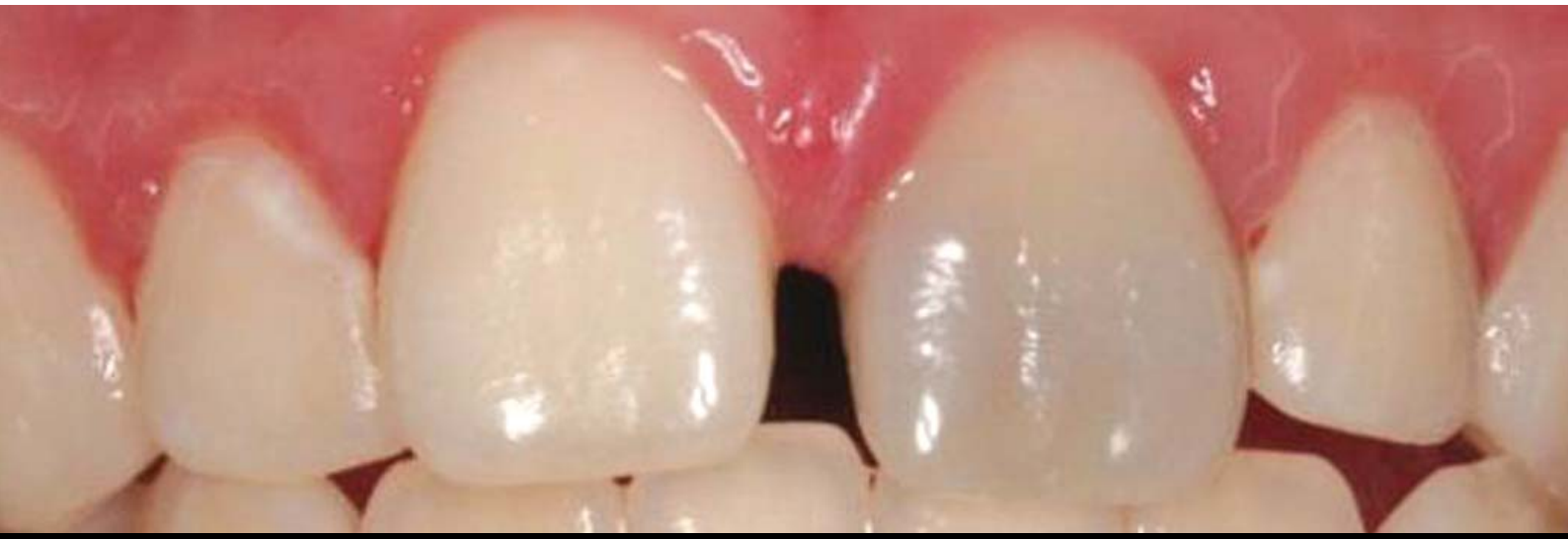
Volume 55 Number 4 August/September 2009

IDA
irish dental association

Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann



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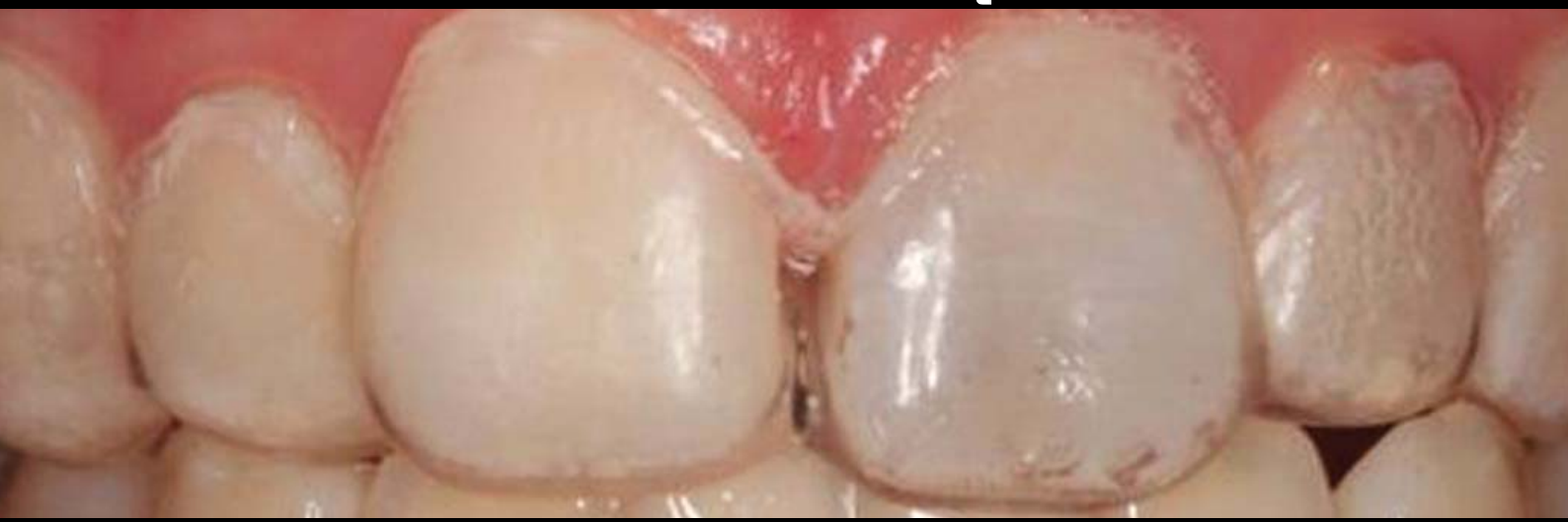
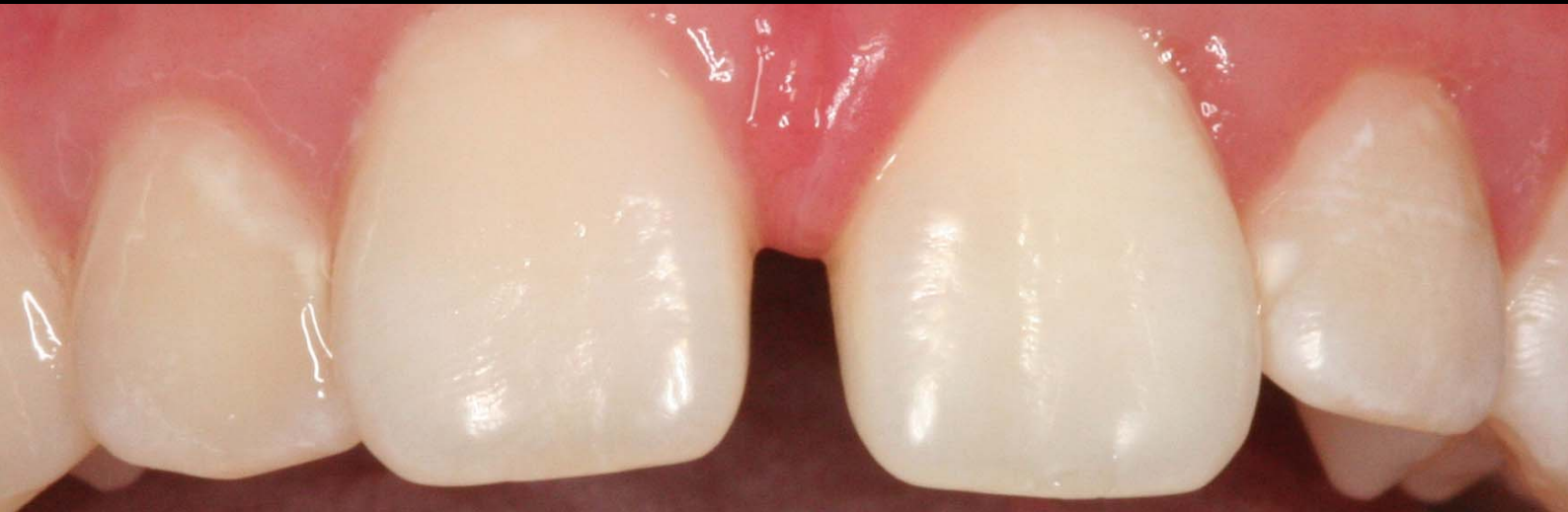


DISCOLOURED TEETH IN CHILDREN AND ADOLESCENTS



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Indications For the inhibition of the formation of dental plaque. As an aid in the treatment and prevention of gingivitis, and in the maintenance of oral hygiene, particularly in situations where toothbrushing cannot be adequately employed (e.g. following oral surgery or in physically or mentally handicapped patients). Also for use in a post-periodontal surgery or treatment regimen to promote gingival healing. It is useful in the management of aphthous ulceration and oral candidal infections (e.g. denture stomatitis and thrush). **Dosage & Administration:** 10ml rinse for 1 minute twice daily or pre-surgery. Soak dentures for 15 minutes twice daily. Treatment length: gingivitis 1 month; ulcers, oral candida 48 hours after clinical resolution. **Contraindications** Corsodyl Mouthwash is contra-indicated for patients who have previously shown a hypersensitivity reaction to chlorhexidine. However, such reactions are extremely rare. **Special Warnings and Precautions for Use** For oral (external) use only. Keep out of the eyes and ears. If the mouthwash comes into contact with the eyes, wash out promptly and thoroughly with water. **Interactions with other Medicinal products and other forms of interaction** Chlorhexidine is incompatible with anionic agents. **Pregnancy & Lactation:** No special precautions. **Side Effects** Discoloration A superficial discoloration of the dorsum of the tongue may occur. This disappears after treatment is discontinued. Discoloration of the teeth and silicate or composite restorations may also occur. This stain is not permanent and can largely be prevented by brushing with a conventional toothpaste daily before using the mouthwash, or, in the case of dentures, cleaning with a conventional denture cleaner. However, in certain cases a professional prophylaxis (scaling and polishing) may be required to remove the stain completely. Stained anterior tooth-coloured restorations with poor margins or rough surfaces which are not adequately cleaned by professional prophylaxis may require replacement. Similarly where normal toothbrushing is not possible, as for example with intermaxillary fixation, or with extensive orthodontic appliances, scaling and polishing may also be required once the underlying condition has been resolved. Taste Transient disturbances of taste sensation and a burning sensation of the tongue may occur on initial use of the mouthwash. These effects usually diminish with continued use. Oral desquamation In cases where oral desquamation occurs, dilution of the mouthwash using 5ml water with 10ml mouthwash, freshly mixed, will often allow continued use of the mouthwash. Parotid gland swelling Very occasionally, swelling of the parotid glands during the use of chlorhexidine mouthrinses has been reported. In all cases spontaneous resolution has occurred on discontinuation of treatment. Irritative skin reactions Irritative skin reactions to chlorhexidine preparations can occasionally occur. Generalised reactions Allergic reactions, hypersensitivity & anaphylaxis to chlorhexidine have also been reported but are extremely rare. **Legal Category:** General Sale. **PA Number** PA 678/2/2. **PA Holder** GlaxoSmithKline, Consumer Healthcare (Ireland) Limited, Stonemasons Way, Rathfarnham, Dublin 16 **Date of printing** March 2009. **Date of Revision of the Text** March 2008
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Further information is available on request from:
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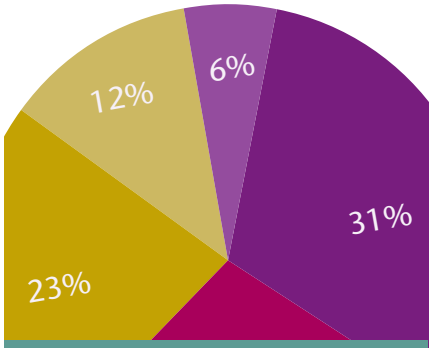

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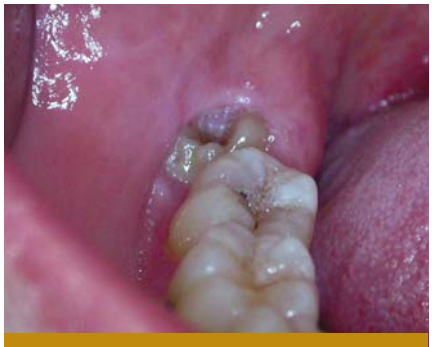

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Oral health at risk from cutbacks

An Bord Snip has recommended termination of the Dental Treatment Benefit Scheme. This is the opposite advice to what has been given by almost all experts to the Oral Health Strategy Group for the DOH&C and is highly contentious.

Prevention must be better than cure. Screening for oral disease is a must for the whole population – one oral/dental examination per year and two scaling and polishing sessions for adults may seem expensive in the short term but is highly beneficial in the long term. Dr O'Sullivan's paper from Cork in collaboration with the Irish Cancer Society highlighted the benefits with regard to the early detection of mouth cancer, a condition as common as cervical cancer in women and much easier to screen for. Much of the literature shows the benefit of saving teeth and avoidance of dentures from a quality of life and general health point of view, with an implant-retained lower prosthesis being the minimal standard for those unfortunately rendered edentulous (which should no longer occur). The literature is alive with the relationship between gingival health and arthritis/heart disease/diabetes. Since arriving back in Ireland, I have been trying to encourage through lectures/editorials/letters/educational forums and the Oral Health Strategy the need for at least yearly attendance at the dentist for all patients, not just those paying PRSI. A suspicious lesion picked up early is a cure; a mouth cancer lesion picked up late is a 15-20% chance of being alive in two years. We still await the Oral Health Strategy and let us hope that it can address our real oral health concerns.

Thanks to all the dentists who responded to the IDA survey (pp. 179-180) on various issues related to dentistry; the members of the Editorial Board are very pleased to see that our work has gained some favour and that we are seen as having an influence in your daily work. We continue to be busy, and are looking strategically with the IDA at indemnifying all aspects of the Journal: taking CDE forward, highlighting the educational strengths ('Identifying orthodontic problems', pp. 193-199) and the importance of the Journal, developing the team approach ('Dental nursing across Ireland', pp. 182-183), and improving the impact factor/citations of your Journal. Unfortunately, we are constrained by the number of scientific pages available to us.

The biggest problem that is seen in dentistry from a medico-legal perspective is breakdown in communications between patient and dentist. Dental Protection, with the IDA, is trying to help improve our communication skills to avert these problems, with workshops around Ireland (p. 164) and practice management training days (p. 166), and if you can spare the time, they are worth attending.

There are two nice stories about helping those less fortunate ('Chernobyl Dental Aid' and 'Busman's holiday' (lucky guys) on pp. 168 and 174) and one crying out for help (the broken chair in Uganda – p. 174).

The scientific section is very practical, with amazing results shown for internal and external bleaching of non-vital discoloured teeth in adolescents and children (pp. 184-189), highlighting the dilemma on whether or not to surgically remove wisdom teeth (pp. 190-192), and a summary of orthodontics in our fact file (pp. 193-199), an amazing picture gallery of orthodontics from Drs Scott and Hagan. We are in safe hands in Europe with Dr Feeney working hard for us and bringing us up to date (pp. 171-173). I never fail to be impressed by the hard work of the team with another difficult and challenging quiz, and a round-up of abstracts to suit everybody's needs.

Now for some good news: oral and maxillofacial surgery in the public hospitals is at last progressing with Mr Chris Cotter having being appointed and hopefully starting soon to work with Prof. Duncan Sleeman in Cork and Mr Gerry Kearns/Mr Padraig O'Cealligh both appointed to the National Maxillofacial Unit in Dublin to join Mr Ryan and myself. Donegal/Sligo are receiving OMFS services from four consultants in Altnagelvin in Derry, Mr Paddy McCann is in Galway and Mr Mick Gilbride is in Limerick to be hopefully joined by a colleague in the near future. It has taken an inordinate amount of work over the years on the part of the RCSI, colleagues and the National Hospital's Office to obtain this progress, despite the stringent times, and is in keeping with the strategic plan developed in 2003/2004. It just shows what can be done: where there's a will, there's a way.

Prof. Leo F. A. Stassen
Honorary Editor

PRESIDENT'S NEWS

Fighting back

IDA President DR DONAL BLACKWELL discusses the IDA's response to the 'An Bord Snip' report, among other topical issues.

An Bord Snip Nua

The suggestion that the PRSI treatment scheme for dental patients be scrapped may not have been among the most prominent in media reports following the publication of the report from the group chaired by Mr Colm McCarthy, but it certainly caught our attention in the Association.

Yet again, we see how the health service would operate if left to economists. The untold damage done to the oral health of the nation by such a move would be simply incalculable. We cannot assume that this will be recognised by the decision makers who will eventually bring forward plans to rein in public expenditure, and for this reason the Association will be engaged in a vigorous lobbying campaign of politicians, civil servants, the media and the profession over the coming months to highlight the folly of this suggestion. The IDA is simply not prepared to see the oral health of the nation destroyed at the stroke of an economist's pen, and I reassure you of our determination in this regard and hope I can count on the support of all members of the Association in this crucial campaign.

Membership survey

This edition of the Journal features the main findings of our membership survey, an exercise that has generated a wealth of information for the Association as we chart our course into the future and develop a new strategic plan. I wish to thank all those who responded and to assure you that we will be busy in formulating a comprehensive response to the many messages that are apparent from the survey findings.

Trade union status

The unanimous decision of this year's AGM to pursue licensed trade union status for the Association to copper fasten our role as a representative body for the profession will require us to seek written declarations from members that they wish to become members of our trade union. As we indicated at the AGM, there will be no additional subscription charge for members as a result of this move, nor will there be any change in the function or structure of the Association. However, this is an important matter and requires prompt action on our part to protect the position of the Association and its right to defend and represent dentists at a time when the profession is under attack from so many quarters. We will be writing to you in the coming weeks to ask that you confirm your willingness to become a member, as we are required to collect at least 1,000 names to establish as a trade union, and I would ask for your prompt assistance in this regard.

Colgate Oral Health Month

The IDA is delighted to be involved in Colgate Oral Health Month again this year. As you know, Colgate Oral Health Month is an international initativeinitiative that takes place in September each year. Now in its seventh year, Colgate and the Irish Dental Association will work together to promote good oral hygiene in Ireland among the general public during September. Blitz teams will also call to over 500 dentists across the country to bring the 'Share a Smile' message to dentists' surgeries. I would encourage you all to get involved in this very worthwhile educational and charitable event.

Dublin Dental School Student Awards

It was with great pleasure that I attended the recent dinner to celebrate the graduation of this year's final year dental students at Trinity College Dublin. I would encourage all graduates to join our Association and ask current members to encourage these new entrants to the dental profession to join the IDA, and to remind them that their first year's membership is FREE.

I congratulate all graduates and wish them every success in their future careers.

Patient Safety Committee

I am delighted that the Council of the IDA has decided to establish a committee to examine quality and patient safety issues affecting dentists and their patients. This committee is being established in order to develop a pro-active approach to dealing with, inter alia, the recommendations arising from recent policy reports such as the Madden report, the new HIQA guidelines and the new guidelines from the Radiation Protection Institute. Anyone interested in getting involved should please contact IDA House.

Practice management training

A very successful Practice Management Training day took place in June in the Clarion Hotel, Dublin Airport. Undoubtedly in this current economic climate there is a big appetite from members for non-clinical training and education. We hope to see more non-clinical events organised for the coming year.

Summer break

Finally, I hope you all manage to get a well-deserved summer holiday to recharge the batteries. We look forward to seeing you all in the autumn for the many and varied IDA national and branch events.

Donal Blackwell
President

Upcoming IDA organised meetings

Munster Branch ASM

This year's meeting will take place on Friday November 20 at the Sheraton Hotel, Fota Island, Co. Cork. The speaker is Dr Jens Andreasen, who will speak on 'Dental Traumatology'.

Dr Andreasen serves as an associate professor at the University Hospital in Copenhagen, Denmark. In 1959, he received his Doctor of Dental Surgery from the Royal Dental College in Copenhagen. He completed his postgraduate training in oral and maxillofacial surgery at the University Hospital. He has authored 308 publications and 10 textbooks, covering topics such as dental traumatology, tooth replantation and autotransplantation, tooth eruption and tooth impaction. He has received four honorary doctorates and has been invited to lecture in 44 countries.

