hemmings K. **Implantology in General Dental Practice.** London: Quintessence 2005.p.15-23
8.Jepson N.J.A, **Removable Partial Dentures-Quintessentials of Dental Practice.** London: Quintessence, 2004. ebook p.111.
9. Nyman S, Ericsson I. **The Capacity of Reduced Periodontal Tissues to Support Fixed Bridgework.** *J Clin Periodont* 1982; 9: 409-414
10. Nyman S, Lindhe J, Lundgren D. **The Role of Occlusion for the Stability of Fixed Bridges in Patients with Reduced Periodontal Tissue Support.** *J Clin Periodont* 1975; 2:53-66
11. Gibson C.J. **A Modified Technique for Minimal Preparation, Resin-Retained Bridges: Four Case Reports.** *Dent Update* 2001; 28:442-448.
12. Bassi G.S, Humphris G.M, Longman L.P. **The Etiology and Management of Gagging – A Review of the Literature.** *J Prosthet Dent* 2004; 91:459-67
13. Farrier S, Pretty I.A, Lynch C.D, Addy L.D. **Gagging during Impression Making: Techniques for Reduction** *.Dent. Update* 2011; 38: 171-176
14. Ibbetson R. Clinical **Considerations for Adhesive Bridgework.** *Dent Update* 2004; 31:254-265.

Innovative and amazingly easy Direct Composite Veneers

Significant advantages over free hand composite and ceramic veneering for tooth fracture, erosion, discolouration, diastema, extending incisors and optimising old restorations.

- **Saves time**
- **Amazing results**
- **One appointment**
- **Waiting room poster**
- **Patient information brochure**
- **Seminars planned for the near future**

Get the full picture on:

www.componeer.info

for your in-surgery demonstration
FREEPHONE 0500 295454 ext's 223 Julie or 224 Adrian

coltène whaledent

Callum Graham explains how using a UK-based implant supplier has helped him reduce his costs and increase patient numbers

Just what the tooth doctor ordered

Left: the Toothdoctor practice in Carluke, Lanarkshire
Right: The patient's room within the practice

At first glance, Carluke might appear to be just another small rural Scottish town, quietly tucked away off the motorway network linking Glasgow and Edinburgh. But over the last 18 months, it has also become the home of a 'quiet revolution' in implant dentistry, as one practice's radical reduction in treatment costs has led to a four-fold increase in patient numbers.

Since it was taken over more than six years ago, the Toothdoctor practice has become well-established in both the town and surrounding parts of Lanarkshire, providing a full range of NHS, private and cosmetic treatments under the guidance of owner Callum Graham BDS and his team of dentists, hygienists and friendly support staff.

Originally a civil engineer, but always with a keen interest in dentistry, Callum took the decision to change career in the mid-1990s and qualified with a degree in dental surgery from Newcastle University in 1999. Post graduation, he became increasingly attracted by dental implantology as a discipline, and undertook several industry-led training courses and work placements – including various spells at leading Harley Street clinics – before launching the Toothdoctor practice.

But, while a high number of patients signalled an initial interest in having dental implants placed, Callum and his team would come across the same stumbling block time and time again.

"It wasn't that potential patients were hard to find – the interest was definitely there – but as soon as the price of the treatment was mentioned, it tended to put a huge number of people off," he explained.

"Due to the ever-increasing cost of the implant supplier and system we were originally using, we had to set our patient fees accordingly, to the extent where it soon cost around £2,500 for a single tooth implant and crown. With the cost being significantly over £2,000, many potential patients found this was prohibitive, especially in an economic downturn, and our uptake for implant treatment was poor."

However, a chance meeting at an Association of Dental Implantology (ADI) Congress in the summer of 2009 offered Callum a simple solution to this price problem, and set the Toothdoctor on the road to a far busier future. He was introduced to Jason Buglass BDS, Managing Director of UK-based dental implant supplier Implantium, whose streamlined business model enables it to sell high-quality implants at prices almost 40 per cent less than rival providers.

"Single tooth restorations now start from £1,450, a massive drop from the £2,500 we were originally charging for the same procedure"

Convinced that patient demand was there for a more affordable and accessible treatment, the Toothdoctor switched to Implantum's Korean-produced Dentium implants and system 18 months ago, and the practice immediately started reaping the rewards.

"Because our costs in terms

Continued »

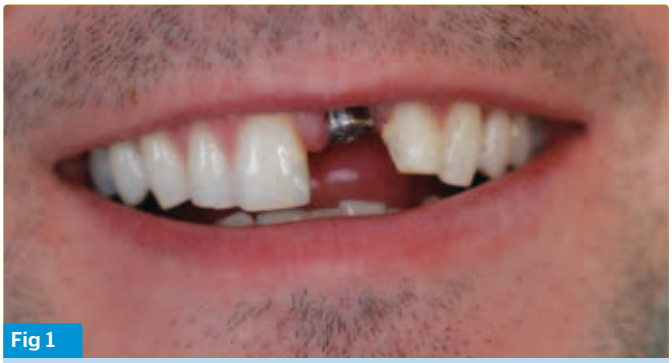


Fig 1
Successful patient without replacement tooth

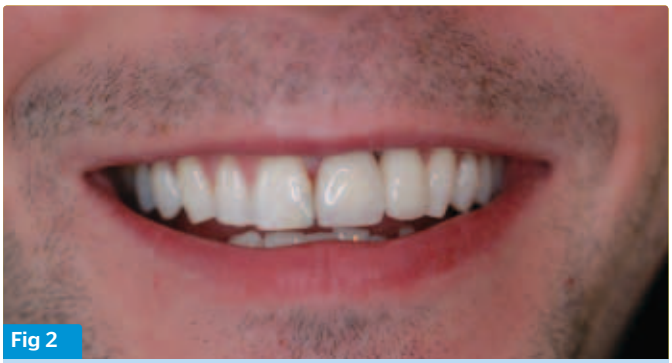


Fig 2
Successful patient with replacement tooth

Continued »

of buying implants and components were significantly reduced, combined with lower laboratory fees, we were able to pass significant savings over to the patient. Single tooth restorations now start from £1,450, a massive drop from the £2,500 we were originally charging for the same procedure. And, while we were anticipating something of a growth in patient numbers, the actual results were staggering. In our first full year with Implantium, we posted a 400 per cent increase in the number of implants we placed, and we are already well on course to beat that number again this year," he said.

"I would estimate we now have an 80 per cent take-up rate from patients"

"I would estimate we now have an 80 per cent take-up rate from patients, which not only includes their implant treatment, but the associated cosmetic or smile makeover treatments which accompany this."

As well as the obvious cost benefits he is now able to pass on to his patients, Callum has also noticed other advantages of the supplier switch. "Price is undoubtedly an important factor, but quality of treatment cannot be sacrificed as a result. I've seen the real clinical benefits of the Implantium system, which is not only easier to use when placing the implants, but also has well thought-out restorative components, making it easier to produce natural-looking restorations.

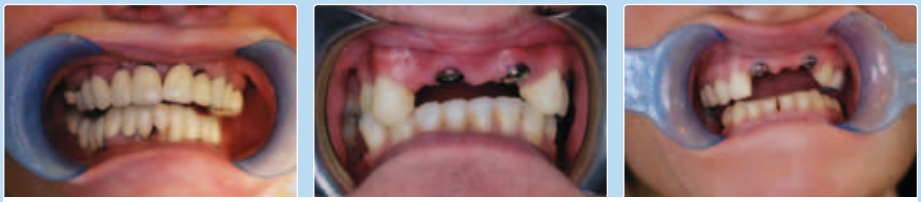
"Simple things, like having healing caps which match impression copings – which in turn match final abutments – mean that there

is very little soft manipulation required after initial healing. All this makes for a quicker, more pleasant, patient journey."

This combination of cost-effectiveness without compromising on quality is certainly proving popular with patients and, as Callum explains, it is also bringing a wide variety of cases through the Toothdoctor's doors.

"As we've started to place more and more implants, some of the treatments we've had to carry out have become increasingly complex. It's been a real mixed bag, from fairly straightforward procedures, such as replacing a fractured and infected incisor tooth with a single implant and crown, to more complicated treatments, often on patients who have been fearful of visiting the dentist and whose teeth have deteriorated to a particularly challenging state.

"It has been exceptionally rewarding to be able to provide this sort of work for our patients now that it is much more affordable and accessible. Some of these people have had to deal with years of self-consciousness and embarrassment about the appearance of their teeth, but now we're literally able to put the smile back on their faces."



Patient examples

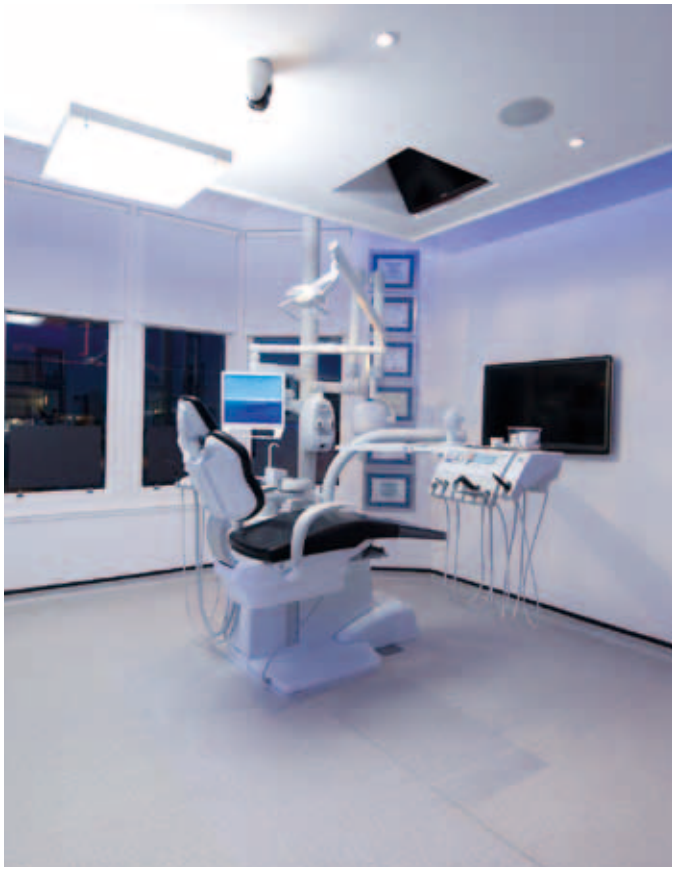
As to the future, Callum accepts that although there is a growing market across the UK for dental implants, demand is still some way from matching other European nations and the United States, where the procedure is much more commonplace. However, it is widely recognised that the UK has massive growth potential for implant-related procedures.

"As we've seen for ourselves at the Toothdoctor, price is still a major factor when patients are deciding whether to proceed with treatment or not. But now that there's such a cost-effective alternative on the market, I'm confident it will help to open up the wider dental implant market in a similar vein to what we've experienced here in Lanarkshire." ■

Implantium is a leading UK-based supplier of high-quality, cost-effective dental implants. Run for dentists, by dentists, Implantium is also home to the Implantium Network, a match-making service which helps place patients interested in getting an implant fitted with skilled dentists in their local area.

Advanced dentistry, interactive technology

Philip Friel explains the importance of technology for modern dental practice management



PhilipFrielAdvanced Dentistry is a shining light among referral practices and was awarded membership of The Leading Dental Centres of the World organisation this year. Dr Friel considers his practice management system to be a crucial element of running a successful modern practice and, here, he tells us why...

I've been working in the area for seven years now and gradually building up a substantial referral base, not only in Glasgow and the west of Scotland but further afield. One thing I've learned is that it's incredibly important to be organised. I spent a lot of time looking for practice management software (PMS) that is accurate and foolproof, but which can also be manipulated and for what I want it to do.

PMS makes a difference to all aspects of a practice, from patient management and treatment management, to estimates, recalls and beyond. The software makes it easy for dentists to interact with colleagues and locate the relevant information for patients whether they are registered patients or referrals. We can view digital X-rays, CT scans and send them quickly and easily to referring dentists if needed. This interactivity is more pronounced when it takes place between up to five internal clinics as well as the surgeries of many mentees whom we work with regularly.

"When choosing PMS for my clinic, R4 Clinical+ from Carestream Dental turned out to be a great advance on what I already considered to be a very good system"

One highlight of our PMS is the patient education software. It's a series of more than 200 animated videos, which show patients exactly what's happening in their mouths. The animations lead the patient on a journey of the treatment process and we are able to print question and answer sheets or email the patient a link to the animations, which have been discussed at the clinic. This gives the whole approach more polish and, having the phrase 'Advanced Dentistry' in our practice name, it's important that we're at the cutting-edge.

Another benefit is the colour-coded categorisation of patients on their clinical notes. We use colours to differentiate between our private registered patients and other clinics' patients who have been referred, to ensure that the latter won't be sent an automated recall six months down the line. Other colour codes can be used for further computerised tasks, such as reminders to patients who are signed up to a payment plan.

The system has extra features such as the mobile aspect, which provides access to the PMS from an iPhone or Blackberry. It's great for viewing X-rays when treatment planning out of the clinic or accessing patient information when referring clinics call for an update. We also use the communication bundles and send text message reminders to patients. The software is adaptable and we can allow for those who don't own mobiles by setting it to generate a letter for them instead. Integrated credit card processing and business tools also save time and streamline the whole process, adding to our state-of-the-art image.

An additional advantage of our PMS is that we have the option to integrate specific templates in clinical notes. Taking a patient examination as an example, I have to tick off all the items performed

on a customised checklist, such as a cancer check or a BPE, before I can move on, ensuring treatment consistency. If I've performed a filling, the computer asks me for details of what I've used, including batch number and expiry dates of the anaesthetic and material used. Depending on the treatment, this information can also be auto populated into our clinical notes simply by the treatment item being completed. It's ideal for someone who isn't computer literate as there's no need for me to sit and type, and I am guided through the whole process, which can be performed in a few clicks of the mouse.

When choosing PMS for my clinic, R4 Clinical+ from Carestream Dental turned out to be a great advance on what I already considered to be a very good system. It allows a seamless patient journey and thoroughly integrated practice management, with any number of reports available at the touch of a button.