Metro branch meeting

The autumn season series of lectures kicks off on Thursday September 17 and is being organised jointly with the Endo Society. Please note that the venue will be the Ballsbridge Court, Dublin 4, at 7.30pm.

The topic for this meeting is 'Endodontics – How Good Are We?' and the speaker is Dr Hal Duncan, Endodontic Consultant, Dublin Dental Hospital.

Eastern Branch meeting

Following on from the over-subscribed attendance at the clinical audit workshops at the Annual Conference in Kilkenny in April, a further workshop will take place in the Eastern Branch on Tuesday October 6 at 7.30pm in Whites Hotel, Wexford.

Communications workshops

Dental Protection, in conjunction with the IDA, will run a seminar on communication skills entitled 'Close Encounters of the Wrong Kind – Can you really say that?' in a variety of venues around the country. The seminars will broadly look at communication skills in complaints and claims, and the consent process. Dates and venues are as follows:

- Limerick – South Court Hotel, Wednesday September 23;
- Galway – Clayton Hotel, Thursday September 24;
- Kilkenny – Ormonde Hotel, Monday November 9; and,
- Dundalk – Crowne Plaza Hotel, Tuesday November 10.

Dental Protection will give presentations and will be on hand to answer any queries or questions on the night.

To book your place, please contact IDA House or log on to www.dentist.ie. Booking forms will be sent to all members.

Captain's Prize golf

The IDA Golf Society will hold its annual Captain's Prize outing on Saturday September 5 at the Carlow Golf Club. All enquiries to Ciaran Allen, 12a The Diamond, Monaghan, Tel: 047 71400, or Email: ciaranallendental@eircom.net.

STOP the ROT campaign

The IDA is launching a campaign to alert the public to An Bord Snip Nua's recommendation that the DTBS be abolished. This is a significant threat to the oral health of working people and their families and, if implemented by Government, will have serious consequences in the long term. The IDA will be asking members of the public to lobby their public representatives to make sure that this does not happen.

We are asking you to support this campaign by putting up the enclosed poster in your surgery and bringing the issues to the attention of your patients. Further measures will follow as the campaign continues.

Minister urged to publish

The IDA has written to the Minister for Health and Children, Mary Harney TD, to express serious concern about the ongoing delay in publishing the oral health policy, which has been in development within the Department for some considerable time. The letter points out that while the Association is hopeful that the policy document will contain recommendations it can actively support, many members have concerns about the possibility of changes that might adversely affect the care afforded to their patients, as well as their own employment and professional practice. The letter expressed the hope that the vacuum that is currently evident can be addressed by the imminent publication of the policy document, and asked for the Minister's assurance of and support for its early publication.

President addresses ISDH

President Mary McAleese, Patron, with the Executive Committee of the Irish Society for Disability and Oral Health. Back row (from left): Norman Campbell; Maura Cuffe; Sabina Burke; Sinead Murphy; Alison Dougall; Alastair Boles; Sarah Roux; Conac Bradley; Ruth Gray; and, Antoinette Nolan. Front row (from left): Tina Gorman, ISDH President; President Mary McAleese; and, Adrianne Dolan, President Elect, ISDH.

Members briefed on Bord Snip Nua

IDA CEO Fintan Hourihan has written to members advising a "planned and considered response" to the Report of the Special Group on Public Service Numbers and Expenditure Programmes (An Bord Snip Nua), which was published recently.

The letter points out that the report contains recommendations for change, rather than policy decisions of Government, and outlines recommendations directly affecting dental practitioners.

The Report proposes that the DTBS be abolished, that the income threshold for the medical card be raised to that of the jobseekers allowance, and that control processes governing the accuracy and probity of payments made to GPs, pharmacists and "other independent contractors" be improved.

The letter to members points out that there are undoubtedly difficult times ahead for dentists, which will require engagement with the relevant policy makers to oppose these recommendations, while being mindful of the desirability of responding with alternative ways of addressing underlying financial problems.

The letter assures members that the IDA will take advice and counsel from legal advisers, and will consult with public relations and public affairs advisers on how best to formulate a response. For the time being, it is suggested that members and the Association refrain from public comment.

PDS Seminar in Wexford

The Annual Public Dental Surgeons Seminar takes place from October 7-9 at Whites Hotel, Wexford. While the event traditionally attracts those dental professionals employed in the HSE, it is by no means exclusive to the public sector and GPs, specialists, etc., are all welcome to attend. This year's programme has a very interesting line-up of speakers, with some presentations having particular relevance to those in private practice. Dr Andrew Smith, a Glasgow-based microbiologist, will present on decontamination and your surgery design, and Dr Paddy Fleming will give an interesting perspective on the NICE guidelines and antibiotic prophylaxis. Cardiologist Dr Aidan Buckley will give a talk on resuscitation, and Dr Anne Hegarty will present on the area of oral medicine. Dr Hal Duncan, an endodontist based in the Dublin Dental Hospital, will give a presentation entitled 'Vital pulp treatment: when, where and what's appropriate'. Dr Kevin Gilmore will speak on erosion, and Dr Eamon Croke on filling the single unit space. Other speakers at the seminar will include Dr Donal McDonnell on oral radiology, Dr Dan Counihan on orthodontics, Mr John O'Connor of Omega Financial Management on dentists and their finances, Dr Debbie Lewis on dentistry for the older patient, and Dr Monty Duggal on quality paediatric dental care.

CPR workshops

CPR is a mandatory requirement for continuing dental education. All registered delegates will have the opportunity to partake in a CPR refresher course during the seminar in October. All members of the dental team are welcome.

Clinical audit workshops revisited

Following on from the very successful clinical audit workshops that took place during the Annual Conference in Kilkenny in April, further workshops have been added to the programme for this year's seminar in Wexford. Drs Andrew Bolas and Maurice Fitzgerald will once again give practical advice and support to all registered delegates FREE OF CHARGE at these workshops, so if you missed the chance to attend, now is the time to register.

Exclude PDS from freeze

Dentists are supportive of incentives being built into their contracts that would be aligned with agreed goals for the public healthcare system, according to a submission delivered by the IDA to the Department of Health and Children on 'Resource Allocation and Financing in the Health Sector'. In the wide-ranging submission, the IDA called on the Government to exclude the Public Dental Service from the HSE recruitment freeze because the work of the Service deals mainly with the priority groups of children and people with special needs. The IDA argues that years of under-investment in the Public Dental Service mean that any further freeze on recruitment to the Service would seriously undermine its ability to maintain a credible function.

Gum disease care aids arthritis

People who have both gum disease and rheumatoid arthritis can relieve both conditions by treating their mouth infection, US researchers have found. Patients who had treatments such as scaling and improved oral hygiene also saw their arthritis symptoms lessened, and gum care plus arthritis drugs was the best combination, the *Journal of Periodontology* study found. Gum disease is prevalent in people with rheumatoid arthritis – and vice versa. In both conditions, soft and hard tissues are destroyed due to inflammation caused by toxins from bacterial infection. The researchers from Case Western Reserve University School of Dental Medicine and University Hospitals of Cleveland studied 40 patients who had both moderate to severe periodontal disease and a severe form of rheumatoid arthritis.

The study's participants were divided into four groups. Two groups received anti-tumour necrosis factor (TNF) arthritis drugs. One of these groups also received standard non-surgical dental treatment to clean and remove the infection from the bones and tissues in the gum areas. The other did not. A third group was given dental treatment alone and the fourth was given nothing.

Those who were given the dental treatment saw an improvement in arthritis symptoms, such as swollen joints and pain, but those who were given both dental treatment and anti-TNF drugs saw the biggest improvement.

Professor Rob Moots from the Arthritis Research Campaign said: "This study confirms that people with rheumatoid arthritis should look after their whole body, including their gums and teeth – and not just their joints".

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Closing date for completed entries is November 1, 2009. Full competition rules and complete information on prize is available on www.sensodyne.ie

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Iris Cumainn Déadach na hÉireann

ABOVE LEFT: Bernard Doherty, Grant Thornton; IDA President Donal Blackwell; Miriam McDonald, Fresh Perceptions; and, David McCaffery, MedAccount.

ABOVE CENTRE: Dr Desmond McElroy; Dr Donal Blackwell, IDA President; and, Dr Garry Heavey.

ABOVE RIGHT: Dr Fiona Lovat-Burke and David McCaffery, MedAccount.

LEFT: A section of the well-attended meeting held in the Clarion Hotel.

Seeing the business perspective

Dentists need to start seeing their practice as a small business, and acting accordingly. That was the message from the IDA Practice Management Training Day, which took place at the Clarion Hotel, Dublin Airport, on June 12. The well-attended meeting was part of the IDA's programme of continuing professional development, and in these unprecedented economic times, the speakers had much valuable advice to offer.

IDA President Dr Donal Blackwell opened the meeting, and introduced the first speaker, Bernard Doherty, Tax Planner at Grant Thornton. Bernard offered advice on partial incorporation, and a range of accounting issues. He also offered advice on employment status as regards people working in the practice.

David McCaffrey of MedAccount spoke about how an accountant can offer the dental practitioner advice throughout the year on a range of financial issues, from critical illness cover to tax and pension planning.

John O'Connor of Omega Financial Management discussed deposits in the current climate, and what rates to expect. He also looked at mortgage affordability, income protection cover, and pension provision.

The final speaker of the morning session, Miriam McDonald of Fresh Perceptions, advised dentists on how to get the most from marketing, advocating a jargon-free approach that puts the patient's needs first, and that is planned, targeted and audited regularly.

After lunch, solicitor John O'Connor gave an overview of legal issues that can be encountered in practice, from owning and leasing property, to the myriad issues that can arise around employment law, partnership agreements, and risk management.

In a change from business-oriented topics, psychotherapist Tom Ryan looked at stress management and work–life balance, advising on how to create supportive workplaces for the whole team.

The final speaker of the day was Dr Gary Heavey, who spoke about how dentists can make life easier by improving management systems and communication. He listed a number of 'golden rules', including: separating business from personal life; using systems to make difficult tasks easier; and, building an informed and well-trained team.

Throughout the day there was enthusiastic participation from the audience, who asked a range of searching questions, and demonstrated that these are issues of great importance to dentists.

Practice Management Training Day

Following on from a very successful Practice Management Training Day in Dublin in June, the IDA is delighted to announce that the programme will take place in Cork on Friday October 16 at the Rochestown Park Hotel Airport from 10.00am-4.00pm.

This tailor-made programme will help you to unlock the full potential of your team and increase your competitiveness, productivity and profitability. Topics to be covered on the day will include:

- 'Dentists and their Finances' – John O'Connor, Omega Financial Management;
- 'Managing Your Dental Practice' – Dr Garry Heavey, practising dentist;
- 'Is Your Accountant Working for You?' – David McCaffery, MedAccount;
- 'Working Within the Law' – Bill Holohan, Holohan Solicitors;
- 'Marketing a Dental Practice' – Miriam McDonald, Marketing Consultant;
- 'Incorporation and Tax Issues' – Bernard Doherty, Grant Thornton; and,
- 'Work–Life Balance' – Dr Tony Humphreys, Clinical Psychologist.

Places are limited: for further information, please contact IDA House.

QUIZ

Submitted by Dr Rory Maguire

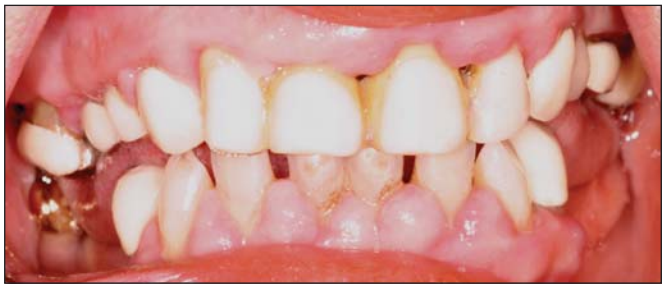

FIGURE 1: What is the condition of this patient's gingivae described as?

A 58-year-old lady presented concerned with the increased spacing of her lower teeth and an increase in the size of her gingivae. Of note in the medical history was that the patient was affected by hypertension, for which she was taking the calcium channel blocking anti-hypertensive agent Istin (in which the active agent is amilodipine besilat, a dihydropyridine).

1. What is the condition of this patient's gingivae described as?
2. Give a differential diagnosis for this condition. What is the likely diagnosis?
3. What medications are commonly associated with this condition?
4. What would your treatment be?

Answers page 203

EAPD agrees updated fluoride guidelines

Following a six-month discussion in order to achieve the highest level of consensus, the European Academy of Paediatric Dentistry (EAPD) has unanimously approved guidelines on the use of fluoride in children. The updated guidelines will appear on the Academy's website (www.eapd.gr) and will be published in the Academy's official journal, *European Archives of Paediatric Dentistry*.

The consensus reached was that fluoride levels in toothpastes targeted at children aged between six months and two years should have a concentration of 500ppm fluoride. For children aged two to six years, the level should be 1,000+ppm, and for those aged over six years it should be 1,450ppm. Dental professionals should also ensure that they recommend that children under six years should only use a pea-sized amount and that for those aged over six years, an application no larger than 1-2cm should be used.

Share a smile with a child in Belarus

Colgate and the Irish Dental Association have teamed up again this year to bring you Colgate Oral Health Month, which is aimed at promoting awareness of the benefits of good oral health throughout the month of September. This year you can help 'Share a Smile' with the children of Belarus affected by the Chernobyl nuclear disaster, by supporting Chernobyl Dental Aid Ireland in your surgery.

Since 1999, Irish dentists have travelled to Belarus to provide children with free dental care, under the auspices of Chernobyl Aid Ireland. Looking forward, Chernobyl Dental Aid Ireland, supported by Colgate and the IDA, wants to provide general dentistry to as many children as possible. You can help by putting the charity collection box in your surgery, where in return for €1 your patients can take home their very own pocket-sized 25ml Colgate Total toothpaste, which is approved by the IDA.

Commenting on the association with Colgate Oral Health Month, Dr Johnny Fearon of Chernobyl Dental Aid Ireland said: "We are delighted that Colgate and the Irish Dental Association have chosen to team up with Chernobyl Dental Aid Ireland for Colgate Oral Health Month 2009. Colgate and the IDA working together on this initiative will allow us to reach out to more children living in poverty and suffering from poor health as a result of the Chernobyl nuclear disaster".

Composite and glass ionomer combined

According to the German company, Voco, Ionolux is a light-curing glass ionomer restorative that offers the advantages of composite and glass ionomer in one product. It is available in natural shades and is characterised by a long working time, which can be individually controlled with the use of a polymerisation lamp. Ionolux permits quick application, has excellent modelling properties, does not stick to the instrument and allows outstanding adaptation to the cavity walls. The polymerisation time of 20 seconds per layer is short and practice-oriented. Ionolux is simple to finish, biocompatible and it releases fluorides. The combined advantages of GIC and composite are simple to use with Ionolux: fill, polymerise, polish, finished.

Ionolux application capsules.

Natural aesthetics

According to Dentsply Friadent, the confidence of sustained healthy margins provided by Ankylos dental implants offers clinical benefits for patients and commercial advantages for practitioners. The system's proven potential to help dentists recreate natural gingival aesthetics and renew normal masticatory function is complemented by the unique choice of indexed or non-indexed abutments in Ankylos C/X. The lasting natural aesthetics and long-term stability of Ankylos-supported restorations result from the unique TissueCare Connection. The exact fitting conical junction between the implant and the abutment ensures preservation of the surrounding hard and soft tissues.

According to Dentsply Friadent, Ankylos C/X dental implants offer clinical benefits for patients and commercial advantages for practitioners.

Belmont on display

According to Morris Dental, it will be taking advantage of the upcoming Identex exhibition to showcase a range of Belmont equipment, enabling the dentist to 'try before you buy'. As sole distributor for Belmont in the Republic of Ireland, the company says it is able to offer the dentist a wealth of knowledge based on a long working relationship with the manufacturer.

The Voyager will cater for those looking for reliability on a budget, the Clesta II offers a wide variety of options within the range, and the Cleo boasts a unique folding leg rest, making patient interaction easy while saving vital space within the surgery. Whatever your preference, Belmont equipment boasts reliability, ease of use and durability.

2009 is a year of celebration for Takara Belmont, as the company celebrates the golden jubilee of its first UK business. Morris Dental, not so far behind, has been in business for 41 years. Together they offer robust, advanced equipment combined with honest, reliable service.

AIDI has success on VAT issue

During the year, members of the Association of the Irish Dental Industry (AIDI) became aware that certain companies were supplying dental products into Ireland at UK VAT rates. On the basis that this was unfair competition, the Revenue Commissioners were advised of the practice. It is understood that the Revenue acted firmly and relatively quickly to ensure that the practice was stopped. (The rules state that any company selling more than €75,000 worth of goods must register for Irish VAT. Dentists who receive goods without VAT or at the wrong rate are technically liable as they are required to correctly self-declare all VAT.)

This was reported at the recent Annual General Meeting of the AIDI, in Newcastle, Co. Down, where Pat O'Brien of DMI was elected President of the Association. Pat succeeded Tony Anderson of Henry Schein who has suffered ill health in recent times but who was present and in good form.

Planning for IDENTEX 09 is well advanced. All stands are filled and the exhibition takes place at the D4 Hotel in Ballsbridge, Dublin (formerly Jury's Hotel) on Friday 18 and Saturday 19 September. Dr Billy Davis will speak at a seminar at IDENTEX on the Saturday.

AIDI is affiliated to the Association of Dental Dealers in Europe (ADDE) and Pat O'Brien attended the ADDE AGM in Italy in April. At the AGM, the ADDE's annual survey of the dental trade in Europe was presented. Key findings were:

- an increase in the number of dentists but a reduction in the number of dental practices. (This is attributed to the number of female dentists sharing workloads); and,
- the number of dental labs is falling in Europe. (This is attributed to new technology allowing in-surgery solutions and competition from the Far East.)

Pat O'Brien, winner of the AIDI Cup, which was sponsored by Think Media, publishers of the Journal of the Irish Dental Association, *receives the trophy from outgoing AIDI President, Tony Anderson.*

CED independence likely by end of 2009

Honorary CED Treasurer TOM FEENEY sums up the latest developments in Europe.

Drs Tom Feeney; Barney Murphy; and, Anthony Kravitz.

Meeting clears the way for CED independence

Much of the recent CED general meeting in Prague was taken up with the question of CED independence. Since its establishment, the CED and previously its predecessor, the EU Dental Liaison Committee, has shared office space with the German Dental Chamber (BZÄK). BZÄK has also provided staff for CED activities.

After a long debate, CED members voted overwhelmingly for independence and mandated the independence task force to proceed with the necessary steps to achieve this historic change. It was agreed that:

- the CED should establish an independent office in Brussels;
- the task force should prepare as a matter of urgency a detailed timetable and steps necessary for transition, aiming at completion of the transition period by the end of 2009;
- the task force should be mandated to consult with BZÄK on transition issues, where appropriate; and,
- the task force should be mandated to meet with BZÄK representatives with a view to establishing how procedures for long-term co-operation on matters of mutual interest could be put in place.

Since the meeting, the task force has gone about its work with vigour and hopes to have its own office and staff in place within a few months.

GM adopts three new resolutions

At the Prague meeting a number of resolutions were adopted unanimously as follows:

1. Competences required for the practice of dentistry in the European Union.
2. Infection control code.
3. CED response to the economic crisis.

Competences required for the practice of dentistry in the European Union

From the point of view of the practising profession, the CED decided to develop its own document on the competences required to practise dentistry in the EU.

In its introduction, the resolution states that the dentist is the primary oral healthcare provider, and upon graduation must be competent to practice evidence-based comprehensive dentistry unsupervised, independently and collaboratively (including referral) on adults, children and medically, physically and mentally compromised patients in the context of holistic patient care, supported by allied dental professionals, and other healthcare providers, with the ultimate goal of improving the oral health of the public in a socially responsible and culturally competent manner.

Directive 2005/36 lays down the minimum training requirements for dentistry, which is confirmed as a specific profession in its own right requiring at least five years of full-time theoretical and practical training at a university or an equivalent dental school. The training imparts the necessary skills and knowledge to the dentist so that he or

Dr Robin Foyle and Mr Fintan Hourihan.

she has the relevant competences for the practice of preventive measures and for the diagnosis and treatment of diseases of the teeth, mouth, jaw, and their tissues.

In the context of this document, the term "clinical competence" is applied to a combination of skills, attitudes, ethical standards and knowledge that provide the clinician with sufficient competence to undertake a specific clinical task. The acquisition of clinical competence may be achieved through a diversity of educational and training programmes. These may be assessed and examined in different ways throughout the European Union.

The clinical competences listed in this document should be the minimum competences required throughout Europe for the safe practice of dentistry. They do not cover the full range of competences required of a modern dentist and should not limit the further expansion of dental education and training, nor should they be used or interpreted to promote specialisation in dentistry. These competences represent a common minimum denominator. Without these basic competences a person could not safely carry out the practice of dentistry.

Infection control code (CED resolution on decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures)

After much discussion, the CED decided that, because of differences in each country, it was impossible to produce a comprehensive list of recommendations, but instead decided to produce CED-agreed voluntary recommendations for the basic procedures necessary to maintain a safe environment for both dental staff and patients.

In the preamble to the recommendations, the resolution states that decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures are important and essential elements of modern dental care. The guidelines for decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures are not constant – they develop and change according to evidence-based scientific findings.

The dentist has overall responsibility over the dental team and is responsible for the professional activities of less-qualified team members. The supervision of a fully qualified dentist is essential. The dentist is obliged to apply recent research information on decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures as part of continuous professional development. Decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures are extremely important for patient safety and the safety of the dental team as well. They must be provided effectively in terms of the costs involved. It is necessary to respect and accept national regulations at the level of EU Member States.

In this context, it is always important to remember that decontamination, cleaning, disinfection, sterilisation, waste management and a wide range of hygienic procedures are fields of commercial interest for many providers and producers.

Economic crisis and European oral health

In its resolution on the economic crisis, the CED noted the unprecedented scope of the current global economic crisis and called on European governments and other actors to prevent and mitigate the negative impact of the crisis on European oral health.

The CED is concerned that the economic crisis and decreasing public budgets could affect health spending and investment in health infrastructure in Europe, reducing availability and quality of care for European citizens now and in the future. Socially and economically more vulnerable groups are likely to suffer more, increasing health inequalities.

The oral and dental health of Europeans is particularly susceptible to economic factors. In most European countries, dental care for the general population is financed from private sources to a greater extent than other kinds of healthcare. As the disposable incomes of European citizens shrink, their ability to pay for healthcare, including dental care will decrease, even if national dental associations are giving volunteer support to economically weaker citizens. The viability of dental practices, particularly in geographically remote and less affluent regions, will be threatened, further reducing the availability of dental care. This could have serious consequences for the oral and overall health of our populations.

The CED stresses the importance of healthy populations and the healthcare sector for the European economy. Healthy workers are necessary for a productive and efficient workforce. Healthcare is a source of jobs for often highly qualified employees and currently accounts for 10% of EU GDP. In addition, healthcare promotes scientific research and technological development, contributing directly to the fulfillment of Lisbon Strategy objectives.

The CED calls on European governments to sustain adequate public funding for the provision of healthcare and for health infrastructure and programmes, including screening, health promotion and disease prevention. Oral health is an integral part of general health and should be fully included in these initiatives. Investments in health are crucial and will contribute to a faster post-crisis recovery, sustainable economic growth and healthy European citizens.

CED granted liaison status in CEN

The CED has been granted liaison status with CEN/TC 55 "Dentistry" by Resolution C 001/2009. The CED requested liaison status with CEN in March 2009, i.e., participation at plenary meetings and in working groups, but with no voting rights and no fees.

CEN's mission is to promote voluntary technical harmonisation in Europe in conjunction with worldwide bodies and its European partners. It is the platform for the development of European Standards and other technical specifications. It has members from 30 European countries (EU and EEA).

CED external relations

The list of international bodies relevant to the CED is as follows:

- ADEE: Association of Dental Education in Europe
- CECDO: Council of European Chief Dental Officers
- CEN: European Committee for Standardisation
- CODE: Dental Regulators in Europe
- CPME: Permanent Committee of European Doctors
- EDSA: European Dental Students' Association
- EPF: European Patients' Forum
- FDI: World Dental Federation
- WHO: World Health Organisation

ADEE (Association of Dental Education in Europe):

- founded in 1975 to represent academic dentistry and dental educators. Secretariat in Dublin – activities in Brussels;
- members: dental schools, specialist societies and national associations concerned with dental education;
- goals: focus on dental education; and,
- CED links: participation at ADEE Annual Meeting in 2008 and 2009.

CEDCO (Council of European Chief Dental Officers):

- founded in 1992 to exchange views on dental matters affecting Europe, offer advice to governments and to the Commission, and facilitate improvements in the range and quality of dental care;
- members are CDOs (Chef Dental Officers): senior officials who act as government advisers on dentistry; and,
- CED links: no formal links planned.

CODE (Dental Regulators in Europe):

- founded in 2004 to promote patient safety and high standards of dental care, contribute to safe professional mobility and to exchange dental regulatory information;
- members: 14 national bodies of dental regulators; and,
- CED links: GM discussion in November 2008 – no decision taken.

CPME (Permanent Committee of European Doctors):

- the Standing Committee of European Doctors (CPME) represents all medical doctors in the EU and promotes high standards of medical training and practice in order to achieve the highest quality of healthcare for all citizens of Europe;
- members: 30 countries (EA and EEA); and,
- CED links: meeting of Presidents, CED-CPME Roundtable in September 2008.

EDSA (European Dental Students' Association):

- founded in 1988 and represents 65,000 dental students from 21 countries;
- promotes students' activities and establishes close relations with professional and academic authorities (links to ADEE); and,
- CED links: EDSA interest in becoming affiliate members.

EPF (European Patients' Forum):

- founded in 2003 to become the collective patients' voice at EU level. EPF's vision is high quality, patient-centred, equitable healthcare for all patients throughout the European Union;
- members: 37 patients' organisations – chronic disease-specific patient organisations operating at EU level and national coalitions of patients' organisations; and,
- CED links: plans for a co-operation agreement in 2009.

The CED's immediate plans are to continue co-operation arrangements and to develop new ones with organisations such as EFP and CEN, through working level links in Brussels. The long-term plans for external co-operation will always take account of CED interests and resources.

Irish dentists honoured

The International College of Dentists (ICD) is a worldwide honorary organisation of dentists who have, by their actions, demonstrated an abiding concern for their profession and their patients. Being recognised and proposed as a Fellow of this organisation signifies that a dentist has brought honour to the profession through devoted service and high ethical behaviour.

The three Irish inductees this year were Dr John Tiernan, Assistant Dental Director of Dental Protection, Dr Claudette Christie, National Director of the BDA in Northern Ireland, and Dr Martin Holohan, Chairman of the Dental Council. Each has given a huge amount to dentistry and to the profession over many years and is very deserving of the honour.

Dr Tom Feeney with new Irish inductees Dr John Tiernan, Dr Claudette Christie and Dr Martin Holohan.

Final afternoon in the clinic where James, Ger, non-dental volunteer Noreen Lucey and Niamh relax with the children they have treated.

Busman's holiday

Three TCD graduates have been using their trip around South America to provide some vital dental care.

South America, while famed for its beautiful scenery and colourful people, is not necessarily a shining example in the field of oral health. Although there is no shortage of smiles from any number of jovial local characters, these smiles often lack essential elements … teeth!

Standards of oral health vary widely in Ecuador, affected mainly by lack of education, poor diet, and limited access to primary care. With this in mind we decided to put down our backpacks and offer our time and skills to some non-profit organisations in Quito. CENIT (Centro de la Niña Trabajadora) is an organisation founded in 1991 to assist families in the poorer southern suburbs of Quito. Many children in these families are expected to work from an early age and receive little formal education. CENIT aims to improve their quality of life through education and job training, nutritional programmes, and health and social services. On a dental level, CENIT promotes simple oral hygiene and has a reasonably well-equipped clinic at their disposal. However, for the past two years they have had no dental personnel to run this clinic.

Our work started with rudimentary examinations of the children. It quickly became clear that most children were in need of some treatment and some were suffering from acute pain. We decided to unearth the dormant clinic and dust down the equipment, and after adventures with blown fuses, near electrocutions and compressor explosions, we eventually opened a bright little clinic. Our main focus was on oral health promotion, dietary advice, distributing toothbrushes, and demonstrating proper oral hygiene techniques. Hands-on treatments included fillings, extractions, protective sealants and fluoride applications. The children proved to be co-operative and plucky, and seemed to require less mollycoddling than their Irish counterparts.

Given the equipment available in the re-opened clinic, and the children's need for treatment, it is with reluctance that we move on from Quito.

We are hoping that by highlighting the work we have done we may find other dental professionals willing to volunteer their time and skills to this worthy cause. While knowledge of Spanish would be an obvious advantage, a translator could easily be organised by the foundation.

For further information please contact volunteer-office@cenitecuador.org or niamhmurtagh@gmail.com.

Niamh Murtagh, Gerard Cuddy and James Morgan are three TCD graduates from Dublin who have been travelling in South America since last year. They worked for four weeks in Quito and are currently travelling in Colombia.

Have you seen this chair?

St Francis Naggalama is a rural, private, not-for-profit hospital in Uganda, offering a variety of medical, surgical and dental services to a deprived population of 200,000 people. The hospital is severely limited by a lack of finances and medical equipment, including a dental chair and accessories. Recently, we received two dental chairs (Chayes Virginia and Electro Mini CAM Bologna), which were kindly donated, but unfortunately they both have mechanical problems and are unusable. St Francis Naggalama Hospital is the only institution providing dental services to this community.

It is the hope that someone may recognise this equipment and identify an organisation that may be able to assist us in obtaining these vital components. Alternatively, if there is a dental organisation that someone may be aware of, which operates in Africa and may be able to assist us in obtaining this crucially important equipment, we would be eternally grateful. The hospital can be contacted regarding this issue through the hospital administrator, Charles Nkusi, Tel: +256 392702709, Email: nagga@ucmb.co.ug, or through the Medical Superintendent, Kenneth Kigoonya, Tel: +256 772619380.

Promoting Oral Heath

Colgate Oral Health Month in partnership with the Irish Dental Association promotes awareness of the benefits of good oral health throughout the month of September.

The general public are becoming more and more aware of the long-term benefits of good oral hygiene and Colgate Oral Health Month only serves to reinforce this message.

Building on previous years' successes with both the Nationwide Roadshows and dental surgery blitz teams, this year Colgate and the IDA have teamed up with Chernobyl Dental Aid Ireland to help raise funds for the children of Belarus affected by the Chernobyl nuclear disaster. The aim of the initiative is to provide general dentistry to as many children as possible in some of the country's 100 orphanages.

I would encourage all our members to actively support this meaningful activity.

Donal Blackwell
President, Irish Dental Association.

Dental Profession Support Activities

As part of Colgate and the Irish Dental Association's continued support for dental professionals, together we have implemented various initiatives involving the dental profession this September to ensure that we are all 'Working towards better oral health in Ireland'.

Aoife Moran, Professional Relations Manager

During Colgate Oral Health Month, Colgate endeavours to increase its support to the dental profession. 2008 saw a substantial increase in interest from the profession, with a staggering 70% registering with us. A further 200 dentists are getting involved this year, in activities that will include:

- Our Blitz Teams, comprised of dental students from Dublin and Cork, will be calling to dental surgeries throughout the country. They will distribute our special surgery packs, dress the surgery with bunting and posters, and distribute samples to the profession;
- We will be sending Colgate Oral Health Month packs to all who have registered with us. These packs include:
  - product samples for distribution to patients;
  - patient information leaflets;
  - surgery posters.
- With members of the IDA as spokespeople, we will be running various public relations activities, including national radio slots and print media. This is with the view to increasing public awareness on the importance of good oral health.

Colgate has developed a Professional Relations Team headed by Aoife Moran. Colgate recognises the importance of working with and supporting the dental profession in the continuing pursuit of better oral health for Ireland.

Colgate activities include:

- visiting as many professionals as possible to keep them informed of our product development;
- developing and distributing clinical product evidence for the dental profession;
- supplying patient information leaflets to surgeries throughout the country;
- provision of both personal and patient product samples of key products;
- development of strong academic relations within the dental hospitals; and,
- continued support of key Irish Dental Association activities.

For more information please contact: Aoife at aoife_moran@colpal.com or mobile: 087 268 7591
Colgate Palmolive Ireland Ltd, Unit 3054 Citywest Business Campus, Naas Road, Dublin 24. Tel: 01-403 9800
www.colgate.ie

Consumer campaign

To complement Colgate Oral Health Month activities with dentists and the Irish Dental Association, Colgate is also undertaking a comprehensive consumer promotion campaign.

To support the activities with the profession, Colgate is running a high profile consumer campaign featuring TV, Radio, press advertising, and a huge PR campaign across a variety of media.

TV, Radio and National Press
Running throughout September, a major advertising and promotions campaign will incorporate TV and radio. In addition to this an extensive national public relations campaign will be running designed to deliver a series of oral care-related stories across a variety of media. Targeted to assist in building awareness of the campaign and the need for improved oral health care. In addition to this we will also be running numerous regional and national consumer competitions.

www.colgate.ie
During September, anyone logging on to **www.colgate.ie** will be able to view all the details regarding the Colgate Oral Health Month campaign; Roadshow listings, product information, oral care information leaflets, interactive tools and further information on the partnership with the Irish Dental Association.

Oral Care Nationwide Roadshow
Throughout the month of September, Colgate's Oral Care Roadshow will visit at least 12 major locations, encouraging the public to "Share a Smile". The Roadshow will feature a dental zone which will have a professional dental hygienist and nurse offering free dental advice, with free product samples and information leaflets. The Share a Smile zone will have lots of fun things for kids, including photos, stickers and goodie bags to take away.

Charity drive

This year, your dental surgery can help 'Share a Smile' with the children of Belarus affected by the Chernobyl nuclear disaster, by supporting Chernobyl Dental Aid Ireland during Oral Health Month.

Since 1999, Irish dentists have traveled to Belarus to provide children with free dental care, under the wing of Chernobyl Aid Ireland. Looking forward, Chernobyl Dental Aid Ireland supported by Colgate and the IDA wants to provide general dentistry to as many children as possible in some of Belarus' 100 orphanages. The aim of Colgate Oral Health Month 2009 is to raise €6,000, which will build a brand new dental surgery in the country.

Commenting on the association with Colgate Oral Health Month, Dr Johnny Fearon of Chernobyl Dental Aid Ireland said,

'We are delighted that Colgate and the Irish Dental Association have chosen to team up with Chernobyl Dental Aid Ireland for Colgate Oral Health Month 2009. Colgate, working together with the IDA, will place a charity collection box in your local dental surgery, where your donation will allow us to reach out to more children living in poverty and suffering from poor health as a result of the Chernobyl Nuclear disaster.'

You can become involved by keeping a charity collection box in your surgery. Patients who donate €1 or more will receive a pocket size Colgate Total toothpaste. The toothpaste will be provided free by Colgate, which means all donations will go directly to the charity. In addition you will also receive leaflets and posters to support the campaign. At the end of the month all you have to do is deposit the funds raised in the Chernobyl Dental Aid Ireland bank account, full account details are provided on the back of the collection box.

Show your support for promoting good oral health in this country and Belarus by helping raise money for this fantastic charity!

For more information on this activity please contact:

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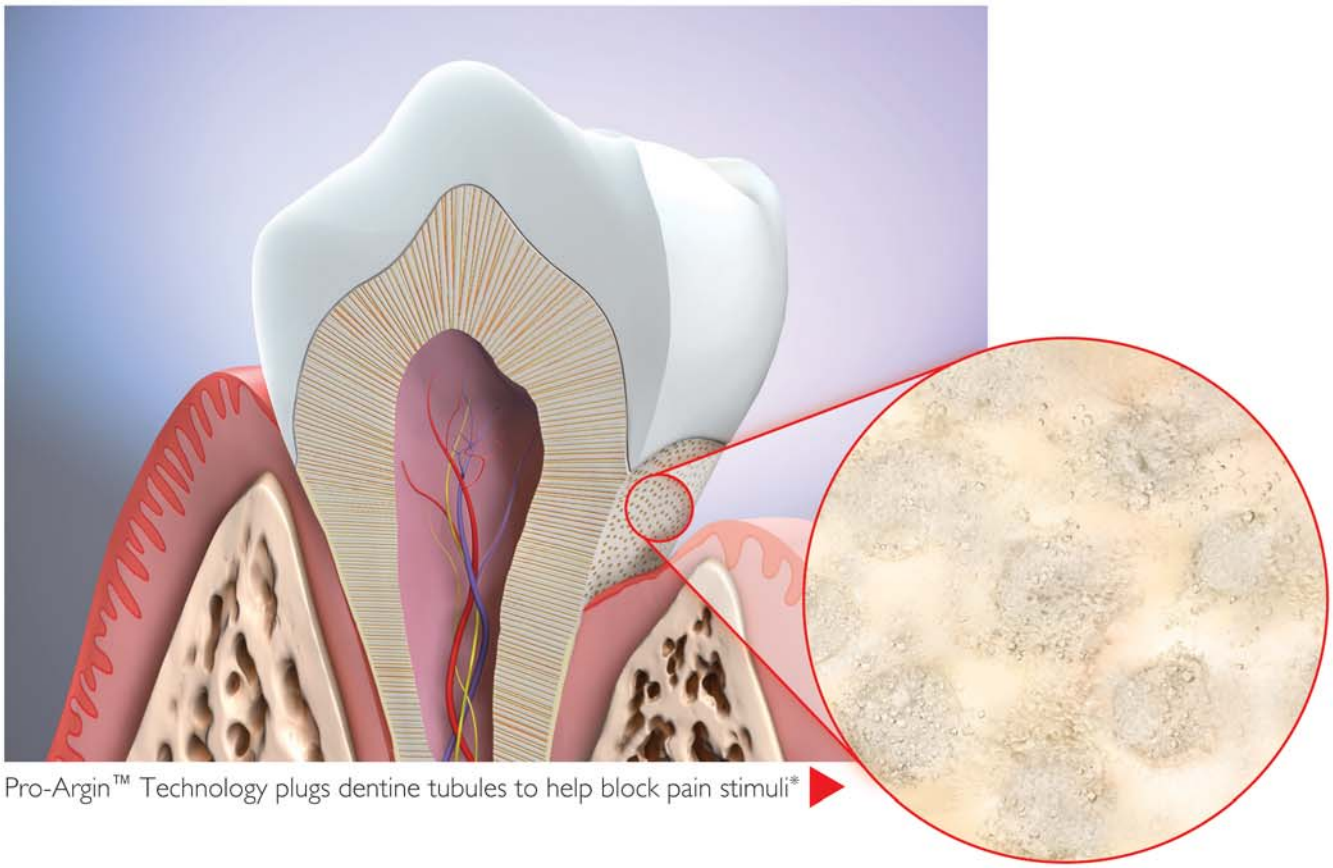
Email: aoife_moran@colpal.com
Mobile: 087 268 7591

Introducing Pro-Argin™ Technology – a breakthrough in dentine hypersensitivity relief



Pro-Argin™ Technology plugs dentine tubules to help block pain stimuli*

Colgate offers a safe and effective new in surgery treatment for dentine hypersensitivity patients with innovative Pro-Argin™ Technology

- Based on a natural process of tubule occlusion with the key components arginine and calcium carbonate
- Immediate and lasting relief with one application
- Clinically proven relief that lasts for 28 days
- Dentine hypersensitivity treatment and gentle polishing in one step

***NEW!* Colgate® Sensitive Pro-Relief™ Desensitising Polishing Paste with Pro-Argin™ Technology**

For further information please call Colgate on 01 403 9800.