For my clinic I wanted an easy-to-use and reliable system. But, on top of that, it had to be a bit funky, with nice demos – something a bit different that would take us to a new level. That's where other systems fell down; they didn't have that 'wow' factor.

PMS allows me to do what I need to in a way that's efficient, reliable and can be easily reproduced time and again in one surgery, a neighbouring surgery or a multiple surgery situation. There's no doubt about it – the system makes our operation very slick. ■

For more information about Carestream Dental, telephone 0800 169 9692 or visit www.carestreamdental.co.uk

Biomet 3i restructures key personnel

As part of Biomet 3i's continued expansion, the company is proud to announce two new organisational changes for the UK & Ireland. Andy Smith has been promoted to General Manager responsible for UK, Ireland and Benelux. Andy brings a wealth of experience from across the healthcare sector and for the last 18 months has been responsible for managing the UK and Ireland's operation for the company.

Welcome to John Aiken who has been appointed as Sales Manager for the UK and Ireland. John joined the company at the end of 2010 as Head of Digital Dentistry and since joining has given significant input and direction to the global digital dentistry strategy, as well as achieving significant growth in the 3i incise business.

For further information, please contact Biomet 3i on 0800 652 1233.

Free CPD for the whole team with Oral-B

The most recent edition of the popular publication Dental Summary Review (DSR) and DSR (Team Issue) was released at the end of May providing the Profession with three hours of CPD.

DSR is targeted at dentists, hygienists and therapists, while the DSR (Team Issue) is, as its title suggests, aimed at all other practice members. Both titles are published by Oral-B to provide the profession with a digest of some of the most interesting and stimulating research that has recently been published. The publication is edited by Dr Stephen Hancocks, OBE, and is available to all UK practitioners. If you haven't already received a copy, contact shancocks@aol.com or visit www.shancocksltd.com

For more information on Oral-B's publications and seminars speak to your local representative, or phone 0870 242 1850.

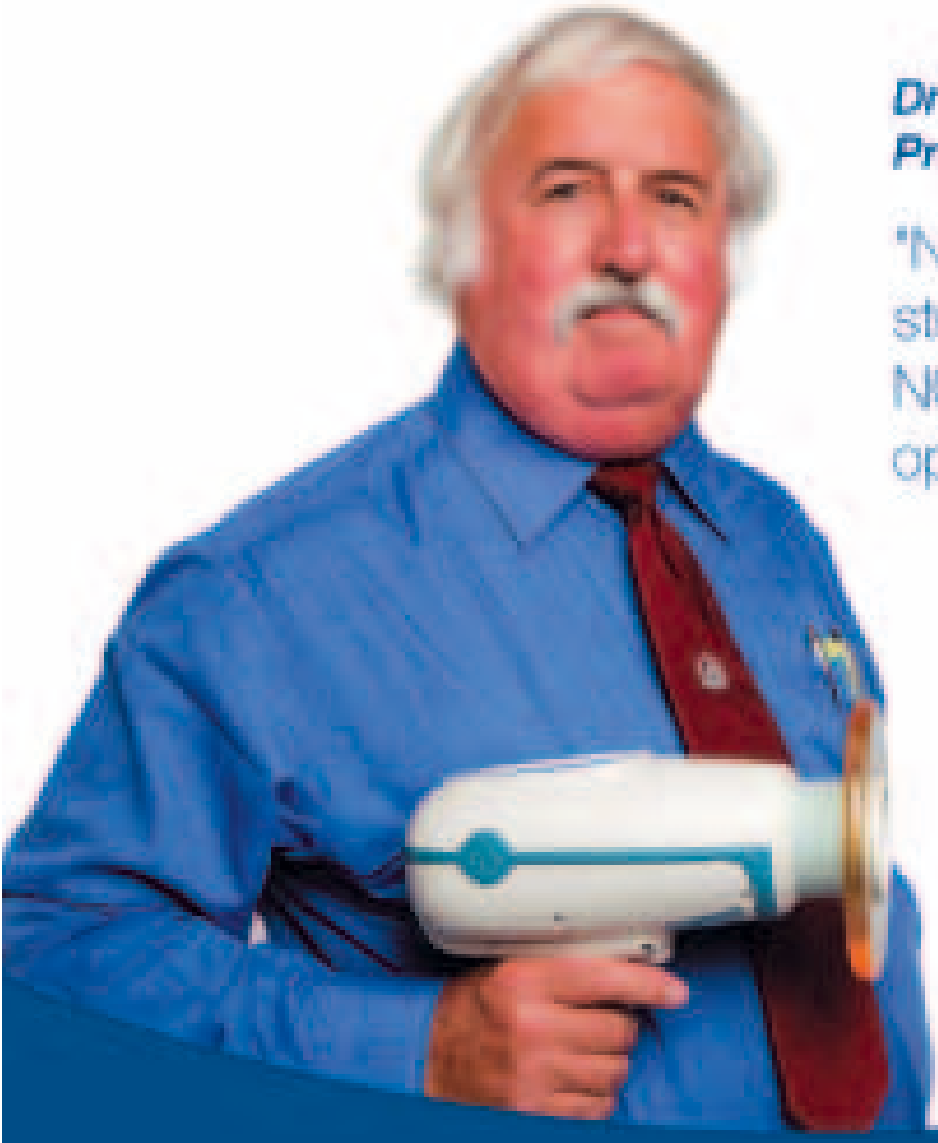
The results are clear

Alkapharm 8060HL Professional Digital Ultrasonic Instrument Cleaner thoroughly cleans reusable immersible medical/dental instruments in just three minutes flat (when ultrasonic cleaning in conjunction with Alkazyme enzymatic solution).

Its solid stainless steel construction houses large capacity cleaning reservoir with fitted external drainage tap, includes both large and small instrument baskets and has a programmable timer from one to 99 minutes.

It also boasts an integral water heater, has an ultrasonic frequency/power of 40KHz / 120W and its compact unit size measure in at 240x160x260 (L/W/H). It comes with 100gm of Alkazyme enzymatic (Equivalent to 20 litres of cleaning solution) included.

Available through all good dental wholesalers. For further information, contact Alkapharm on 01785 714 919, or visit www.alkapharm.co.uk



Dr Alan Calverd - Radiation Protection Advisor says...

"Numerous independent studies have proven the NOMAD Pro better for the operator and patient"

"The NOMAD handheld x-ray provides the highest level of safety, quality and patient care for the dental practice"

Dr Alan Calverd
MA PhD MInstP MIPEM CertRPA CPhys EurPhys RegRadProt
Calverd Associates www.calverdassoc.com

NOMAD - safe, efficient, reassuring, shareable

NOMAD™
Portable X-Ray System

For more information, call Clark Dental on **01270 613750**
or email: sales@clarkdentalsales.co.uk

CLARKDENTAL

Checks and balances

Are you likely to get a Business Records Check? Tricia Halliday explains

A consultation was carried out at the beginning of this year by HM Revenue & Customs (HMRC) concerning how best to implement a programme of Business Record Checks to achieve a major improvement in the standard of record keeping by those involved in running a small or medium sized business.

It was announced that 50,000 cases will be reviewed annually to check both the adequacy and accuracy of business records with penalties being imposed for significant record keeping failures.

During the consultation, HMRC indicated that poor record keeping is a problem in around 40 per cent of all small and medium sized businesses and responsible for a loss of tax in up to two million cases each year. HMRC are adamant that the loss of tax through poor record keeping, particularly in the current economic climate, cannot continue and is therefore determined to use the powers at its disposal to improve business record keeping and so reduce the loss of tax.

They have confirmed that they plan to select cases for a Business Records Check on the basis of risk assessment, focusing on businesses that have features associated with poor record keeping. It is likely that a small proportion will be selected at random to verify the worth of the Business Records Check and to help improve the risk assessment criteria. If your dental practice has incurred tax penalties for late filing of tax returns or for record keeping errors in the past, you may be high on HMRC's list.

It was originally planned that the Business Records Check would start during autumn 2011. However, HMRC have commenced these checks earlier than originally planned on a 'test and learn' basis. This means that, initially, no penalties will be charged if poor records are detected, although they have failed to make this clear when notifying businesses that they have been selected for a Business Records Check. This seems to be another example of a high-handed and insensitive approach by HMRC.

Parliament has given HMRC powers to make checks of business records whether or not a return has been made. The law allows an officer of HMRC to enter your practice business premises and inspect statutory business records, where it is reasonably required for the purposes of checking your tax position. It is intended that the Business Records Check will be pre-arranged with at least

seven days' notice. You and your accountant will be made aware in advance and appointments made.

Typically, a Business Records Check will consider a 'sample' of the records kept to ensure there is a full and clear record of all business 'money in' and 'money out' and that the records allow an accurate interpretation to be made as to the nature of the receipts and expenses.

There is already a requirement in law for anyone who is required to make a Self Assessment Return, or Corporation Tax Return, to keep and preserve the records they need to make a correct and complete return. For those of you carrying on a dental practice either alone or in partnership, or as a company, the law further specifies that the records to be kept and preserved must include records of all receipts and expenses in the course of the business.

Business taxpayers must keep the records for five years after the fixed filing date for the Self Assessment Tax Return or, in the case of a limited company, for six years. The law provides that where you fail to comply with record keeping obligations you are liable to a penalty not exceeding £3,000. HMRC policy to date has been that this penalty should be imposed in only the most serious cases for example where records are destroyed.

"Parliament has given HMRC powers to make checks of business records whether or not a return has been made"

While the law sets out what records need to be kept, the precise format of those records is not specified. The records you keep will generally reflect the size and complexity of your affairs and may range from the simplest of manual records for a sole trader, to the most sophisticated computerised system for a large dental practice with a number of surgeries. The records should be kept up to date and in sufficient detail to allow you to make a correct and complete return, calculate the correct amount of tax to be paid or claimed and to enable HMRC to check the figures on your tax return, if required.

If you are at all concerned with your record keeping or are in any doubt about what records you should keep, you may wish to discuss this with your accountant. ■

Tricia Halliday is a Partner at Martin Aitken & Co. Tricia is contactable at ph@maco.co.uk, or on 0141 272 0000. You can find out more about Martin Aitken & Co by visiting www.maco.co.uk

Dental Protection

Xtraordinary subscriptions for practice employees

We believe that a DPL Xtra practice will work with us to maintain a safer environment for all those DPL members in their team. We reward this commitment by reducing the subscriptions payable by dentists, hygienists, therapists, orthodontic therapists, and clinical dental technicians working in the practice.

DPL Xtra

An Xtraordinary Indemnity Programme for the Whole Practice

For more information go to www.dentalprotection.org/uk/dplxtra
or call our Membership Helpline on 0845 718 7187

Implantologist joins Stafford Street team

Dr Yann Maidment, the principal at Edinburgh's Stafford Street Dental Care, is pleased to announce that dental implantologist Dr Willie Jack has joined their team.

Willie qualified from Edinburgh University in 1983 and worked for NHS Lothian before moving south to work in NHS, private and corporate practices. He passed his MGDS at RCS Edinburgh in 1997 and his masters degree in oral implantology and biomaterials from Sheffield in 2009.

Willie will be happy to receive referrals for all aspects of dental implantology. He treats cases from single immediate placement to full arch restorations on multiple implants and can place implants for patients own dentists to restore or can treat the whole case.

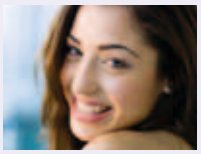
He has been running postgraduate implant courses for many years and intends to launch regular courses alongside small group hands-on meetings and mentoring, including a unique monthly implant education programme.

To contact, phone 0131 225 7576, email willie@williejack.com or go to williejack.com

Cowell and Carr have the Smile Factor

Brits love Alan Carr's gappy grin as much as Simon Cowell's Hollywood smile, according to new research by Oral-B.

To celebrate the start of National Smile Month, Oral-B asked Brits to vote for their favourite male and female celebrity smiles. The research showed that despite X Factor boss Simon Cowell having bright white veneers, comedian Alan Carr's gappy, natural grin was just as loved by the British public. Cowell and Carr enjoy an equal share of the vote (4 per cent) proving that, as we may well see with the launch of the US X Factor, Hollywood is not always best.



New mum Holly Willoughby (24 per cent) was crowned the owner of the most loved female smile and mum to be Kelly Brook (18 per cent) came in second.

Male celebrities who impressed the most with their smiles were newlywed Prince William (11 per cent) and King of the celebrity world, David Beckham (11 per cent).

A British smile?

Research suggests it is unbrushed and unloved. A shocking 6 per cent of British men have gone more than a whole week without brushing their teeth, data from Oral-B reveals today. However, women proved to be the worst daily offenders with nearly 60 per cent admitting skipping brushing before bed.

The survey commissioned by Oral-B highlights the country's oral care habits to launch National Smile Month, which runs until 15 June.

British teeth have long been ridiculed by the rest of the world and it seems we agree – one in two feel that as a nation we have bad teeth. A change may be emerging as only 43 per cent 16-24 year olds agreed with this statement versus 58 per cent of those aged 55-64.

Bad news for work colleagues as 11 per cent of Brits admitted skipping brushing in the morning while 28 per cent revealed that on occasion they've not brushed their teeth for a whole 24 hours. As many as 9 per cent of men admitted not brushing for the whole weekend.

Think KaVo Primus 1058, think Henry Schein Minerva

When space is a priority, Henry Schein Minerva's compact KaVo Primus 1058 Treatment Centre is the ideal solution, specifically designed according to your areas of speciality and to fit into even the smallest of surgeries.

Available from as little as £10,700, the KaVo Primus 1058 ensures everything you could ever need from a treatment centre is directly at hand. Those who offer prophylaxis or orthodontic treatments will appreciate the PROPHYcenter and ORTHOcenter that this compact system delivers, providing a good quality working environment while maintaining excellent value for money. And if 'digital' is the way forward for your practice, then be sure to choose the fully multimedia-prepared version.

Outstanding ergonomics, functionality and reliability for both clinicians and patients have all led the KaVo Primus 1058 to receive the 'reddot design award'.