Colgate *YOUR PARTNER IN ORAL HEALTH*

* Graphical representation based on SEM photography; for illustration only

www.colgate.ie

Snapshot of dentists' attitudes

The Association recently commissioned research on the state of dentistry in the Republic of Ireland. The Journal reports the main findings which provide a vivid picture of the mindset of Irish dentists.

Recently commissioned research on the views and attitudes of dentists to the Association, its activities, and on various issues relating to dentistry, has been made available to the Journal. Among the main findings were a high level of support for the Association in its negotiations with Government, and widespread dissatisfaction with the operation of the DTSS scheme. This latter finding provides concrete evidence for anecdotal reports, and an explanation for the continuing high level of withdrawal by general dental practitioners from the scheme.

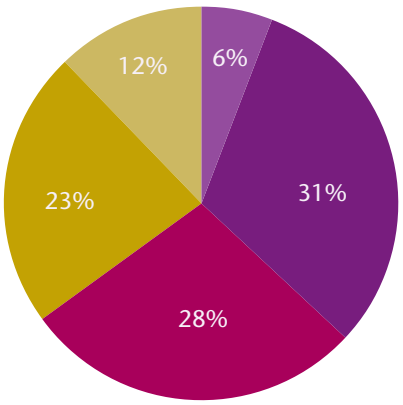
Who answered?

The research had a high level of response with 440 dentists (64% of whom were male, 36% female) responding, 85% of whom are members of the Association.

Usage and participation

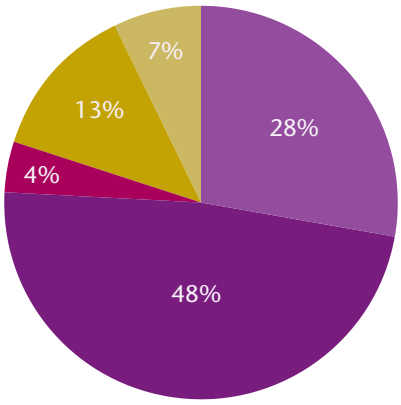
In the section on usage and participation by dentists in the Association, *The Journal of the Irish Dental Association*, branch meetings, the *IDA Update* newsletter, and continuing professional

Age



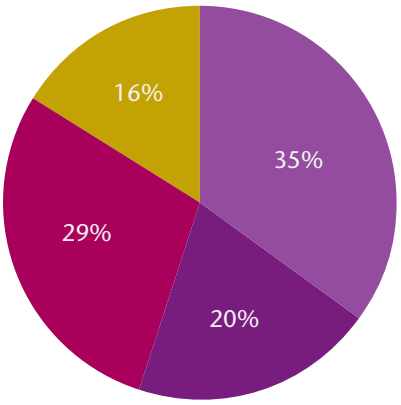
- Under 30
- 30-39
- 40-49
- 50-59
- 60+

Practice type



- Single handed practice
- Group practice
- HSE single clinic
- HSE multiple clinic
- Others

Region



- Dublin
- Rest Leinster
- Munster
- Conn/Ulster

development (CPD) activities of the Association all scored highly (in excess of 65%) in usage ratings. Two-thirds of dentists have used the CPD service from the IDA (this rises to three-quarters of female dentists).

Satisfaction with various IDA services is also generally high, scoring from an average 4.09 (on a scale of 1 to 5) for CPD, to 3.61 for financial benefits. Only 26% felt that the IDA should provide extra services and, of those, the highest single number was 13% who felt that the IDA should provide additional CPD services. Only 13% of all respondents were prepared to pay an increased subscription for additional services.

CPD has a high level of relevance with 90% of respondents stating they took part in CPD activities at least once a year. A full third took part in CPD activity on a monthly basis.

Satisfaction with IDA

In relation to satisfaction with the Association, 70% of dentists say the service provided by staff at IDA House is good, while 73% said they are very or fairly satisified overall with IDA. 83% of dentists ranked IDA's ability to meet future challenges as excellent, very or fairly good; and 78% were prepared to recommend IDA membership to colleagues. 78% also considered IDA services either very, or fairly well suited to their needs.

56% did not know if the IDA's decision making process is efficient, while only 46% considered the IDA good value for money.

Dental activity

78% of the dentists that replied were full-time in dentistry. Of those that were part-time dentists, 58% were female. 49% of dentists spent up to 10% of their time on non-clinical or administrative activities and a further 31% spent up to 20% of their time on this work.

Morale

Current morale levels among dentists generally were described by respondents as fairly or very high (50%), with a further 33% describing their morale as average. However, morale was significantly lower among public dentists and among those in the 40-49 age group. When compared with morale levels of five years ago, the overall response was that 25% said morale had improved, 29% said it was unchanged and 38% said it had declined. However, the decline in morale was much more evident in the mid and older age range and among public dentists.

Work changes

56% of public dentists and 43% of private dentists stated that the intensity of their workload had increased over the past three years and almost exactly half of dentists in both sectors felt the complexity of their consultations had stayed the same over the last three years.

However, 48% of private sector dentists and 38% of public sector dentists felt that the level of complexity had increased. Of those, 29% felt this was due to greater patient awareness and higher patient expectations, while 22% felt it was due to more demanding patients or more difficult cases.

New GP contracts

With dissatisfaction high among GDPs with the DTSS scheme, and elements of the DTBS scheme that could be improved, flexibility proved to be the most desirable aspect of any new contract. 70% of general practitioners strongly agreed, and a further 20% slightly agreed, that flexibility for participating dentists is an important principle in a new contract. Flexibility was followed by the need to provide equity of access which had 60% strongly, and 22% slightly, in agreement. A clear majority of general practitioners are against the idea of a single unified contract.

Grant-in-aid emerged as the preferred payment system for State-sponsored dental schemes (preferred by 53%), with fees per item being the preferred option of 35%.

Improvements and satisfaction

There was little agreement on which single improvement would make the greatest positive difference to a dentist's working life. 7% said less paperwork, while 6% each said more CPD, or state funding for dentistry, although there were marked differences in the answers between public and private sector dentists. For example 8% of private dentists wanted less paperwork while 10% of public dentists wanted further training or CPD.

Unsurprisingly, in the answers to the question on what is the least satisfying aspect of their practice, administration/paperwork was ranked as the single highest irritant by 15% of dentists, followed by awkward or difficult patients (9%).

The benefits of dealing directly with patients were clearly the most satisfying aspects of dentisty: 19% of dentists cited happy/satisfied patients as the most satisfying aspect while 12% cited treating or helping patients. 7% nominated 'pain relief' and 4% cited 'helping people get rid of fear/nerves'.

Support for IDA

86% of dentists would strongly support the IDA in negotiating with Government, with a further 4% slightly supporting. Only 1% would oppose (slightly) the IDA.

Details of the survey

This national survey of dentists was conducted on behalf of the Irish Dental Association by Behaviour & Attitudes. The research took the form of a postal 'census' survey with the questionnaire being mailed to dentists throughout Ireland at the beginning of April 2009. Postal returns continued into May 2009 and resulted in a total of 440 responses.

Behaviour & Attitudes is a member of the European Society of Opinion and Market Research (ESOMAR), Association of Irish Market Research Organisations (AIMRO), and the Market Research Society (UK) and abides by the strict technical and ethical standards set down by these bodies.

A changing profession

Association Chief Executive, FINTAN HOURIHAN, comments on the findings and says that they will form the background to the formulation of a new three-year strategy for the organisation.

Overall, we were gratified by the significant response to the survey and thank all those who took trouble to return completed forms. Our research agency, Behaviour & Attitudes, is pleased that the sample is representative of the cohort of Irish dentistry generally. We now propose to have regular membership surveys carried out.

A vivid picture

The findings paint a vivid picture of a changing profession which is set to have a majority of females in the very near future. Practice types are changing also and there are many other significant findings which will require a considered and comprehensive response on the part of the Association.

Overall, dentists use and are satisfied with the services offered by the Association and it is particularly gratifying that the highest satisfaction and usage rates correlate strongly with the services identified as most important by members. The findings in regard to CPD serve as remarkable testimony to the commitment of dentists to their profession in spite of receiving absolutely no support from the State.

Satisfaction with the Association is positive but in an era of rapid change we recognise we need to keep moving to maintain these levels of satisfaction. We expect to roll out a number of new benefits and initiatives for members in the coming months. The fact that four out of five Irish dentists would recommend membership of the Association is heartening.

The findings in regard to the DTSS and DTBS contracts for general practitioners are also revealing and render impossible any notion on the part of the State for the introduction of a single contract for medical card and PRSI services. The fact that we have near universal support for the Association having a central role to play in discussing State contracts is also highly significant and should prove once and for all that change can only be introduced in partnership with, and with the agreement of, the IDA.

Real anxiety about public dental service

The survey does show some significant grounds for concern in relation to the public dental service. There are very real anxieties apparent among public dental surgeons about the starvation of staffing and other resources. There is also concern about the absence of any real policy direction for oral health. There is a pressing need for a clinical leader to be appointed within the HSE and a chief dental officer to be appointed within the Department of Health and Children.

Meeting changing needs

There are many other findings which we need to consider carefully in the coming months in formulating a new three-year strategy for the Association. As ever, we are always keen to receive feedback from members in building a picture of the challenges facing the profession and planning to meet the changing needs of our members.

Dental tourism

The next edition of the Journal of the Irish Dental Association **will carry details of the research findings in relation to treatment afforded to patients who had gone abroad for dental treatment and had to be seen by Irish dentists for remedial work.**

NEWS FEATURE

Dental nursing across Ireland

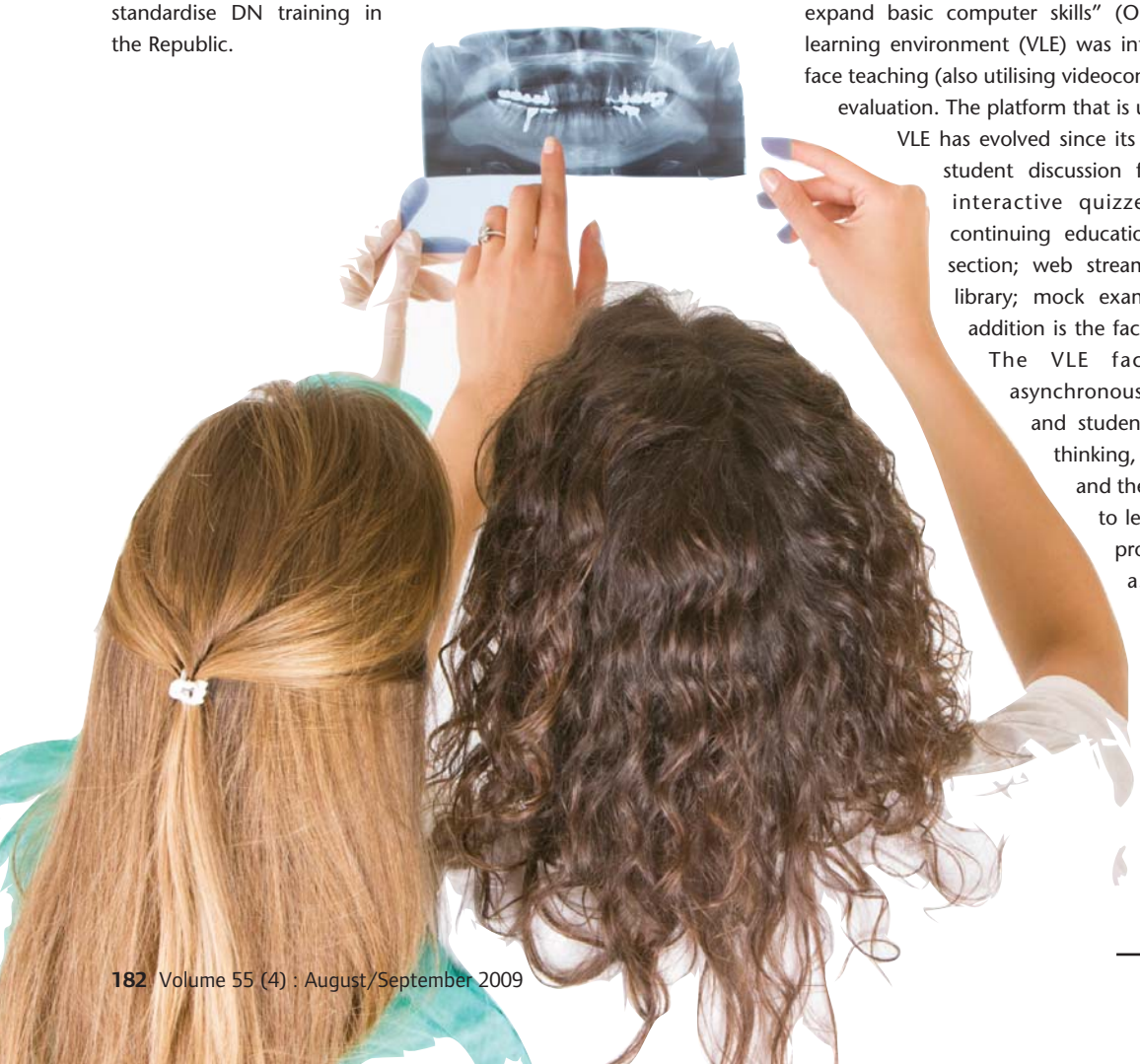
CARMEN SHERIDAN provides an introduction to the National Dental Nurse Training Programme of Ireland.

"How can healthcare educators lead nursing students into this century using old, enmeshed and outdated approaches, to acquire knowledge that may or may not be relevant to them in the future?" **Krenz, 2002**

The impending implementation of a statutory register for dental nurses (DNs) in the Republic of Ireland has created a demand for flexible educational training for DNs. The main barriers for this group of students are geographical distances and time constraints due to their personal and work commitments. "It is clear if we are to succeed in effectively preparing student nurses for professional practice we must keep pace with ongoing developments in technology, research and practice, and we must revise our curriculum and pedagogy accordingly" (Cannon *et al*, 2004).

A national programme

The two training centres in the Republic of Ireland for DNs are the Dublin Dental School and Hospital and the Cork University Dental School and Hospital. The two schools have joined in an initiative to create a national programme that will meet training demands and standardise DN training in the Republic.



In 2004 the National Dental Nurse Training Programme of Ireland (NDNTP) commenced, with study centres in Dublin, Cork and Galway. This increased to five study centres in 2009 (Dublin, Galway, Cork, Waterford and Limerick). This programme depends on the support and expertise of dental practitioners to complete a logbook, verifying competency of practical skills. Didactic teaching methods are supported by various technologies to provide a flexible, collaborative learning environment. Students who successfully complete all required components will be awarded a diploma in dental nursing from Trinity College or Cork University Dental School and Hospital (depending on which centre the students are registered with). This award satisfies the requirements for entry onto the current voluntary register for DNs with the Dental Council.

Moving with the times

The NDNTP is modular in design; it consists of three terms, each with three modules. The programme is 18 months in duration and takes place one evening per week, and assessment is continuous. "More than ever, nursing education programmes need to introduce or expand basic computer skills" (O'Neill, 2003). In 2005 a virtual learning environment (VLE) was introduced to support the face-to-face teaching (also utilising videoconferencing) resulting from student evaluation. The platform that is utilised for the VLE is Moodle. The VLE has evolved since its introduction in 2005 to include: student discussion forums; course feedback forms; interactive quizzes; course documents; links; continuing education information; an employment section; web streaming; mobile learning; a virtual library; mock examinations; and, its most recent addition is the facility to offer online examinations. The VLE facilitates anytime anywhere asynchronous interactions (student–student and student–teacher), promotion of critical thinking, self-directed learning, flexibility, and the removal of geographical barriers to learning. The online portion of the programme uses synchronous and asynchronous communication methods to collaborate online, as well as being provided with multimedia programmes that use immediate feedback to allow the learners to study and review materials. Aside from the student area on the website, we have created an alumni area, practitioner's area and a staff area.

NDNTP graduate class 2008-2009. BACK ROW (from left): Helen Phipps, Dental Nurse Tutor; Carmen Sheridan, Dental Nurse Tutor; Anne Rooney; Sandra Barr; Valerie Hickey; Genevieve Morrisey; Sharon Weldon; Deirdre Cairns; Rachel Byrne; Yvonne Sokanska; Lisa Kavanagh; Catherine O'Donovan; Anna Marie Kelly; Sharon Conway; Lisa Kineavy; Aisling Dixon; and, Debbie Mullen.

MIDDLE ROWS (from left): Madonna Bell, Evening Course Co-ordinator – Dublin; Magdalena Skobejko; Mariola Stepaniuk; Sylwia Hensoldt-Zakrzewska; Ciara Connolly; Lorna Fields; Rebecca Campean; Sharon Byrne; Aisling Hynes; Gemma Tansey; Caron Keogh; Elaine McNally; Denise Traynor; Anne Winder; Stacey Shortall; Michelle Staunton; Ashley Jordan; Laura Flynn; Edel Turley; Mary Peare; and, Tina Gorman, Director of Nursing.

FRONT ROW (from left): Tara Cunnigham; Catriona Flood; Magdalena Makowska; Jin Fang Han; Magdelina Pierce; Emma Murphy; Paula Doolin; Alice Corcoran; Deirdre McCarthy; Charlotte Grootveld; Ruth Tully; Ciara Teehan; Stephanie Griffin; Rachel Keane; Audrey Walsh; Sinead Nolan; Miriam Horan; and, Karen McGuiness.

Since 2004 there have been 540 graduates of the NDNTP, with 116 students enrolled for 2009. Through continuous evaluation and quality assurance, course tutors implement changes to better facilitate the students in their learning, while incorporating and applying sound pedagogical principles.

For more information or for application information for the programme please contact Carmen Sheridan, Dublin Dental School and Hospital, Tel: 01 612 7341, Email: carmen.sheridan@dental.tcd.ie, or Siobhan Murray, Cork University Dental School and Hospital, Tel: 021 490 1160, Email: siobhan.murray@ucc.ie, or visit http://dentalnurse.learnonline.ie (please note there is no www.).

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SCIENTIFIC

An effective bleaching technique for non-vital, discoloured teeth in children and adolescents

Discolouration of a permanent incisor may have a significant social impact on children and adolescents. Intervention should be minimally destructive of tooth tissue and should not compromise future restorative options. This paper reviews the technique of inside/outside bleaching, and proposes it as an efficient, effective and acceptable method for use in the compliant younger patient with an unaesthetic non-vital tooth.

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Key words
Bleach, non-vital, discoloured, endodontics, children, adolescents.

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Introduction

Permanent incisors may discolour following trauma, loss of vitality, endodontic treatment and restorative procedures.[1] The blood pigment haematin is responsible for enamel and dentine staining following trauma-induced erythrocyte destruction.[2] Other causes of discolouration in endodontically treated teeth include obturation materials, remnants of pulp tissue in the pulp horns, intracanal medicaments and coronal restorations.[1]

Noticeable discolouration of teeth can impact on a person's self-image, self-confidence, physical attractiveness and employability.[3] A darkened incisor is of particular concern in children and adolescents, as during these vulnerable formative years facial appearance may affect friendships and confidence development.

Over the years a number of bleaching and restorative techniques have been proposed for managing discoloured non-vital incisors (**Table 1**).[4]

This paper aims to describe the use of the inside/outside bleaching technique as an excellent management option in selected young patients with a discoloured permanent incisor.