To find out more, or to arrange a visit from your local equipment specialist, please call 08700 10 20 41 or visit www.henryschein.co.uk

No-compromise performance and real A-dec value

A-dec 200 is a complete system packed with features for added accessibility and comfort – all at great value and within a neat compact package.

Including the dental chair, delivery system, assistant's instrumentation, dental light, and support centre with cuspidor, every detail on the new A dec 200 is designed to enhance patient care and treatment efficiency and showcases the best of design with purpose.

Available in eight seamless upholstery colours, the patient chair features four preset positions. The double-articulating headrest keeps patients comfortable during chair moves and the chair's two-position armrests and natural seat articulation provide additional patient comfort.

For more information, visit www.a-dec.co.uk, or call 02476 350 901.

A-dec's newest family member

A-dec, a global leader in dental equipment, has introduced A dec 200 as the newest in its legendary line-up of patient chairs and delivery systems. Known internationally for high quality, performance and durability, A dec developed the new system with input from dental professionals around the world to accommodate the wide range of practice styles found in global markets.

"As the new point-of-entry to the A-dec family of dental chairs and delivery systems, we knew that A dec 200 would have big shoes to fill," said Karl O'Higgins, General Manager for A-dec UK. "A dec has always been known for reliability. Even our entry-level systems have the reputation for durable performance with minimal down-time."

To learn more about A-dec 200, contact your local authorised A-dec dealer, visit our website at www.a-dec.co.uk, or contact the UK head office on 02476 350901.

Are you throwing money down the drain...

... along with your water?

multidem

Accurate restorations

The NobelProcera transforms dental prosthetics with leading CAD/CAM technology, making it easier then ever before to create detailed, true to life restorations to suit every patient.

Colin Sykes uses the NobelProcera at Radford Heath Dental Laboratory in Torquay. "We purchased the first NobelProcera scanner when it was launched several years ago and then upgraded it to the Nobel-Procera Forte model," he said.

"I have found the scanner to produce accurate restorations using a wide variety of materials, allowing us to provide an invaluable service to our customers. It is easy to use and I would certainly recommend it to others."

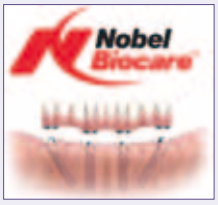
Now dental professionals everywhere can offer customers and patients an even wider range of dental restorations and solutions with the NobelProcera.

For further information, please call 0208 756 3300 or visit www.nobelbiocare.com

radfordheath

Nobel Biocare

Predictable and affordable treatment



Increasing patient acceptance is a priority for many dental practitioners and Nobel Biocare's All-on-4 system can help you achieve this.

Eliminating the need for sinus lifting, nerve repositioning and complex bone grafting, it offers patients a more affordable solution to restore missing teeth with highly predictable results.

With its immediate loading function, the system enables clinicians to provide their patients with a less traumatic experience in the chair and a fast recovery. In many cases, the entire treatment will be completed within just one day.

Ideally suited to be the clinician's second implant system, the All-on-4 broadens the clinician's potential patient base.

Please call Nobel Biocare for further information, on 020 875 633 00.

Innovative implant lecture in October

BIOHORIZONS

WS FUSION, the unique, comprehensive, interactive implant presentation between world leading implantologists Dr Hom-Lay Wang and Dr Marius Steigmann, will take place at the prestigious Mayfair Hotel in London on 28, 29 and 30 October.

Sponsored by BioHorizons, the lecture is entitled 'The Art and Science of Predictable Aesthetics, Bone Augmentation, Soft Tissue Grafting and Prosthetic Modelling around Implant Therapy' and will include implant surgery, prosthetic driven implant therapy as well as a half day hands-on workshop with pig jaws.

Having lectured extensively on the art and science of implants, both as a team and separately, the high standard of these lectures are gathering momentum and creating a strong following around the world. The London Fusion event is anticipated to sell out early so please ensure you book early to avoid disappointment.

To book or for more information, visit www.biohorizons.com or contact the UK office on 01344 752560 or infouk@biohorizons.com

BioHorizons hosts biggest Global Symposium yet

BioHorizons Global Symposium played host to 820 delegates across 31 countries, at the prestigious Arizona Biltmore Hotel in Phoenix, Arizona on 28 April to 1 May, making it their biggest and most successful symposium to date.

Addressing a wide range of implant dentistry challenges, including immediate loading, aesthetics, tissue regeneration and implant complications, as well as the latest innovations with BioHorizons patented Lazer-Lok implants, the four-day programme included lectures from world leading clinicians, including Marius Steigmann, DDS, Carl Misch, DDS, MDS, PhD and Jay Malmquist, DMS and a welcome from R. Steven Boggan, President and CEO, BioHorizons.

BioHorizons will be hosting their Asia Pacific Symposium Series 2011 in Macao, People's Republic of China on 22-23 September at the beautiful Venetian Macao Resort Hotel.

Visit www.biohorizons.com, call 01344 752 560 or infouk@biohorizons.com to register.

BACD members in fundraising mood

Neil Harris, the director of study clubs for the British Academy of Cosmetic Dentistry, will be cycling from John O'Groats to Lands End in an effort to raise money for Bliss, the national charity for premature and sick babies.

Neil will be setting off on this mammoth journey on 11 June, but he is not alone in his charitable efforts, as fellow BACD members Zaki and Dominique Kanaan will be using their summer holiday to climb Mt Kilimanjaro in aid of Bridge2Aid and Elaine Halley and Julian Caplan will both be running marathons for the charity.

Other BACD members are also keen to help charitable organisations and to this end, Nik Sisodia has recently completed a 35-mile bike ride for the Stroke Association.

To find out more, contact Suzy Rowlands at suzy@bacd.com, or visit www.bacd.com

R4 Clinical+ "has the 'wow' factor"

R4 Clinical+ from Carestream Dental is one of the most highly advanced dental practice management software solutions available today.

Dr Philip Friel, who runs Philip Friel Advanced Dentistry, a private referral clinic based in Glasgow, agrees. He said: "This is the third clinic in which I've organised the installation of practice management software (PMS) and each time I've used Carestream Dental.

"Clinical+ is easy to use, reliable and consistent, but more than that it has the 'wow' factor that takes my clinic to the next level.

"Extra features such as PMS access via my iPhone and automated text messaging to patients are smart and convenient, while the patient education 3D animation software looks fantastic. It really strengthens our image of being at the forefront of innovation, helping me to explain procedures to my patients in an incredibly polished way."

Contact Carestream Dental on 0800 169 9692 or visit www.carestreamdental.co.uk

60,000 Whitening Systems Sold

Over 3.0 Million Smiles Whitened

World's #1 Chairside Tooth Whitening System

- Gets teeth whiter, faster and keeps them whiter longer
- In clinical studies, patients with A3 or darker achieved an average brightening of 8 shades in just one office visit*
- 50% of patients achieved an end shade of B1 or better*

Call now for a free demo

UK 0800 032 3005

Ireland +44 1923850 423

Discus also offers a FREE patient referral website for all our Zoom customers. teethwhitening.products.co.uk

DISCUS

Combating calculus

Calculus, widely recognised as a cause of gum problems by increasing the retention of dental plaque, is set to face new opposition with Oral-B Pro-Expert toothpaste.