The inside/outside bleaching technique

Settembrini *et al* (1997)[5] originally described the inside/outside bleaching technique. As its name implies, bleaching takes place within the tooth and on the outside of the tooth simultaneously. Bleaching gel is placed on the internal and external aspects of a non-vital, root filled, discoloured tooth and refreshed regularly.

10% carbamide peroxide gel is the most commonly used concentration and the most researched.[6] Gel is usually available in a user-friendly pre-loaded syringe. A variety of products are commercially available including Opalescence®, NiteWhite® and Polanight. Carbamide peroxide was originally used as an oral antiseptic in the

Table 1: Management options for a discoloured permanent incisor.

Bleaching techniques	■ Inside/outside bleaching
	■ Non-vital power bleaching
	■ Walking bleach technique
	■ External night-guard bleaching
Restorative techniques	■ Direct composite restoration
	■ Indirect or direct composite veneer
	■ Porcelain veneer
	■ Full coverage crown

Table 2: Advantages and disadvantages of the inside/outside bleaching technique.

Advantages	Disadvantages
Conservative, safe and effective.	Requires a compliant patient.
Rapid bleaching result (decreases the time that H_2O_2 is in contact with pericemental tissues).	Risk of bacterial contamination of the root canal if the patient fails to return for access closure.
No sensitivity (non-vital tooth).	Risk of food impaction into open access cavity (access open three to seven days).
Bleach accesses internal aspect of the tooth.	Requires an element of manual dexterity.
Lower concentration than walking bleach or power bleach technique.	Risk of unwanted colour change and/or sensitivity in adjacent teeth.
No temporary access cavity restoration that can be lost.	Cost of tray fabrication.
Discolouration is easier to mask with restoration if necessary.	
Preserves tooth structure.	
No compromise of future options.	
Cost-effective alternative to crowns and veneers and their subsequent replacement.	

1960s due to its antibacterial nature. The literature confirms that the 10% concentration is safe and effective in terms of toxicity and carcinogenesis, when used under the supervision of a dentist.[3,7]

The inside/outside technique has evolved as an excellent option for young patients. It holds many advantages over more historic management options such as lower bleach concentration and minimal tooth destruction; it does, however, require careful patient and tooth selection to ensure a successful result (**Table 2**).

Bleaching in children and adolescents

Intervention is clearly indicated for a discoloured non-vital incisor if it is deemed that the presence of the unsightly tooth is a cause of social distress to that person. In these cases the inside/outside bleaching technique often represents the most conservative and effective treatment option compared to placing restorations. It is usually desirable to delay definitive restorative treatment of young permanent incisors until they have fully erupted and the gingival architecture is mature. The technique has also been used successfully in immature teeth following apexification procedures (**Case 4**). It has been reported that the teeth of young adolescents are easier to bleach than adult teeth as the enamel is more permeable and this permeability decreases with age.[15] As compliance may be a problem in younger patients, it is important that both the child and the parent are fully informed and committed before pursuing tooth-whitening treatment.

Case selection

Case selection is paramount to the successful use of the inside/outside bleaching technique. A thorough assessment must be made to ensure suitability of the patient and the endodontically treated tooth.

Patient selection

Assess patient compliance, and that the patient has the necessary manual dexterity required for bleach administration. It is important that the patient understands the unfavourable consequences of delayed coronal seal replacement. In the three- to seven-day treatment course, the coronal access is open but unlikely to develop problems, especially given the antibacterial nature of urea. A longer time frame will predispose the vulnerable tooth to bacterial invasion, possible endodontic failure and caries. Immature root development may also predispose the tooth to cervical fracture, especially without reinforcement from an intra-coronal restoration.[16]

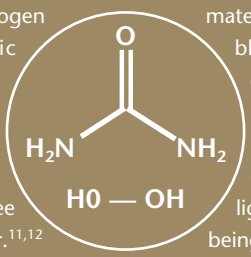
The patient's medical history should be reviewed to highlight any medical conditions that may contraindicate bleaching, e.g., enzymatic disorders and any known allergies to H_2O_2 and plastics.[15]

Tooth selection

A comprehensive clinical and radiographic examination must be carried out, including trauma history, existing restorations and quality of endodontic treatment. Some oral conditions that need to be resolved prior to bleaching or may contraindicate the use of bleaching

The chemistry of bleaching

10% carbamide peroxide ($CH_6N_2O_3$) releases 3.35% hydrogen peroxide (H_2O_2) and 7% urea in a hydrophilic environment.[5,8,9] The urea elevates the pH of the mouth, imparting antibacterial and bacteriostatic properties. $CH_6N_2O_3$ is reported to be more antibacterial than 0.2% chlorhexidine *in vitro*.[10] H_2O_2 is the active ingredient, being a powerful oxidising agent, which produces free radicals and nascent oxygen in the presence of water.[11,12]



These small molecules can pass freely through and penetrate the enamel and dentine to decolour or solubilise the chromogenic material within the tooth structure.[5,8] It is thought that the bleaching action is achieved by breaking down large coloured molecules that cause staining (by cleaving or reducing double bonds) into smaller molecules. These smaller molecules are then either small enough to diffuse out of the tooth structure or absorb less light and appear lighter.[13] H_2O_2 degrades over time, with a reported 50% being available after two hours.[14]

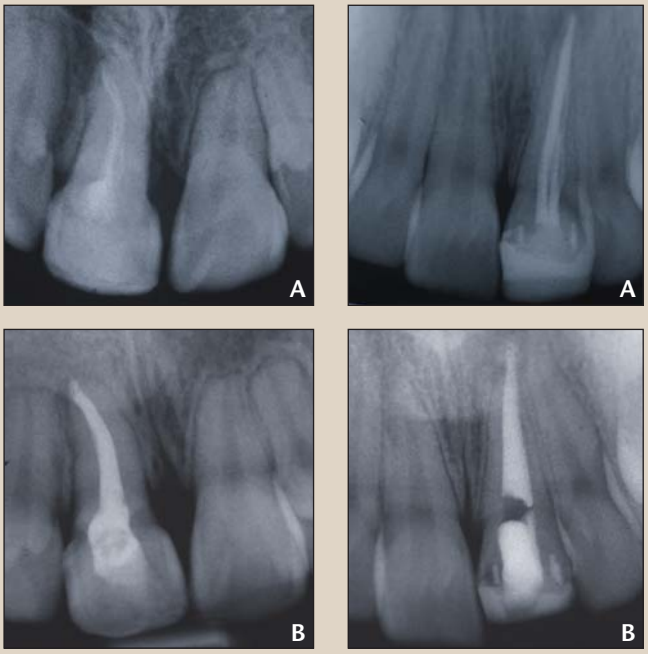


FIGURE 1: A: Inadequate presentation of RCT; B: Re-treatment.

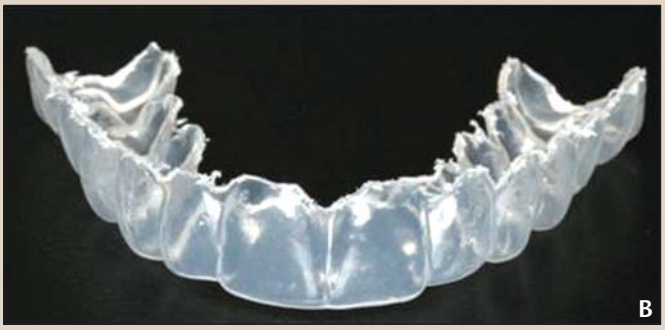


FIGURE 2: A: Preoperative shade and photograph; B: Bleaching tray.

A: PREOPERATIVE VISIT

Step 1: Obtain written informed consent.

Step 2: Ensure quality of endodontic restoration and vitality of adjacent teeth (Figure 1).

Step 3: Record pre-operative shade clinically and photographically (Figure 2A).

Step 4: Construct plastic bleaching tray from an alginate impression (Figure 2B).
The tray should extend to at least two teeth on either side with a reservoir on the tooth to be bleached.

B: TOOTH PREPARATION

Step 1: Remove necessary restoration.
Remove restorative material from the external facial surface of the tooth requiring contact with the bleaching gel, e.g., composite veneer (see **Case 3**).

Step 2: Access the pulp chamber and thoroughly clean off any debris.
An ultrasonic scaler or EMS is useful for removing residue.

Step 3: Remove GP 2-3mm below cementoenamel junction.
Use endodontic burs, Gates Glidden or a heated plugger. Confirm measurement using periodontal probe or endodontic files with a stop (**Figure 3**).

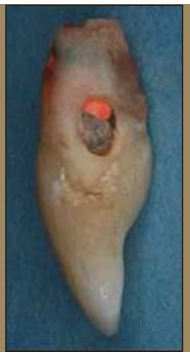
products include poor oral hygiene, dry mouth, un-restored caries and severe enamel erosion.[15] It is important to diagnose the cause and type of tooth discolouration. Grey-brown intrinsic discolouration of pulpal origin is most amenable to the inside/outside bleaching technique. Other causes of staining may be less predictably bleached. In the authors' experience, a yellow discolouration may be less amenable to bleaching, may require multiple treatments and may recur.

The adequacy of the endodontic obturation should be reviewed and have a well-condensed appearance on a periapical radiograph (**Figure 1**). It is imperative to ensure that there is no evidence of periapical pathology. Inadequate root fillings must be revised and re-treated, and bleaching delayed for at least

Concerns regarding bleaching

Cervical root resorption

Resorption is thought to be related to bleach diffusing through patent dentine tubules into the cervical cementum and periodontal ligament, causing a tissue reaction and an inflammatory response, leading to root resorption.[18] The cases in which internal bleaching has been associated with cervical resorption are invariably those cases where heat, light and high concentrations of H_2O_2 have been used.[19,20] Further risk factors include trauma, bleaching before endodontic materials are set, and failure to seal the gutta percha (GP) with an appropriate base material.[7,11,21] There is no evidence reporting cervical resorption when low concentrations of H_2O_2 are used without heat, as in inside/outside bleaching.



Step 4: Seal the GP.
Place ≥2mm glass ionomer cement (resin modified or conventional) or zinc phosphate cement as a protective seal over the GP to prevent leakage (**Figure 4**). Placing the base at the CEJ reduces bleach permeability through the cervical dentine.[22]

Step 4: Etch the internal aspect of the tooth with 30% phosphoric acid.
Etch for one minute; this removes the smear layer and opens the tubules.

Step 5: Deliver 10% $CH_6N_2O_3$ bleach, tray and clear instructions.

C: BLEACHING HOMEWORK

Step 1: Instruct the patient to inject bleaching gel into the canal orifice.

Step 2: Load the tray reservoir with a pea sized amount of gel.
It may be useful to mark the correct tooth on the tray with an alcohol pen.

Step 3: Insert the tray over the teeth and remove any excess gel.
Use finger, cotton wool, tissue.

Step 4: Change bleach gel every two to four hours during the daytime and before bed.
Remove for tooth cleaning only. Avoid contact sports.

Step 5: Clean the access cavity between bleaching sessions.
Use end-tufted or TePe® brush, or a syringe with water.

D: CLOSURE

Step 1: Review after three to five days.
Assess the degree of lightening. Continue for a further three to four days if necessary. It is recommended to slightly over-bleach the tooth (see **Cases 1** and **4**). When the desired colour has been achieved, clean the pulp chamber thoroughly with an ultrasonic scaler.

Step 2: Provisionally restore the access cavity for at least two weeks.
This allows the shade to stabilise and oxygen to dissipate from the tooth, ensuring that the enamel is free of residual oxygen, which may inhibit the composite bond.
Place cotton pellet and brightest shade of glass ionomer cement (resin modified or conventional).

Step 3: Definitive composite.
It is useful to restore the access cavity with a bright shade of composite to allow easier retrieval. White GP may be placed in the access cavity prior to composite restoration to aid re-entry for further bleaching in the future.[23]

Step 4: Review the patient clinically and radiographically as indicated.

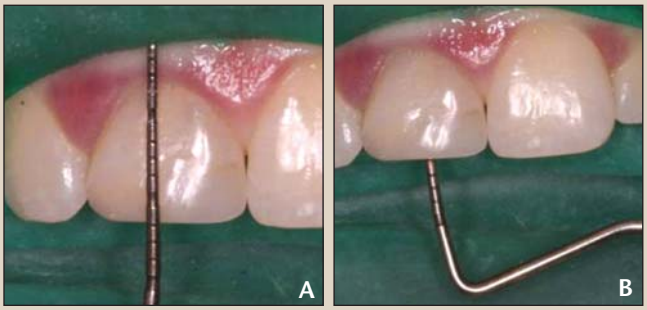


***FIGURE 3** (ABOVE): A: Measuring 2mm below CEJ with periodontal probe; B: Confirming adequate removal of gutta percha.*

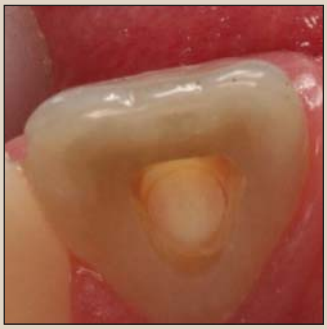


***FIGURE 4** (LEFT): Glass ionomer seal* in situ *overlying gutta percha at CEJ.*

seven days, to ensure set of obturation and sealant materials.[8,17] Patients should be aware that even adequate coronal restorations may require replacement following bleaching to ensure good aesthetic match.

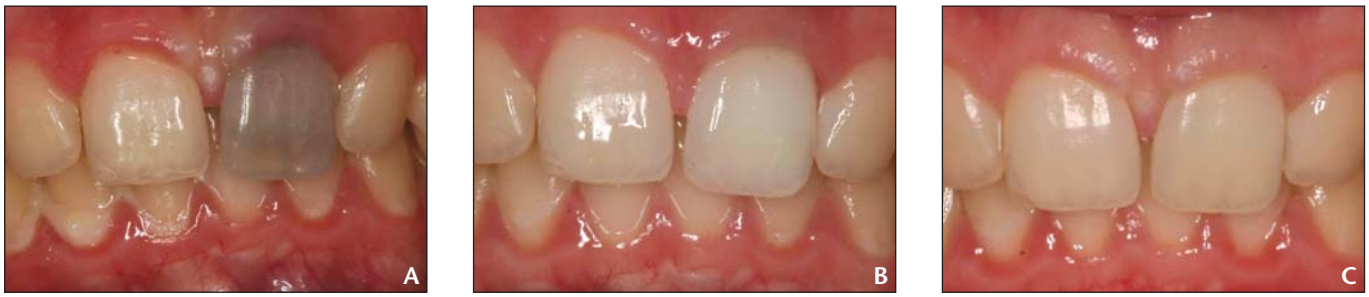
Protocol for inside/outside bleaching (see panel above)
The protocol may be divided into four stages:

- preoperative visit;
- tooth preparation;
- bleaching homework; and,
- closure stage.

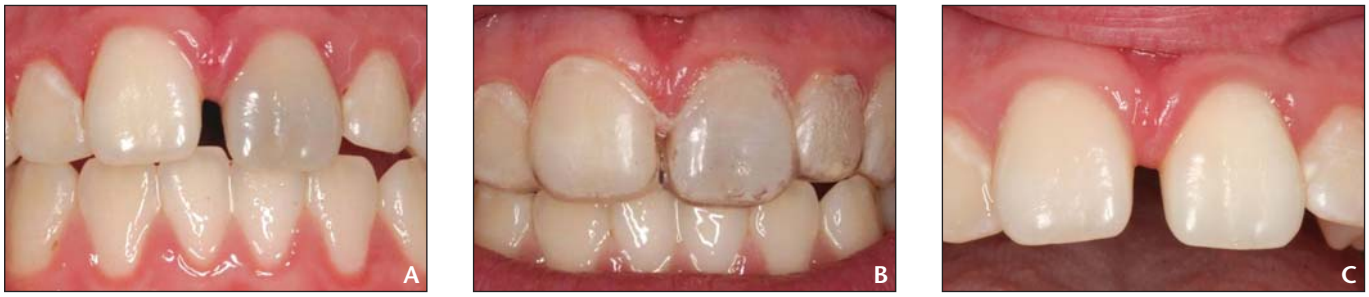
Legal aspects

There is ongoing controversy over the legal situation regarding the use of tooth bleaching products. Under European legislation, 10% $CH_6N_2O_3$ is considered a cosmetic product rather than a medical device. At present it is illegal to supply a product for the purpose of tooth whitening, if that product contains or releases more than 0.1% H_2O_2. Changes to this legislation have been forecast, and the reader is referred to the following website for links and the latest updates: http://www.bdbs.co.uk/.

Given the unclear legal situation, it is important to discuss the options, weigh up the risks and benefits with the patient, and obtain written informed consent. Clinical notes should reflect that the bleaching option is in the best interest of the patient. In many cases, non-vital bleaching represents the most predictable and conservative treatment option compared to destructive removal of healthy tooth structure.



CASE 1: *A: Initial presentation; B: Immediate post-bleaching after three days; C: 15-month review.*



CASE 2: *A: Initial presentation; B: Bleaching tray* in situ*; C: seven-month post-bleaching review.*

Clinical cases

Cases 1 to **4** show some examples of successful use of the inside/outside bleaching technique in children and adolescents by the authors. These cases illustrate the variable clinical circumstances in which this easy and effective technique may be applied.

Case 1

A 12-year-old boy presented with a history of luxation of tooth 21 at age 10. The incisor had subsequently lost vitality and discoloured. Adequate endodontic treatment had been completed. Inside/outside bleaching was applied for four days, with the incisor being slightly over-bleached. The bleaching result remained stable at 15-month review.

Case 2

A 13-year-old girl presented with a discoloured 21. The tooth had lost vitality following trauma six months previously. Root canal treatment was performed and the tooth was monitored for healing for a number of months. Inside/outside bleaching was subsequently carried out for six days. A highly cosmetic post-bleaching result was achieved and lightening remained stable at seven-month review.

Case 3

A 13-year-old boy presented with a discoloured 11 and an unaesthetic composite veneer. There was a history of luxation injury to this tooth at age nine. The tooth was asymptomatic with a satisfactory root canal treatment. The composite veneer was removed to allow bleach access to external tooth surface. Inside/outside bleaching was applied for five days. A stable highly aesthetic outcome was achieved; the patient was very satisfied and requested no further treatment.

Case 4

A 10-year-old girl presented with a history of an uncomplicated crown fracture of 21 at age eight. An apexification procedure was performed using MTA on the immature incisor. The tooth was subsequently bleached using the inside/outside technique for four days and then restored with composite resin.

Conclusion

The above clinical cases highlight the effectiveness of the inside/outside bleaching technique in producing successful and predictable cosmetic results in young patients. The use of lower concentration H_2O_2 minimises the risk of root resorption that exists with walking and power bleaching techniques. Inside/outside bleaching provides a less destructive and cost-effective alternative to veneers and their subsequent replacement. Although increased patient co-operation and commitment is required, results are more rapid and reliable than the walking bleach technique. The authors have found both in-chair and homework compliance to be excellent, and patients reported exceptional satisfaction with the outcome. The clinical success and reduction of potential harmful sequelae invite the inside/outside bleaching technique to be recommended as the treatment of choice for non-vital discoloured incisors in young compliant patients.