Formed by the calcification of previously deposited dental plaque, calculus then provides a rough surface on which further plaque can adhere. To counter this cycle of events, Oral-B Pro-Expert toothpaste is formulated with polyphosphate which helps prevent the initial build-up of calculus. This active ingredient inhibits the crystal growth of the unwanted hydroxyapatite in residual plaque, inhibiting mineralisation and helping to prevent calculus formation.

Laboratory and clinical work have confirmed this effect, especially when Oral-B Pro-Expert toothpaste has been used over time. Furthermore its substantial efficacy against calculus has been confirmed.

Also, the unique combination of polyphosphate and stabilised stannous fluoride delivers long-lasting anti-bacterial benefits and is recognised as a broad-spectrum antimicrobial agent.

DK out

Stannous fluoride, a widely recognised anti-caries agent used in Crest toothpaste, introduced by Procter & Gamble as the first clinically proven anti-caries fluoride toothpaste in 1955, is now back in a newly stabilised form in Oral-B Pro-Expert toothpaste.

Although widely recognised for its anti-caries properties, stannous fluoride can be unstable in water-solution. However, the evolution of an innovative formulation with low water and polyphosphate has enabled a doubly effective combination.

Stabilised stannous fluoride works in two ways to deliver its anti-caries benefits. Firstly, fluoride has the ability to inhibit demineralisation and enhance remineralisation of enamel.

Additionally, stabilised stannous fluoride exhibits strong reactivity with tooth enamel and root surfaces forming resistant, insoluble precipitates to provide further resistance to acid attack from plaque micro-organisms thereby adding extra protection and significantly improving its anti-caries effect.

Pink gums, white teeth and no more dental blues

Gum health through effective plaque control is just one of the many beneficial features of the newly-launched Oral-B Pro-Expert toothpaste.

Incorporating stabilised stannous fluoride, Oral-B Pro-Expert toothpaste provides powerful, long lasting antimicrobial action which fights plaque and consequently gum problems as well as caries. Additionally, the anti-microbial properties also guard against oral malodour while other properties of the stannous fluoride help protect against dentinal hypersensitivity.

The American Dental Association (ADA) Council on Scientific Affairs has recognised stannous fluoride as meeting its requirements for anti-caries, antibacterial and gum health efficacy.

Sensitivity relief

Oral-B's new all-in-one Pro-Expert toothpaste is set to bring relief to thousands of dentine hypersensitivity suffers, thanks to its inclusion of stabilised stannous fluoride.

While reducing hypersensitivity is just one of the comprehensive range of oral health benefits delivered by Oral-B Pro-Expert toothpaste, for people who experience this painful condition it will probably be enough by itself!

As a multi-benefit dentifrice, the all-in-one oral health advantages of Oral-B Pro-Expert toothpaste are not only clearly understandable for professionals. Patients who suffer from hypersensitivity will soon also appreciate its advantages in relieving this condition through advanced technological research. By improving gum health and helping to reduce the risk of erosion, Pro-Expert toothpaste will also help guard against the causes of sensitivity for future peace of mind.

Philips' newest Sonicare is a gem

Philips is not a company to rest on its laurels and previewed a sparkling extension to its highly successful Sonicare toothbrush collection at the BDA conference. The new Sonicare Diamond Clean takes sonic tooth brushing to its most sophisticated level and provides the best clean yet.

This is substantiated by unparalleled superiority claims based on independent clinical research: Diamond Clean removes up to 100 per cent more plaque from hard to reach places; it improves gum health in only two weeks; provides noticeably whiter teeth in just one week; and protects against abrasion and gum recession to help reduce sensitivity.

The high performance brush features five modes: Clean, White, Polish, Gum Care and Sensitive.

For more information about Diamond Clean, including copies of studies, visit www.sonicare.co.uk/dp

The newest innovation in interproximal cleaning

Philips, maker of the Sonicare toothbrush, is pleased to unveil the Philips Sonicare AirFloss, an easier way to clean between teeth.

Dental professionals often struggle to get patients to floss on a regular basis and the Sonicare AirFloss, with its breakthrough microburst technology, has been specially designed to address this problem by increasing ease of use while maximising interdental plaque removal and improving gum health.

During Philips consumer testing, 86 per cent of patients found Sonicare AirFloss easier to use than floss and Sonicare AirFloss removes up to 99 per cent more plaque in-between teeth than brushing with a manual toothbrush alone.

Philips Sonicare is the number one recommended sonic toothbrush brand by dental professionals worldwide and is backed by more than 175 clinical trials.

Less intense and alcohol-free

Johnson & Johnson have launched a less intense, alcohol-free version of Listerine Mouthwash – Listerine Zero.

The new product is alcohol-free for a less intense taste, but still contains the classic Listerine four essential oils: menthol, thymol, methyl salicylate and eucalyptol. Listerine Zero kills up to 99 per cent of plaque bacteria in vitro, more than other alcohol-free, daily use mouthwashes. Listerine Zero also contains 220 ppm (0.05 per cent) fluoride for effective enamel protection.

For dental professionals, there is now a less intense and alcohol-free, yet highly effective daily use mouthwash within the Listerine range to suit the individual needs of some patients and to help them achieve a cleaner, fresher and healthier mouth beyond toothbrushing and interdental cleaning alone.

For more information about Listerine Zero, or for free samples, please contact Johnson & Johnson on 0800 328 0750.

The corrosion of erosion

Oral-B's new all-in-one Pro-Expert toothpaste with its unique combination of polyphosphate and stabilised stannous fluoride may help reduce the tooth erosion increasingly seen as a result of modern lifestyles.

This new partnership of ingredients in Oral-B Pro-Expert toothpaste has created an innovative and comprehensive range of oral health benefits. These include protection against gum problems, plaque, caries, calculus formation, dentinal hypersensitivity, staining and bad breath as well as erosion.

Clinical and laboratory studies showed that the technology significantly reduced progression of erosion. The effect is due to the creation of a protective stannous containing barrier resistant to acid attacks and protecting the underlying enamel surfaces.

Listerine supports National Smile Month

Listerine, the most clinically studied daily use mouthwash, is proud to be a platinum sponsor of National Smile Month 2011. Johnson & Johnson, the manufacturers of Listerine, are committed to working with the British Dental Health Foundation to improve oral health.

National Smile Month is organised by the British Dental Health Foundation and runs from 15 May to 15 June.

Gabriele Haitzinger, oral care brand manager for Johnson & Johnson said: "We fully support the British Dental Health Foundation in their important work to raise public awareness and improve oral health. As a market leading brand, Listerine mouthwash is offered to the consumer for adjunctive use following tooth brushing and flossing based on a fundamental message that a clean and healthy mouth is important for oral health as well as general overall health."

Contact Johnson & Johnson on 0800 328 0750.

Striving for perfection

The Oral-B Triumph toothbrush is already highly sophisticated, so it was challenging to find ways in which its performance might be advanced further. However, Oral-B believed there were additional features which could be incorporated into the unit which could support the Profession in their quest to encourage greater patient compliance when it comes to oral health. The company is proud to introduce the newest model of Oral-B Triumph 5000 with SmartGuide.