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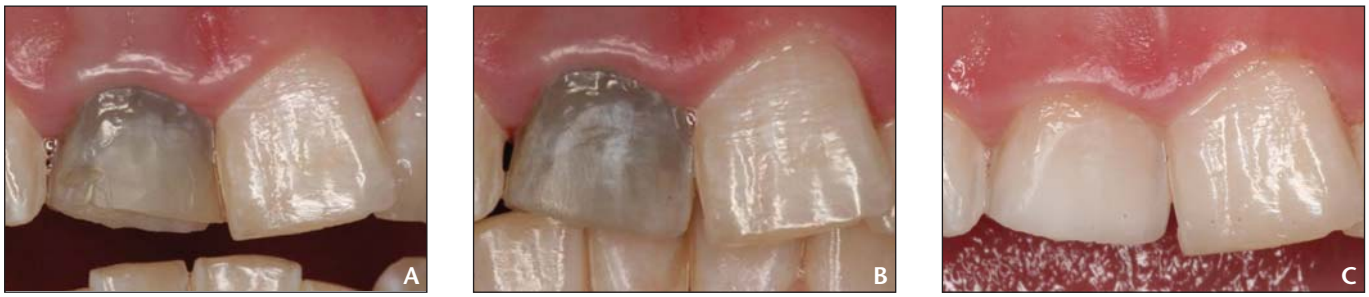
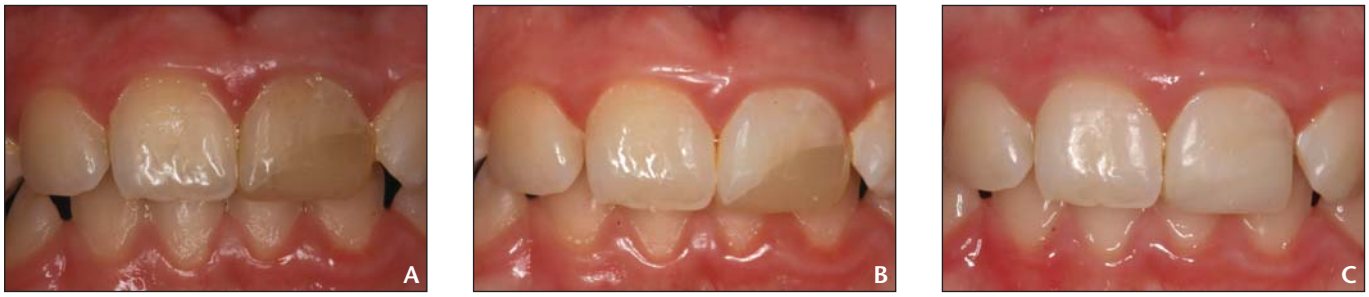


CASE 3: *A: Initial presentation; B: Following removal of composite veneer; C: Immediate post-bleach result.*



CASE 4: *A: Initial presentation; B: Immediately post bleach (note slight over-bleaching); C: 12-month review with new coronal restoration.*

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SCIENTIFIC

Pericoronitis: treatment and a clinical dilemma

Pericoronitis is an infection associated with impacted lower third molars that can necessitate the removal of these teeth. The clinical features of this condition are described and its treatment outlined, emphasising local measures. A case of pericoronitis in a 52-year-old patient is discussed, which illustrates the risks and benefits of removal of wisdom teeth; removal can lead to nerve damage, retention can precipitate serious, even life-threatening infection.

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Pericoronitis

Pericoronitis is defined as inflammation in the soft tissues surrounding the crown of a partially erupted tooth. It generally does not arise in teeth that erupt normally; usually, it is seen in teeth that erupt very slowly or become impacted, and it most commonly affects the lower third molar. Once the follicle of the tooth communicates with the oral cavity, it is thought that bacterial ingress into the follicular space initiates the infection. Several studies have shown that the microflora of pericoronitis are predominantly anaerobic.[1,2,3,4,5,6] It is generally agreed that this process is potentiated by food debris accumulating in the vicinity of the operculum and occlusal trauma of the pericoronal tissues by the opposing tooth.

Clinically, pericoronitis can be acute or chronic. The acute form is characterised by severe pain, often referred to adjacent areas, causing loss of sleep, swelling of the pericoronal tissues, discharge of pus, trismus, regional lymphadenopathy, pain on swallowing, pyrexia, and in some cases spread of the infection to adjacent tissue spaces. Patients with chronic pericoronitis complain of a dull pain or mild discomfort lasting a day or two, with remission lasting many months. They may also complain of a bad taste. Pregnancy and fatigue are associated with an increased occurrence of pericoronitis.

Bilateral pericoronitis is rare and strongly suggests underlying infectious mononucleosis. In a study by Nitzan *et al* (1985) reviewing the clinical aspects of pericoronitis, from a sample of 245, the highest incidence of pericoronitis was found in the 20-29 year age group (81%).[1] The condition was rarely seen before 20 or after 40. The general health of the patient was not found to be a predisposing factor, other than upper respiratory tract infection, which preceded the occurrence of the disease in 43% of cases. Emotional stress preceding the manifestation of pericoronitis was reported in 66% of the sample. There was also a significant correlation between oral hygiene and the severity of the condition. The acute form tended to appear in cases of moderate or poor oral hygiene, while the chronic type was associated with good or moderate hygiene. There was no significant difference between the sexes. A seasonal variation was noted, the peak incidences occurring in June and December. In 67% of the cases the involved tooth was classified as vertical, in 12% as mesio-angular, in 14% as disto-angular, and various other positions represented 7%.

Treatment

For patients presenting with localised pain and swelling involving the pericoronal tissues, and in the absence of regional and systemic symptoms, it is recommended that local measures only are used. These include debridement of plaque and food debris, drainage of pus, irrigation with sterile saline, chlorhexidine or hydrogen peroxide, and elimination of occlusal trauma. In the past the use of caustic agents such as chromic acid, phenol liquefactum, trichloroacetic acid or Howe's ammoniacal solution was advocated to control pain by placing a small

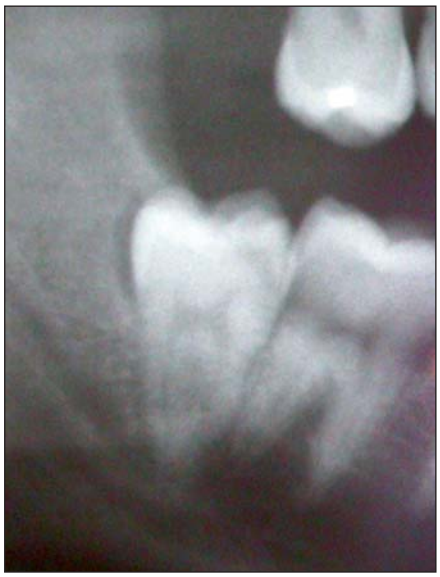

FIGURE 1: *Radiographic examination of the tooth in January 2007.*

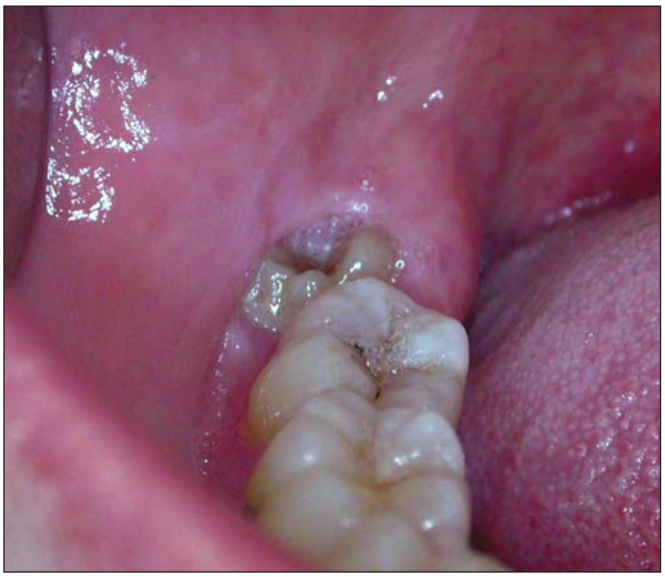

FIGURE 2: *Review of the patient in 2008.*

amount on a cotton pledget under the operculum. The resultant chemical cauterisation of the pain nerve endings in the superficial tissues gave rapid pain relief; however, the use of these toxic chemicals in the oral cavity is no longer encouraged. Ozone has been put forward as a local antimicrobial that might be a useful adjunct in the treatment of pericoronitis; however, there is no research available to show its efficacy as yet.

In addition to local pain and swelling, if the patient is exhibiting regional or systemic signs and symptoms, antimicrobial therapy is recommended; however, it should be emphasised that it is as an adjunct rather than a first-line treatment. Systemic symptoms include pyrexia, tachycardia and hypotension. The antibiotic of choice is either metronidazole 400mg three times a day for five days or phenoxymethylpenicillin 500mg four times a day for five days. The two can be used in combination for severe infections. For patients who are allergic to penicillin, erythromycin 500mg four times a day for five days is suitable. These are all active against anaerobic bacteria, which are the predominant cultivable microflora found in pericoronitis and are the first-line antibiotics of choice. Once the acute phase of this condition has passed, operculectomy has been used as a preventive measure; however, there is no research to support or condemn this mode of treatment.

Case study

This case is an illustration of the clinical dilemma that clinicians are faced with when treatment planning for lower third molars.

A 52-year-old female patient presented for review in the Oral and Maxillofacial Department in early 2008. Originally she had been referred by her general dental practitioner having suffered two episodes of pericoronitis requiring antibiotics involving the lower right third molar in 2006, thus fulfilling the National Institute of Clinical Excellence guidelines for the extraction of third molars.[9] The antibiotics used were not stated by the referring dentist. She was assessed in clinic in January 2007. On examination at that time her lower right third molar was found to be partially erupted, buccally placed, and with no signs of previous infection in the pericoronal tissues. Radiographic examination showed that the tooth was slightly disto-angular, below but close to the occlusal plane, with a conical root, which was closely related to the upper border of the inferior alveolar nerve canal (**Figure 1**). There was no periodontal bone destruction, nor was there rarefying osteitis distal to the crown of the tooth, indicative of chronic infection.

On the basis that this tooth had given rise to two recent infections, the decision was taken to extract this tooth under local anaesthetic on a dento-alveolar surgery list and she was put on the waiting list, which was at the time around 10 months. She was scheduled to have the tooth removed in November 2007, but at the last minute cancelled the appointment and requested a further clinical review on the basis that she had had no symptoms in over a year and was concerned about the possibility of nerve damage as a result of the procedure. She had been given the usual warnings about the possibility of damage to the inferior alveolar and lingual nerves, and in her case that the apex of her third molar was in close proximity to the upper border of the inferior alveolar nerve canal.

On review in 2008, clinically and radiographically both the lower right third and second molars were free of pathology. The tissues around the third molar appeared healthy, as can be seen in **Figure 2**.

After a discussion with the patient it was decided not to extract it on the basis that it was now free of pathology and the patient did not want to risk any long-term morbidity unless the extraction was absolutely necessary. It was not possible to give this patient definitive advice as to whether or not this tooth would give trouble in the future.

Discussion

Mercier and Precious (1992) reviewed the literature in terms of the risks and benefits of third molar surgery under the headings of: risks

of non-intervention versus intervention; and, benefits of non-intervention versus intervention (**Table 1**).[7]

They conclude that absolute indications and contra-indications for the removal of asymptomatic third molars cannot be established as no long-term studies exist to validate either early removal or deliberate retention of these teeth. The National Institute of Clinical Excellence in the UK has adopted the following guidelines for clinical practice in the National Health Service:[8]

1. The practice of prophylactic removal of pathology-free impacted third molars should be discontinued in the NHS.
2. The standard routine programme of dental care by dental practitioners and/or paraprofessional staff need be no different, in general, for pathology-free impacted third molars (those requiring no additional investigations or procedures).
3. Surgical removal of impacted third molars should be limited to patients with evidence of pathology. Such pathology includes unrestorable caries, non-treatable pulpal and/or periapical pathology, cellulitis, abscess and osteomyelitis, internal/external resorption of the tooth or adjacent teeth, fracture of tooth, disease of follicle including cyst/tumour, tooth/teeth impeding surgery or reconstructive jaw surgery, and when a tooth is involved in or within the field of tumour resection.
4. Specific attention is drawn to plaque formation and pericoronitis. Plaque formation is a risk factor but is not in itself an indication for surgery. The degree to which the severity or recurrence rate of pericoronitis should influence the decision for surgical removal of a third molar remains unclear. The evidence suggests that a first episode of pericoronitis, unless particularly severe, should not be considered an indication for surgery. Second or subsequent episodes should be considered the appropriate indication for surgery.

This lower right third molar has been partially erupted for at least 20 years (the patient cannot recall beyond that) and was associated with two episodes of infection that had completely resolved. Part of the reason for this may be the patient's good plaque control, but other than this, it is difficult to explain why the pericoronal tissues have not become chronically infected as happens around so many partially erupted third molars, and it is impossible to give a clear prognosis. This demonstrates the dilemma clinicians face when advising patients. If the tooth is not removed, there is a risk of the development of a serious infection that sometimes requires hospitalisation and can even be life threatening, for example if the infection spreads to the sub-mandibular and sublingual spaces (Ludwig's angina) or the parapharyngeal space (parapharyngeal abscess). Ludwig's angina presents with pyrexia and malaise, elevation of the tongue and floor of mouth, difficulty swallowing, slurred speech and board like swelling of the submandibular tissues, eventually involving the anterior neck. Parapharyngeal abscess presents with considerable pyrexia and malaise, extreme pain on swallowing, dyspnoea and deviation of the larynx to one side. These conditions warrant urgent surgical intervention to secure the airway and to drain and decompress the affected tissue spaces.

If the tooth is removed, there is the risk of major permanent outcomes, especially that the patient could be left with permanent anaesthesia, paraesthesia or dysaesthesia affecting her lower lip or tongue. This case study illustrates the need for informed valid consent and the need for the clinician and patient to balance the risk–benefit analysis for their surgical procedure.

Table 1: Risks and benefits of third molar surgery

	Non-intervention	Intervention
Risks of	■ Crowding of dentition based on growth prediction. ■ Resorption of adjacent tooth and periodontal status. ■ Development of pathological conditions such as infection, cyst, tumour.	■ Minor transient: sensory nerve alteration, alveolitis, trismus and infection. ■ Haemorrhage. Dentoalveolar fracture and displacement of tooth. ■ Minor permanent: periodontal injury, adjacent tooth injury, TMJ injury. ■ Major permanent: altered sensation, vital organ infection, fracture of mandible. ■ Litigation.
Benefits of	■ Avoidance of risk. ■ Preservation of functional teeth. ■ Preservation of residual ridge.	■ In relation to age, i.e., less morbidity post op in younger patients. ■ In relation to different therapeutic measures.

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Identifying orthodontic problems

DR CIARA SCOTT and DR SHEILA HAGAN present a guide for the busy practitioner in examining the developing dentition and deciding when to intervene and when to refer.

Orthodontic treatment benefits many of our child patients. It can sometimes be difficult to know what to be concerned about and when may be the most appropriate time to refer a child to a specialist for orthodontic treatment, or for advice with regard to management or interception for a younger child.[1]

Primary dentition

It is rare for orthodontic treatment to be indicated in the primary dentition, but this stage is fundamental in establishing the dentition and in establishing the dental health required for future orthodontic treatment.

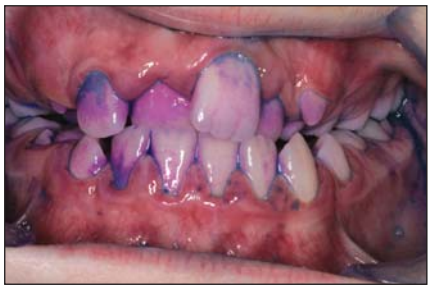


FIGURE 1a: Poor oral hygiene will compromise suitability for orthodontic treatment.

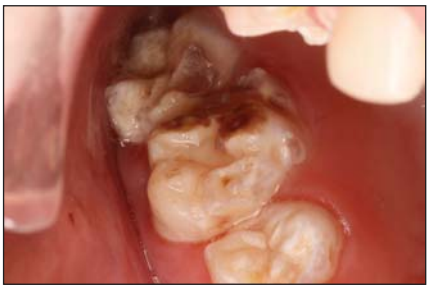


FIGURE 1b: Decalcification of the occlusal surfaces has occurred as a result of fizzy drinks while wearing a removable appliance.

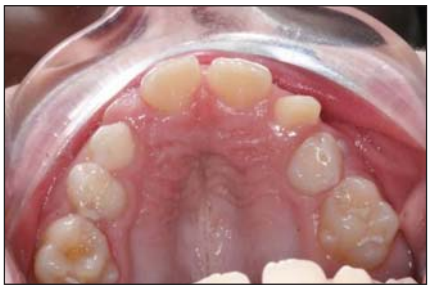


FIGURE 2: Severe crowding as a consequence of tooth decay and early primary extractions.

PROBLEM	INTERVENTION	REASONING
Dental health (**Figures 1a and 1b**)	Developing good habits from an early age can help to avoid some orthodontic problems. Early loss of primary teeth due to caries can cause localisation of crowding and contribute to malocclusion. Poor motivation and dental anxiety can compromise orthodontic treatment.[2]	Early loss of primary teeth can cause crowding and crossbites due to arch contraction.[2] Prevention of dental disease and maintenance of an intact primary dentition can simplify orthodontic treatment later. Orthodontics will be more efficient and more successful in a well motivated patient with a caries-free and well maintained dentition. It is important that patients and their parents understand this.
Teeth present	When examining a child for the first time, a history is established from the parent for any missing teeth. Occasionally, primary teeth are congenitally missing, impacted or infraoccluded. They may displace permanent successors.	Contralateral teeth usually erupt within six months of each other. Radiographs may be indicated if an unusual sequence of eruption is identified. Congenitally missing primary teeth may be associated with a syndrome, so full medical history should be taken and the patient referred to a paediatric dentist.
Anomalies	Sometimes gemination, fusion, hypodontia or supernumerary teeth can occur in the primary dentition.	Usually, no intervention is required unless the teeth are preventing eruption of permanent teeth. It is likely that there may be missing or supernumerary permanent teeth if anomalies are present in the primary dentition, so parents can be warned of this possibility.
Early loss of primary teeth (**Figure 2**)	Pain, trauma, decay or infections take priority in the young child. If a tooth has to be lost or extracted, any consequent orthodontic problem has to be dealt with as a secondary problem at a later date.	Unless co-operation and oral hygiene are excellent, space maintainers are not usually suitable for very young children. It is important to establish and maintain good oral health from a young age.
Spacing and crowding	The primary dentition is best spaced. Crowding is more likely in the permanent dentition if there is crowding in the primary dentition.	Advise parent, but no treatment indicated.

The mixed dentition

This is the stage when the occlusion is starting to establish. Most children will benefit from a full orthodontic examination by their general practitioner at the age of 10.

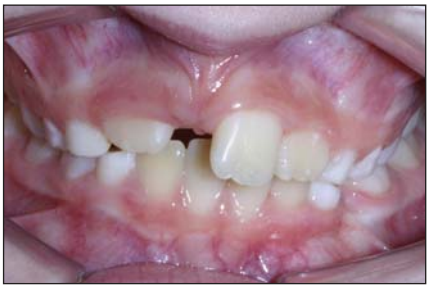


FIGURE 3: An uneruped central incisor; the sequence is disrupted as the U2s have erupted.

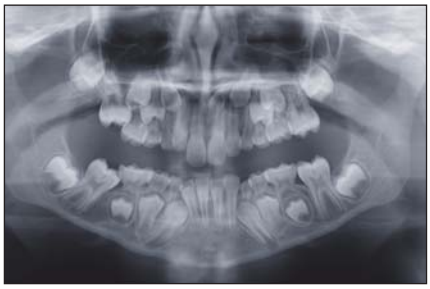


FIGURE 4: An impacted upper right first permanent molar.

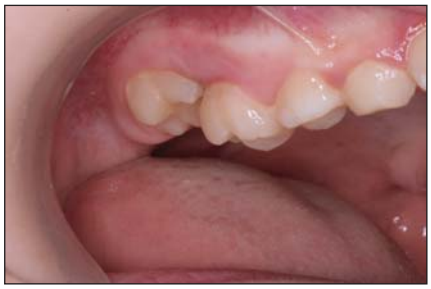


FIGURE 4a: An impacted upper right first molar.