This ingenious model now includes a new visible pressure indicator on the reverse of the handle, an override mechanism within the unit that automatically reduces the brushing speed and stops the pulsating motion of the brush and an audible timer which beeps after 30 seconds, alerting the user that's it's time to focus on the next quadrant.

Stain-proof

A toothpaste that offers protection against gum problems, plaque, caries, calculus formation, dentinal hypersensitivity, erosion and staining surely has to be too good to be true? Not the new Pro-Expert toothpaste from Oral-B.

As well as the other listed oral health benefits, a polymer included in Oral-B Pro-Expert toothpaste, called polyphosphate, is proven to help give that all important winning smile by reducing extrinsic staining. The ingredient works by whitening using chemical stain control which includes both stain-prevention and stain-removal mechanisms.

Due to its strong affinity for the calcium phosphate contained in tooth enamel, polyphosphate significantly influences the binding properties of the chromogens responsible for stains. The improvements have been observed by professionals and patients.

The synergistic partnership of polyphosphate and stabilised stannous fluoride – by inhibiting plaque growth and adhesion, as well as promoting remineralisation – ensures that teeth not only look good but are also healthy too.

Belt and braces bonding from GC UK

To further compliment GC's new composite restorative G-ænial, the company has developed a one component self-etching light cure adhesive, G-ænial BOND.

With a belts and braces approach, G-ænial BOND offers the best of both worlds: the simplicity and reduced post-operative sensitivity of a self-etch adhesive together with the greater bond strength that was traditionally found only with etch and rinse adhesives.

As a one bottle self-etch bonding agent, G-ænial BOND can be used to self-etch both enamel and dentine, however to further enhance the bond phosphoric acid can be applied on enamel for 10 seconds prior to the application of G-ænial BOND.

The dimethacrylate monomer increases G-ænial BOND's permeability into enamel and dentine, while the increased level of phosphate ester monomer optimises etching – belt and braces all the way!

Call GC UK on 01908 218 999.

Cool
Clean
Clever

Ambidextrous as standard

'contour next' by

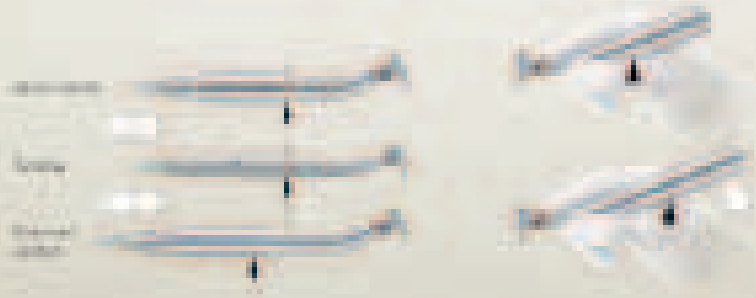
Tridac

www.tridac.co.uk

01923 - 242398

Bien Air Dental

MICRO-SERIES
COMPACT & ERGONOMIC



COMPONEER – the new direct composite veneer

Coltène Whaledent is proud to present a new and easy system for restoring anterior teeth with COMPONEER the polymerised, prefabricated nano-hybrid composite enamel shells which combine the advantages of direct composite and prefabricated veneers.

In present practice, the choice is between a directly-modelled composite restoration or elaborate indirect veneer technology, but now the COMPONEER system offers you another treatment option with the advantage of a lower economic perspective to the practitioner and the patient.

A naturally aesthetic smile can be offered to the patient in just one session with this easy-to-use system which also allows for a high level of hard tooth conservation and has a wide range of uses in aesthetic and clinical applications.

For further information, visit www.componeer.info or call free phone 0500 295454 exts 223/224.

Launch of NUPRO Sensodyne prophylaxis paste

DENTSPLY International and GlaxoSmithKline (GSK) have entered into an agreement to create a portfolio of co-branded oral care products to be used in the dental office by patients suffering from tooth sensitivity, a problem which is estimated to affect one in three people.

In December 2009, GSK acquired NovaMin through the purchase of NovaMin Technology Inc. NovaMin is a patent protected innovative calcium phosphate technology which has been clinically proven to relieve tooth sensitivity.

The agreement will allow DENTSPLY to co-brand its NUPRO products which contain the NovaMin technology, with GSK's Sensodyne brand. This co-branding will provide a continuum of care for tooth sensitivity treatment from the dental office to everyday use at home.

For more information, or to book an appointment with your local DENTSPLY product specialist, call 0800 072 3313 or visit www.dentsply.co.uk

The results are clear

Alkazyme-W is a combined cleaning and disinfecting agent for the routine decontamination of the integral dental chair-side water supply.

Simple to use: a 15-minute weekly routine service clean with Alkazyme-W is all that is required to ensure the dental unit water supply unit remains free of bactericidal contamination, thus ensuring 'clean water in – clean water out'.

Microbial activity: unique combined enzyme-based detergent/disinfectant system rapidly removes bactericidal bio-film leaving all internal surface areas thoroughly clean and disinfected.

Highly economical: each 500gm tub of Alkazyme-W allows for up to 100 service applications.

Safe to use: non-toxic and fully biodegradable.

Alkazyme-W is available to purchase from all dental wholesale suppliers.

For product information, ask your local dealer representative or visit www.alkapharm.co.uk

Hyflex CM – The regenerative NiTi file

Coltène Whaledent is pleased announce the launch of Hyflex CM, the controlled memory NiTi file which, because of no memory effect, is extremely flexible to adapt to canal anatomy to significantly reduce the risk of perforation of the canal.

This also allows pre-bending similar to stainless steel files and is perfect for extremely curved root canals. Hyflex CM NiTi files are multi-use and, with autoclaving or with a glass bead steriliser, regain the original shape while also strengthening the file. With controlled memory they are up to 300 per cent more resistant to cyclical fatigue compared to conventional NiTi files which substantially helps reducing the incidence of file separation.

For more info, visit Coltenewhaledent.com or call 0500 295 454.

Treat yourself with DENTSPLY rewards

High street dental practices can benefit from significant discounts off many of their favourite DENTSPLY products by simply visiting www.dentsplyrewards.co.uk.

For every DENTSPLY product they purchase, the dentist earns rewards that can be spent on other DENTSPLY products of their choice from a comprehensive range, to suit the individual needs of their practice.

DENTSPLY Rewards
Quality rewarded.

Dentsplyrewards.co.uk enables practitioners to remain competitive in the current economic climate by making it easier for them to trial new products at a very low price.

Clinicians can still continue to benefit from their usual dealer offers and prices as all orders made on the website will be directed through to the dentist's dealer of choice and invoiced at their usual dealer prices.

To register and start benefiting from your rewards today, visit www.dentsplyrewards.co.uk

A breath of fresh air

Hygienic and on demand air is critical to the complex functioning of today's dental practice. A reliable and efficient air compressor is essential, however, oil-based compressors can be problematic. Durr has found the solution, pioneering a range of compressors which quite literally deliver oil-free, fresh air.

The innovation in Durr's range of compressors is its Teflon-coated pistons. Oil blockages and build up are eliminated maximising compressor efficiency and longevity and ensuring the smooth running of other air-utilising dental equipment.