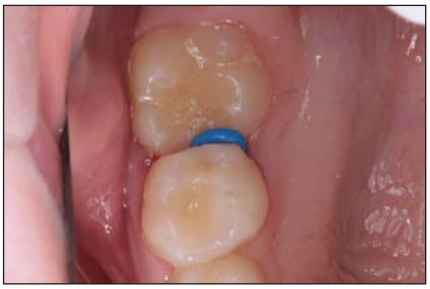


FIGURE 4b: An orthodontic separator is placed in the contact point. Specialists may progressively tighten a brass wire separator.

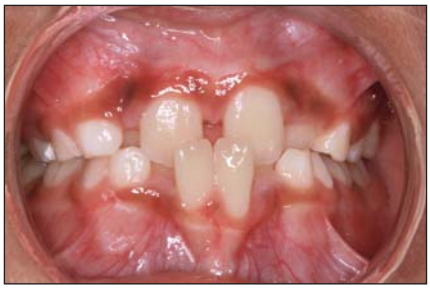


FIGURE 5: An anterior crossbite with mandibular displacement off LL1. There is some gingival dehiscence and mobility of this tooth.

FEATURE	INTERVENTION	REASONING
Unerupted incisor (**Figure 3**)	Look for and palpate for the permanent tooth first. Disruption in the normal sequence of eruption may warrant further investigation. Take radiograph (occlusal view anterior maxilla or periapical) to locate the unerupted tooth if it has been more than six months since contralateral tooth erupted.[3] Ask about any history of trauma and at what age this occurred. Look for any dilaceration or supernumeraries on the film.	Refer, as soon as the problem is identified, with the radiograph if you have taken one. The patient is likely to benefit from extraction of the primary incisor if this is present. The orthodontic plan would usually involve removal of any supernumerary teeth and surgical exposure of the unerupted incisor. Orthodontic traction/treatment may not be required if there is sufficient space for the tooth to erupt, so consider maintaining space if appropriate. A fixed or removable orthodontic appliance can be used to align the tooth.
Unerupted/impacted molar (**Figure 4, 4a** and **4b**)	A permanent molar may become impacted against the primary molar. It may self-resolve but intervention is indicated if more than six months has elapsed since the contralateral tooth erupted. Treatment can involve: using an orthodontic separator to disimpact, or reduction of the distal aspect of the primary second molar. Extraction of E is indicated if disimpaction is not successful.	Refer for intervention treatment or for advice with regard to extraction of the primary second molar. The 6 will erupt more mesially if the E is extracted causing space loss. This can be managed later. When reducing the distal aspect of the E, a blunt ended diamond may be used, and care is needed to avoid iatrogenic damage to 6. Primary or secondary failure of eruption of permanent molars can occur. The prognosis of these molars may be poor, but intervention is required to reduce the risk of more distal teeth being affected. These should be referred.[4]

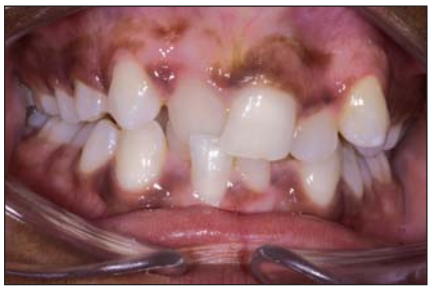


FIGURE 6: UR1 is in crossbite with LR1; the unseen UR2 is also in crossbite with the instanding LR2.

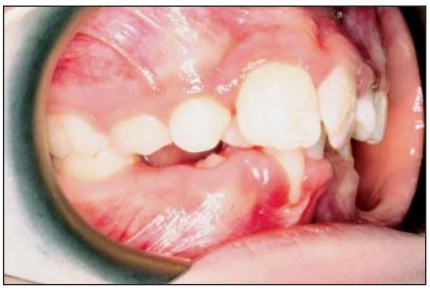


FIGURE 7: The mandibular displacement off the instanding UR2 has caused labial gingival dehiscence and mobility LR1.

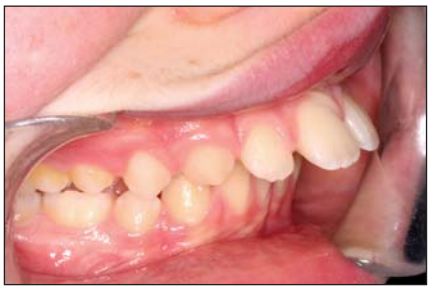


FIGURE 8: The overjet is 12mm and there is a full unit Cl II molar relationship.

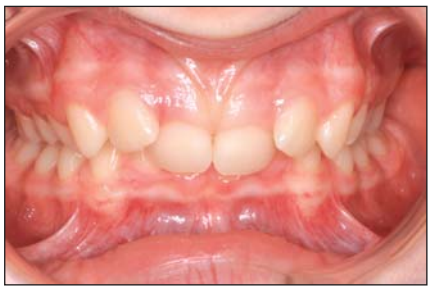


FIGURE 9: Increased and complete overbite. There is trauma to the lower labial gingivae.

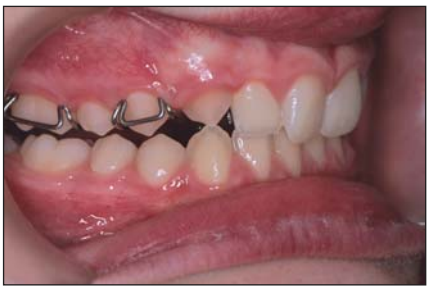


FIGURE 10: A simple URA with active flat anterior bite plane, to allow the lower molars to erupt and therefore reduce the overbite.

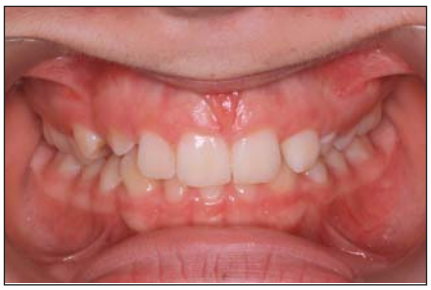


FIGURE 11: Un-erupted and non-palpable UL3 in the permanent dentition.

FEATURE	INTERVENTION	REASONING
Crossbites (**Figures 5, 6** and **7**)	When an anterior or unilateral posterior crossbite occurs, there is often a mandibular displacement present. Indications for early correction of crossbites are: ■ mandibular displacement, forward or laterally from RCP; ■ wear facet/trauma to a tooth in crossbite; ■ dehiscence or trauma to the gingivae; and, ■ mobility of the teeth. Mandibular displacements may precede TMD. If RCP develops in a displaced position, then interceptive orthodontic treatment is indicated to establish good occlusal development.	Refer for opinion/treatment. Studies have suggested that early correction of crossbites can prevent the crossbite being perpetuated into the permanent dentition.[5] This may be achieved with occlusal grinding of primary teeth or a removable or fixed appliance. Early interceptive treatment relies on the child's co-operation and good oral hygiene, so treatment may be postponed if this is poor. Primary teeth have poor undercuts so retention of a URA may be more difficult in the early mixed dentition, especially if teeth are due to exfoliate.
Overjet (**Figure 8**)	It has been shown that there is an increased risk of incisor trauma in children with an overjet >6mm. Increased overjets are usually most ideally treated in the late mixed dentition.	Refer with view to functional appliance treatment. This is most efficient after the first premolars have erupted. Early treatment may be indicated if severe OJ and risk of trauma, or if the child is being teased. Use mouth guard for bicycle and contact sports to aid prevention of incisor trauma.
Overbite (**Figures 9** and **10**)	Check for any trauma or stripping of the lower labial or upper palatal gingivae. An overbite is very deep if there is no lower incisor show in occlusion. Overjets, overbites and skeletal disproportion are much more simply treated in the growing patient, and most efficiently treated in the late mixed dentition.	Early referral is indicated if gingival trauma is observed. Interceptive management with a bite plane may be indicated. Deep overbites may deepen and become traumatic with growth. Treatment of deep or traumatic overbites is much more complex in a non-growing patient[6] (**Figure 11**).

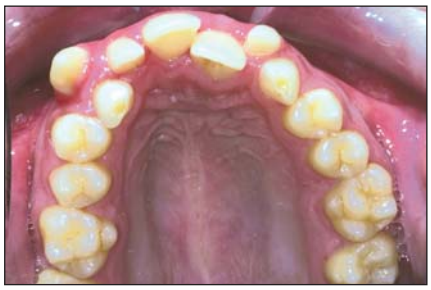


FIGURE 12: This 13-year-old patient is in the permanent dentition, with 7s erupted, but the ULC is firm with no buccal prominence. The lateral incisor is flared.

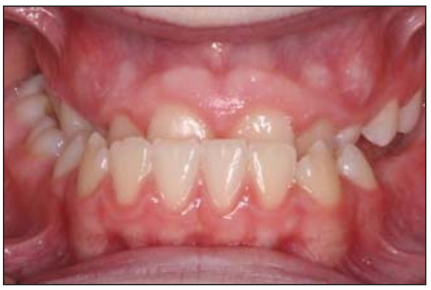


FIGURE 13: Cl III malocclusion; this is a postural Cl III maloccusion as the patient can achieve edge to edge and is displacing forward.

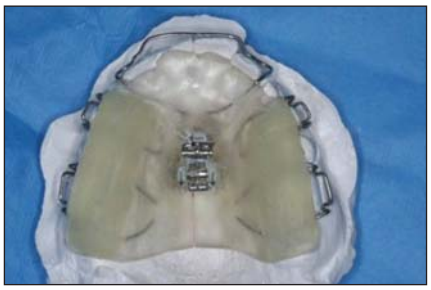


FIGURE 14: A simple URA with a hyrax screw and posterior bite planes to allow correction of the crossbites and displacement.

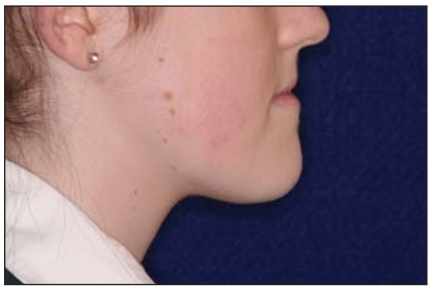


FIGURE 15: Skeletal discrepancy in this high angle Cl III patient.

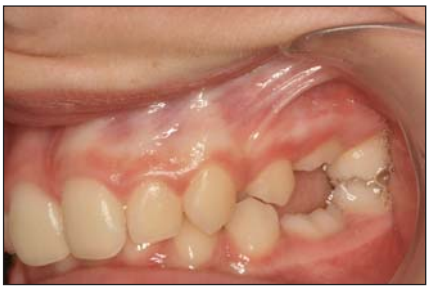


FIGURE 16a: Infraocclusion of the primary second molars.

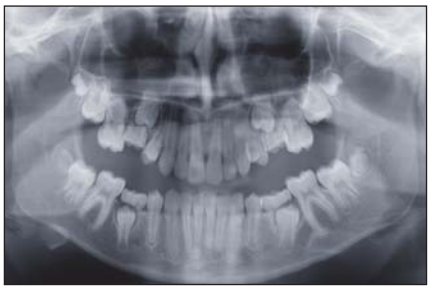


FIGURE 16b: The permanent successors are present.

FEATURE	INTERVENTION	REASONING
Poor prognosis of teeth (esp. 6s)	Timing of first molar extractions can be crucial. It can simplify orthodontic treatment later or even reduce the need for orthodontics. Compensating and balancing extractions are not always appropriate, especially if the child will co-operate with orthodontic treatment later.	Refer for opinion. Resolving acute pain and infection is paramount. Ideally, extractions can be planned in conjunction with orthodontics. Check for the presence of 5s and 8s prior to planning extractions.
Unerupted canines (**Figures 11** and **12**)	Canines are usually palpable in the buccal sulcus by nine-and-a-half years, and there should be a buccal prominence by the time the 4s have erupted. They should erupt within six months of the contralateral tooth having erupted. Palpate buccally and palatally and check for mobility of Cs. Also look for distobuccal flaring of 2s.	Obtain parallax shift radiographs: vertical (OPG and maxillary occlusal); or, horizontal (2x periapical or maxillary occlusal). Extracting Cs (between 10-13 years of age) may help the 3s to erupt or improve position if there is sufficient space in the arch.[7] Refer for an orthodontic opinion about extracting Cs in crowded cases or if canine is very high, very mesial or looks unfavourable radiographically. If 3s are in a favourable position, they should erupt within 6-12 months of the C's extraction.
Class III (**Figure 13**)	Unlike Class II cases, Class III problems are less successfully intercepted in growing patients.	Refer for an opinion. Early treatment of Class III cases is most successful in low angle/deep bite cases, in patients who have a mandibular displacement and can achieve an edge to edge bite. Observation may be appropriate. Treatment may be by camouflage or surgery later depending on patients' concerns. A definitive treatment plan may not be finalised until late teens when most growth is completed.

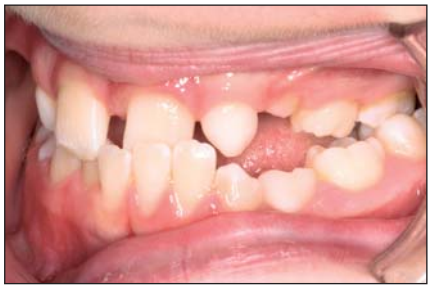


FIGURE 17a: Infraocclusion of the primary first molars associated with missing upper lateral incisors and palatal upper canines.

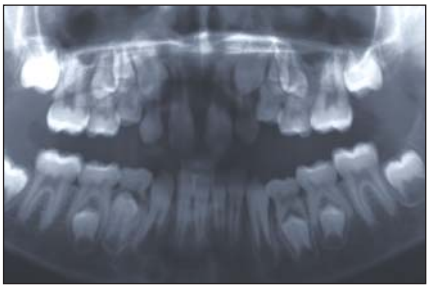


FIGURE 17b: Infraocclusion, hypodontia and ectopic canines can be related. This patient will benefit from extraction of the upper Cs and Ds and specialist review of occlusal development.

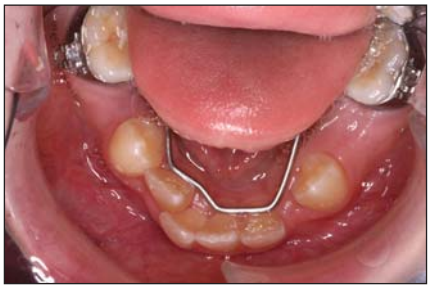


FIGURE 18: A lower lingual arch can act as a space maintainer or to utilise leeway spaces.

FEATURE	INTERVENTION	REASONING
Skeletal discrepancies (**Figure 14** and **15**)	A skeletal discrepancy can occur in all three dimensions. Antero-posterior (class II and III), transverse (asymmetry) or vertical (deep or open bite tendency). A mandibular displacement can cause an asymmetry or exaggerate a skeletal problem but this is not a true skeletal asymmetry.	Refer for opinion early. Patients with severe skeletal discrepancy benefit from joint orthodontic and surgical planning. The optimal treatment for severe skeletal problems is usually orthognathic surgery, but other treatment options may be indicated.
Infraocclusion (**Figures 16a, 16b, 17a** and **17b**)	The second primary molars are most commonly affected. It can be severe if it occurs in a young child and affects Ds and Es. An OPG may be indicated to check for the presence and position of the permanent successor teeth.	Refer for orthodontic/paediatric opinion. Management depends on age, site and severity. If the tooth becomes infraoccluded very early or is below the contact point, extraction is more likely to be indicated. If a permanent successor is present, the infraoccluded tooth should exfoliate, but this may be delayed.[8]
Retained/missing teeth	If you suspect/diagnose hypodontia in a child of any age then a thorough history including family history is indicated. There can be a wide variation of normal occlusal development. Check if the sequence of eruption is disrupted. Excellent oral health, preservation of primary teeth and prevention of decay and further tooth loss is essential for patients with hypodontia. Primary molars should be restored and maintained until a definitive plan is in place.	Refer for specialist opinion. These patients benefit from joint orthodontic and restorative planning. The orthodontic plan will depend on the site and severity of hypodontia and the overall malocclusion. Often primary molars can be preserved for a long time if the permanent successors are missing.[8] If they become infraoccluded, they may need to be extracted as this can compromise the alveolar bone and periodontal tissues. Hypodontia and infraocclusion are associated with an increased risk of impacted canines.[9]
Crowding (**Figure 18**)	Assess for crowding and spacing at around the age of 10 in the mixed dentition. On average, 21mm of space is required in the lower arch between the lateral incisor and the first molar to accommodate the canines and premolars, and 22mm in the upper arch.	Refer for an orthodontic assessment. At this mixed dentition stage, it is possible to: 1. Intercept with extractions to allow blocked out teeth to drop into place. 2. Fit an appliance, such as a lingual arch, to maintain space or utilise leeway space. 3. Fit active appliances to expand the arch or distalise the molars to open space for crowded teeth. Once the occlusion is established and teeth are blocked out, it is more difficult to accommodate them without extractions.

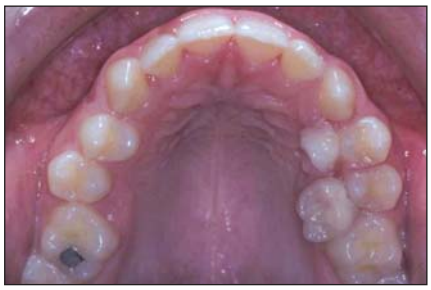
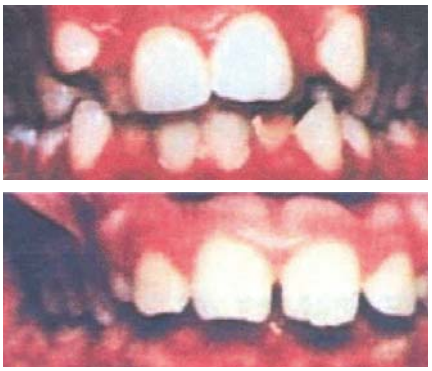
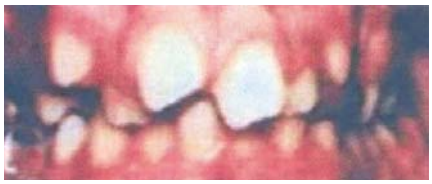


FIGURE 19: Over-retained primary teeth. They need to be extracted if they fail to exfoliate when permanent sucessors erupt.





FIGURES 20-22: Aesthetic component criteria.

FEATURE	INTERVENTION	REASONING
Retained primary teeth (**Figure 19**)	Over-retained primary teeth, which fail to exfoliate when the permanent teeth are erupting, can create plaque traps and can cause deflection of the permanent successor.	Extraction is indicated of over-retained primary teeth that do not exfoliate when permanent successors erupt, especially if the permanent tooth is displaced from the arch or oral hygiene is poor in that area. Refer for opinion if concerned.

When referring patients for an orthodontic opinion, it is helpful if the referral contains the patient's name, age, and any relevant medical, dental and social history. Also include details of any specific concern you have. Please forward any recent radiographs. It is also helpful to make it clear if you feel the case is urgent. Orthodontists may give an opinion based on a photograph or radiograph. Full clinical examination does give a more comprehensive assessment of the orthodontic needs.

The general practitioner is responsible for monitoring the developing dentition, promoting prevention and identifying potential problems as they arise. A good working knowledge of the Index of Treatment Need IOTN[10] can help to identify the most severe problems and identify those patients who may be eligible for treatment within the HSE orthodontic service.

Access to orthodontic treatment within the HSE is by referral by the HSE public dental service and the principal dental surgeon for each area.

2007 HSE Guidelines[11]

Grade 5 Treatment required

5.a Increased overjet >9mm

5.h Extensive hypodontia with restorative implications (more than one tooth missing in any quadrant requiring pre-restorative orthodontics). Amelogenesis imperfecta and other dental anomalies which require pre-prosthetic orthodontic care.