Oil-free air is also crucial to the initial success and the long-term durability of many types of restorative treatment, especially the adhesion of composites and dental adhesives.

For more information, call Durr Dental on 01536-526740.

Enhancing the patient experience... in seconds

Today's dentist is being constantly challenged to improve the patient experience while being mindful of the need to manage consultation time. VistaScan digital radiography system can deliver on both and has significant advantages over the more rigid charged coupled device (CCD) system.

Images can be processed in seconds and the accompanying software allows image enhancement and manipulation, so detail can be viewed at higher resolution for the benefit of the patient and clinician.

Digital radiography is changing the way dentists communicate with their patients and consequently how patients understand the disease in their mouths. For example, a patient with severe periodontally involved teeth can be shown, in close up, the degree of bone loss they are experiencing.

For more information on VistaScan, call Durr Dental on 01536 526 740.

National Smile Month at The Dental Directory

National Smile Month is here – 15 May to 15 June 2011 – and whatever events you have planned for your patients, The Dental Directory can help!

As the UK's largest dental supplier, we offer one of the most comprehensive ranges of oral hygiene products available – all ready for free next day delivery, and all at fantastically low prices.

To celebrate Smile Month, we have some great offers on products from Molar TePe, Colgate, Oral B, Wisdom, GSK, Waterpik, Dentocare, Philips and many more! Plus a good selection of children's toothbrushes and toothpastes, the latest motivator stickers and motivator products too.

For the latest issue of Big Bite, call 0800 585 586 or visit www.dental-directory.co.uk

Snappy summer special

Diamond Snappy Glass Ionomer Cement is available from Kemdent during August on a buy one, get one free offer.

Diamond Snappy Glass Ionomer Cement was designed to help dentists treat nervous patients, particularly children. Certain characteristics contained within the product's properties enable the dentist to carry out a successful restoration quickly and still give patients the tender care they need.

Snappy is very easy to pack and place because it is not sticky. It has a quick snap set with no bitter after taste and is resistant to saliva as soon as the cavity is filled.

Because it is completely saliva resistant, no rubber dam is required, saving the dentist time and effort.

Diamond Snappy's high-speed setting is due to a more reactive acid-base reaction. Diamond Snappy also maintains a superior compressive strength for a long time making it amazingly wear resisitant and durable.

Call 01793 770 090 or visit our website www.kemdent.co.uk

Dental companies' £1,000 bursary to dentists

Smile-on and The Dental Directory have awarded four lucky dentists a £1,000 bursary to be spent on their favourite Dental Directory products, while they study for an MSc in restorative and aesthetic dentistry. Not only will the winners receive an MSc degree on completion of the course, they will also make valuable savings on the equipment they will need throughout the programme.

The innovative postgraduate qualification was the UK's first online programme for dentists on the subject. The course allows busy dentists to study at times and locations convenient to them, enabling them to continue treating patients throughout.

Call 020 7400 8989 or visit www.smile-on.com

A significant leap forward

Align Technology, Inc has announced the UK launch of Invisalign G3, the most significant collection of new features and innovations in the company's history.

Engineered to make Invisalign easier to use with Class II and Class III patients, Invisalign G3 is designed to deliver clinical results which are significantly superior to any other Invisalign offering to date.

Building on the new and improved feature set introduced to the Invisalign treatment option line in 2010 and recently launched to the US and Canada, Invisalign G3 has been well received by doctors. This is thanks to new SmartForce features designed for increased predictability of certain tooth movements, and simpler, more intuitive software to streamline treatment planning and review.

Align Technology's International Clinical Director Dr. Mitra Derakhshan said: "Invisalign G3 delivers the clinical features doctors expect and can make it easier to use across a broad range of treatments."

Greater control, less discomfort

Septodont, a global leader in dental pharmaceuticals and the UK's number one manufacturer of dental anaesthetics, is pleased to announce the launch of its new and highly innovative Septoject Evolution needle, designed to provide greater control for practitioners and less discomfort for patients.

Septoject Evolution is engineered for a smoother penetration with less displacement, meaning less discomfort for your patients, even when used for multiple injections. Designed with a patented scapel-designed bevel for easier insertion and reduced deflection, it means around 29 per cent less force is required from you, while it delivers better control and accuracy.

If you require further information, contact Septodont on 01622 695 520, email information@septodont.co.uk or visit www.septodont.co.uk

Scottish Centre for Excellence in Dentistry

Totally Committed to Quality Care and Excellence...

A Multi-Disciplinary Referral Centre

We are happy to accept referrals for all aspects of dentistry including implants, oral and facial surgery, periodontics, orthodontics, prosthodontics, endodontics, restorative dentistry, facial rejuvenation, hypnotherapy sedation and CT scanning.

We can offer advice only, carry out part of the treatment or all of the treatment; the choice is yours. We can place implants for your patients and you can restore them; call or email us for further details. Nobel Biocare will provide a free prosthetic kit when you treat your first patient.

Why not come and take a look around our centre and see for yourself where your patient would come to be treated.

- New referrals seen within 2 weeks
- Emergency patients seen on the same day
- Complimentary update seminars for referring GDP's

We run a series of courses throughout the year for GDP's - see our website for details

Nobel Biocare

Arshad Ali

Arshad Ali [illegible]

Best Specialist Referral Practice UK 2010

The Leading Dental Centers of The World

Scottish Centre for excellence in dentistry

All REFERRALS WELCOME – PLEASE CONTACT US TO ARRANGE A VISIT TO OUR CENTRE

Watermark Business Park 335 Govan Road Glasgow G51 1HJ
t 0141 427 4530 f 0141 427 8471 e enquiry@scottishdentistry.com

www.scottishdentistry.com

BIOHORIZONS®

The Art and Science of Implant Therapy

Predictable aesthetics, bone augmentation, soft tissue grafting and prosthetic modeling around dental implants

Marius Steigmann & Hom-Lay Wang

October 28-30, 2011

The May Fair Hotel,
London, England

Information / Registration

Tuition: Full course £1,295
Lectures only £995
(Friday and Saturday only)

BioHorizons is pleased to offer this course as part of its worldwide education programme. Registrations will be made via our Corporate Headquarters in the US, and will be charged at the US equivalent rate to the sum shown in Sterling. Payment can be made by Visa, MasterCard or American Express.

Veronica Zamora
BioHorizons Corporate Headquarters
2300 Riverchase Center
Birmingham, AL 35244 USA
Tel: +1-205-986-7927
Fax: +1-205-967-3181
Email: vzamora@biohorizons.com

Chris Nethercliff
BioHorizons UK
17 Wellington Business Park
Dukes Ride, Crowthorne
Berkshire, RG45 6LS
Tel: +44 1344 752560
Fax: +44 1344 777023
Email: cnethercliff@biohorizons.com

Venue:
The May Fair Hotel
Stratton Street,
London
W1J 8LT
United Kingdom

Single occupancy rate: **£265 per night**
Double occupancy rate: **£285 per night**
Inclusive of VAT and breakfast
Phone: +44 (0) 20 7629 7777
www.themayfairhotel.co.uk

Sponsored by

ICOI

WS Dental