5.i Impeded eruption of teeth (apart from 3rd molars) due to crowding, displacement, the presence of supernumerary teeth, retained deciduous teeth, and any pathological cause

5.m Reverse overjet >3.5mm with reported masticatory and speech difficulties

5.p Defects of cleft lip and palate

5.s Submerged deciduous teeth – arrange removal of teeth but orthodontic treatment not necessarily provided

Grade 4 Treatment required

4.b Reverse overjet >3.5mm with no masticatory or speech difficulties

4.c Anterior or posterior crossbites with >2mm discrepancy between the retruded contact position and intercuspal position

4.d Severe displacements of teeth >4mm but only with Aesthetic Component of **Figures 20-22** .

4.e Extreme lateral or anterior open bites >4mm

4.f Increased and complete overbite with gingival or palatal trauma

4.l Posterior lingual crossbite with no functional occlusal contact in one or more buccal segments

4.m Reverse overjet >1mm but <3.5mm with recorded masticatory and speech difficulties

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DIARY OF EVENTS

SEPTEMBER

IDA Golf Society – Captain's Prize
September 5 — Carlow Golf Club

Council of the Irish Dental Association – Meeting
September 12 — IDA House

Metropolitan Branch – Joint Endodontic Scientific Meeting
September 17 — Dublin 4 Hotel
Further details to follow when available

Irish Academy of American Graduate Dental Specialists (IAAGDS) – Annual Scientific Conference
September 26 — Conrad Hotel, Earlsfort Terrace, Dublin 2
Time: 9.00am-1.00pm (short lectures). Free to attend for all dentists.

OCTOBER

Public Dental Surgeons Seminar 2009
October 7-9 — Whites Hotel, Wexford

Metropolitan Branch – Scientific Meeting: 'Cross Infection Control'
October 9 — Dublin 4 Hotel
Further details to follow when available

NOVEMBER

Council of the Irish Dental Association – Meeting
November 14 — IDA House

Munster Branch – Annual Scientific Meeting
November 20 — Sheraton Hotel, Fota Island, Cork
Speaker: Dr Jens Andreasen, on 'Dental traumatology'. All enquiries to IDA House, Tel: 01-295 0072

Metropolitan Branch – Scientific Meeting – Restorative Dentistry
November 26 — Dublin 4 Hotel
Further details to follow when available

DECEMBER

IDA Golf Society – Christmas Hamper
December 11 — The Royal Dublin Golf Club

FEBRUARY 2010

Council of the Irish Dental Association – Meeting
February 6 — IDA House

APRIL 2010

Council of the Irish Dental Association – Meeting
April 17 — IDA House

MAY 2010

IDA Annual Conference: 'Pearls of Wisdom'
May 12-15 — Radisson Hotel, Galway

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ABSTRACTS

Histologic investigation of root canal-treated teeth with apical periodontitis: a retrospective study from 24 patients

Riccuci, D., Sigueira, J.F. Jr, Bate, A.L., Pitt Ford, T.R.

This study intended to examine histologically root canal-treated teeth evincing apical periodontitis lesions and correlate the findings with clinical observations. Specimens were obtained from 24 patients (12 asymptomatic and 12 symptomatic) by extraction or endodontic surgery, and consisted of roots or root tips and the associated pathologic lesion. Specimens were processed for histologic analysis, and serial sections were evaluated. Findings were correlated with clinical observations according to the presence or absence of symptoms. The mean period elapsed from treatment to specimen retrieval in the asymptomatic group was 7.5 years, as compared with 2.2 years in the symptomatic group. All specimens exhibited periradicular inflammation. Bacteria were visualised in all cases, except for one specimen from the asymptomatic group in which a foreign body reaction to overfilled material was the probable reason for emergent disease in a previously vital case. Irrespective of the presence of symptoms, bacteria were always located within the root canal system, although they were also observed in the periradicular tissues in one asymptomatic and four symptomatic teeth. In general, intraradicular bacterial colonisation was heavier in symptomatic failed teeth. The present findings support the role of intraradicular infections, usually in the form of biofilms, as the primary cause of endodontic treatment failure.

Journal of Endodontics 2009; 35 (4): 493-502.

Effectiveness of limited cone-beam computed tomography in the detection of horizontal root fracture

Kamburo lu, K., Cebeci, I., Gröndahl, H.G.

The aim of this study was to compare the diagnostic accuracy of conventional film radiography, charge coupled device (CCD) and photostimulable phosphor plate (PSP) digital images and limited cone-beam computed tomography in detecting simulated horizontal root fracture. Root fractures were created in the horizontal plane in 18 teeth by a mechanical force and fragments were relocated. Another 18 intact teeth with no horizontal root fracture served as a control group. Thirty-six teeth were placed in the respective empty maxillary anterior sockets of a human dry skull in groups three by three. Intraoral radiographs were obtained in three different vertical views by utilising Eastman Kodak E-speed film, CCD sensor, RVG 5.0 Trophy and a PSP sensor Digora, Optime. Cone-beam CT images were taken with a unit (3D Accuitomo; J Morita MFG. Corp, Kyoto, Japan). Three dental radiologists separately examined the intraoral film, PSP, CCD and cone-beam CT images for the presence of horizontal root fracture. Specificity and sensitivity for each radiographic technique were calculated. Kappa statistics was used for assessing the agreement between observers. Chi-square statistics was used to determine whether there were differences between the systems. Results were considered significant at $p<0.05$. Cone-beam CT images revealed significantly higher sensitivities ($p<0.05$) than the intraoral systems between which no significant differences were found. Specificities did not show any statistically significant differences between any of the four systems. The Kappa values for inter-observer agreement between observers (four pairs) ranged from 0.82-0.90 for the 3DX evaluations and from 0.63-0.71 for the different types of intraoral images. Limited cone-beam CT outperformed the two-dimensional intraoral, conventional as well as digital, radiographic methods in detecting simulated horizontal root fracture.

Dental Traumatology 2009; 25 (3): 256-261.

Supportive periodontal therapy of furcation sites: non-surgical instrumentation with or without topical doxycycline

Dannewitz, B., Lippert, K., Lang, N.P., Tonetti, M.S., Eickholz, P.

Objectives

Evaluation of the clinical effect of topical subgingival application of doxycycline gel adjunctively to scaling and root planing (SRP) at furcation sites during supportive periodontal therapy (SPT).

Material and methods

In 39 SPT patients exhibiting at least four pockets ≥5mm with bleeding on probing, SRP was rendered in all pockets ≥4mm. Additionally, 14% doxycycline gel was applied subgingivally in 20 patients after random assignment (SRP&DOXY). Clinical parameters were assessed at baseline, three, six, and 12 months after therapy. Additional benefit of topical doxycycline was evaluated as a short-term (three months) improvement of furcation involvement and influence on the frequency of re-instrumentation up to 12 months.

Results

A total of 323 furcation sites (class 0: 160; class I: 101; class II: 18; and, class III: 44) were treated (SRP: 165; SRP&DOXY: 158). SRP&DOXY resulted in better improvement of furcation involvement than SRP alone three months after treatment (p=0.041). However, SRP&DOXY failed to show a significant difference between both groups in the number of re-instrumentations.

Conclusion

Single subgingival application of doxycycline in addition to SRP had a short-term effect on furcation involvement. However, it failed to reduce the frequency of re-instrumentation up to 12 months at furcation sites.

J Clin Periodontol 2009; 36 (6): 514-522.

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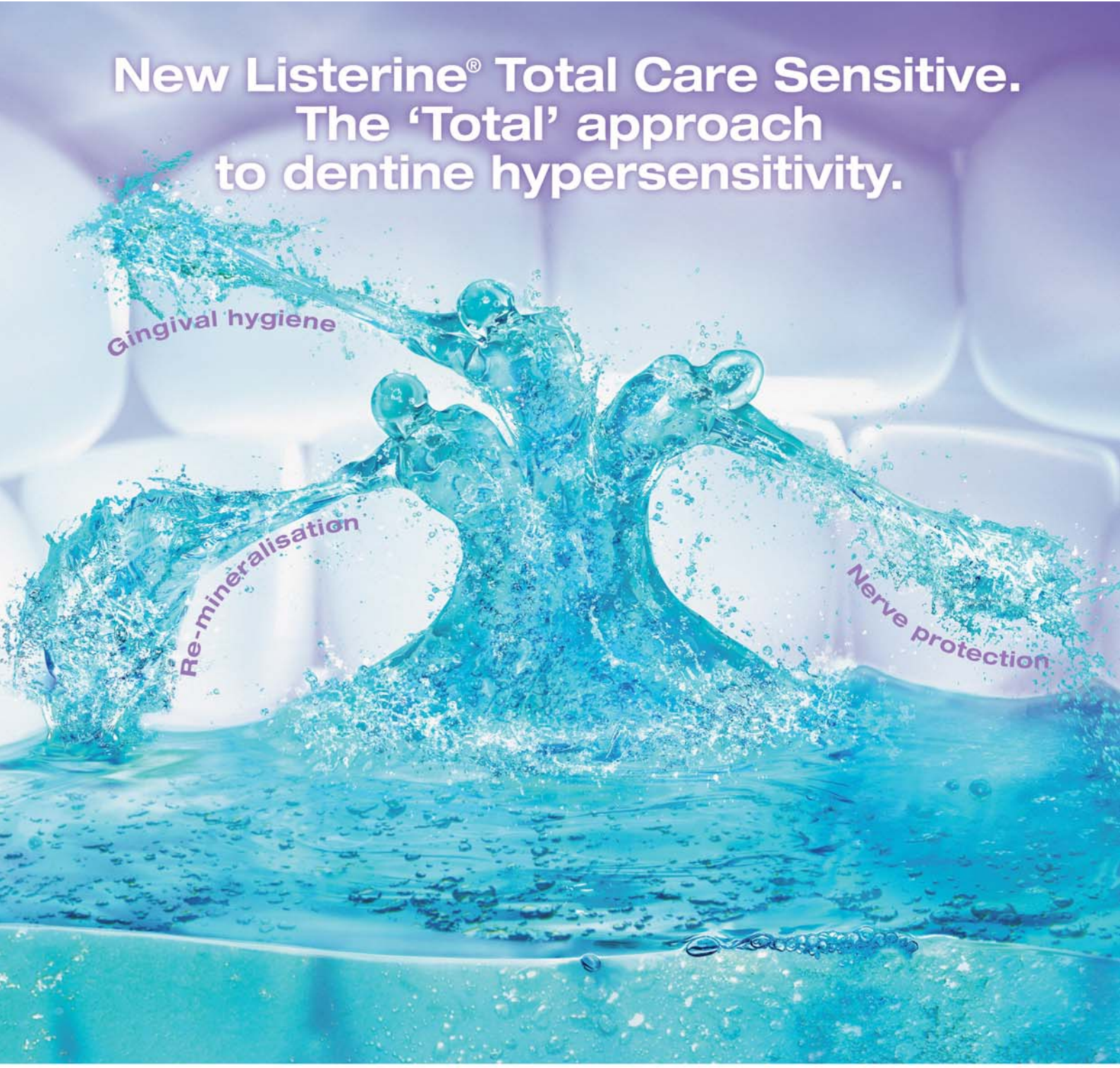

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Team is the theme

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Our visiting speakers include:

Howard Farren, founder of www.dentaltown.com, will speak about utilising your **team** in managing and developing your dental practice in these difficult times.

Dr Stanley Malamed, one of the most popular speakers in his field, will present current concepts for the dental **team** to deal with dental emergencies and the effective use of local anaesthesia and sedation within the dental environment.

Dr Joseph Massad will present to your **team** on improved techniques for removable dentures and implant retained overdentures.

Rita Bauer, medical photographer and the digital education media specialist at the University of Toronto, will take the mystery out of this new technology and will inspire you and your **team** to embrace digital photography.

Irish speakers include:

Drs PJ Byrne
Dympna Daly
Paul Moore
Brian O'Connell
Aisling O'Mahony
Declan Corcoran
Claire Healy
Donal McDonnell
Anne O'Donoghue
Spencer Woolfe

who will present new and exciting take-home gems for the entire dental **team**.

Pearls of wisdom
Galway
IDA Annual Conference May 12-15, 2010

The effect of vibration on pain during local anaesthesia injections

Nanitsos, E., Vartuli, R., Forte, A., Dennison, P.J., Peck, C.C.

Background

The 'gate control' theory suggests that pain can be reduced by simultaneous activation of nerve fibres that conduct non-noxious stimuli. This study investigated the effects of vibration stimuli on pain experienced during local anaesthetic injections.

Methods

In a preliminary study, subjects were asked to rate anticipated and actual pain from regional anaesthetic injections in the oral cavity. A second study compared, within subjects, pain from injections with and without a simultaneous vibration stimulus. Both infiltration and block anaesthetic injection techniques were assessed. In each subject, two similar injections were given and with one, a vibration stimulus was randomly allocated. Injection pain was assessed by visual analogue scale and McGill pain descriptors.

Results

Both infiltration and block injections were painful (mean anticipated intensity: 31.25, actual: 17.82mm on 100mm scale). Pain intensity with and without vibration was 12.9mm (range 0-67) and 22.2mm (range 0-83), respectively (p=0.00005, paired T-test), and this effect was seen with both infiltration (p=0.032) and block anaesthetic (p=0.0001) injection subgroups. Furthermore, compared to no vibration stimulus injections, injections with vibration resulted in fewer pain descriptors chosen (p=0.004), and the descriptors had a lower pain rating (p=0.001).

Conclusions

The results suggest that vibration can be used to decrease pain during dental local anaesthetic administration.

Australian Dental Journal 2009; 54 (2): 94-100.

Quiz Answers *(from page 167)*

1. What is the condition of this patient's gingivae described as?
   Gingival enlargement.

2. Give a differential diagnosis for this condition. What is the likely diagnosis?
   - Dental plaque-induced gingival disease modified by systemic factors:
     a. associated with the endocrine system, e.g., pregnancy associated pyogenic granuloma; puberty-associated gingival enlargement; and,
     b. plaque-induced gingival disease, associated with blood dyscrasias: leukaemia-associated gingivitis;
   - Dental plaque-induced gingival disease modified by medications: drug-influenced gingival enlargement;
   - Gingival lesions of genetic origin: hereditary gingival fibromatosis, other; and,
   - Foreign body reaction.

   Given the patient is taking a Ca^{++} blocking agent, the likely diagnosis is drug influenced gingival enlargement.

3. What medications are commonly associated with this condition?
   - Phenytoin sodium or epinutin: an anti-convulsant used in the treatment of epilepsy;
   - Cyclosporin A: an immunosuppressant administered to prevent host rejection; and,
   - certain calcium channel blocking anti-hypertensive agents. The dihydropyridines (e.g., nifedipine, felodipine, amlodipine) are more commonly associated with gingival enlargement than the other sub-groups of calcium channel antagonists.

4. What would your treatment be?

i. Oral hygiene instruction and full mouth debridement.
ii. Consult with the patient's medical practitioner as to the feasibility of the use of an alternate medication. Clearly the patient's overall systemic disease should take priority over aesthetic and/or oral functional concerns, and in some cases a change of medication may not be advisable.
iii. Re-evaluate and consider surgical excision of any residual gingival enlargement.
iv. Maintenance.

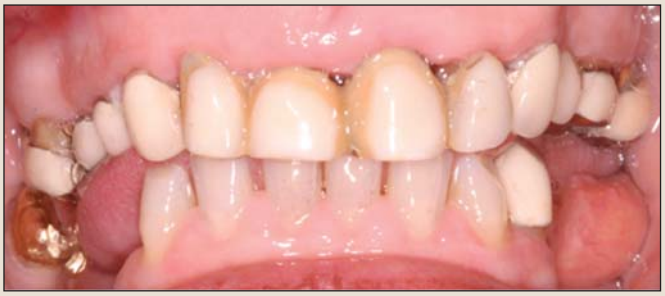


FIGURE 2: *Following consultation with the patient's medical practitioner the patient's anti-hypertensive medication was changed from a calcium channel blocking agent to a β-blocker. Following oral hygiene instruction and full mouth debridement the gingival enlargement resolved and no surgical intervention was required. The patient was referred for prosthetic treatment.*

CLASSIFIED

Classified advert procedure

Please read these instructions prior to sending an advertisement. On the right are the charges for placing an advertisement for both members and non-members. Advertisements will only be accepted in writing via fax, letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than September 1, 2009, by cheque made payable to the Irish Dental Association. If a box number is required, please indicate this at the end of the ad (replies to box number X). Classified ads placed in the Journal are also published on our website www.dentist.ie within 48 hours, for 12 weeks.

Advert size	Members	Non-members
up to 25 words	€75	€150
26 to 40 words	€90	€180

Non-members must send in a cheque in advance with their advert. The maximum number of words for classified ads is 40.

Only if the advert is in excess of 40 words, then please contact:
Think Media
The Malthouse, 537 North Circular Road, Dublin 1.
Tel: 01-856 1166 Fax: 01-856 1169 Email: pat@thinkmedia.ie

POSITIONS WANTED

Oral surgeon seeks position in busy dental practice. Part-time sessions also considered. Email: mbmoersler@excite.com.

Available immediately, full- or part-time associate. Very experienced caring dentist. Anywhere within one hour of Cork city. Tel: 087-988 2386.

Male Irish Trinity graduate with three years' experience seeks locum position in Dublin area, starting in mid August Tel: 087-938 6980, or Email: cuddyg1@hotmail.com.

Female Irish Cork graduate with one year's vocational training experience seeks full-time associate position in the Galway, Limerick or Ennis area. Available from mid August. Tel: 087-640 1494, or Email: jenniew09@gmail.com.

Dentist seeks full- or part-time associate position in Galway city or surrounding area from mid August. Please Tel: 085-720 9629 at any time, or Email: jamiegcummins@gmail.com.

Female Cork graduate with one year's Junior House Officer experience seeks full- /part-time associate position in Dublin area. Available from mid July. Please Tel: 086-322 4344, or Email: barbaracarey@hotmail.com.

Irish dentist with over three years' experience looking for part-time or locum work within a commutable distance from Cork City. Tel: 086-854 3156 after 7.00pm.

Oral surgeon available for part-time position in south of Ireland: Cork, Waterford, Kerry. Email: ikok2@yahoo.com.

Cork graduate currently available for full/part-time associate position in Cork city/suburbs/West Cork area. Tel: 087-907 9672.

POSITIONS VACANT

Dental associate required for busy West of Ireland practice. Full book, on-site lab, rotary Endo, ortho, good clinical and clerical support. Tel: 087-418 0907, or Email: shanecadden@yahoo.co.uk.

Part-time associate wanted for South Dublin mixed private/PRSI/medical card busy three-person practice. Minimum five years' experience required. Tel: 087-988 7821, or Email CV to: aoifecox@iol.ie.

Associate dental surgeon required for busy Midland dental practice. Full book, computerised, digital x-ray, rotary endo and good support staff. To take over from departing dentist. Excellent potential with view. Tel: 086-867 0350, or Email: oralcentre@hotmail.com.

Enthusiastic dental associate required (also hygienist and dental technician). Westmeath area one hour from Dublin. Busy modern computerised practice, three-surgery, digitalised OPG. Tel: 044-966 1777 to set up interview, or Email: info@dentistsireland.com. Immediate start. Advertisers please Email: drmulrooney@yahoo.com.

Part-time experienced associate required for busy dental practice in Booterstown/Blackrock, Dublin. Two surgeries, digital x-ray, hygienist, computerised and excellent staff. Private/PRSI only. Tel: 01-288 5746, or Email: info@booterstowndental.ie.

Associate required for busy dental practice in Limerick City. Computerised, dental x-ray, OPG, hygienist. Tel: 061-417566.

CLASSIFIED

Full-time associate required to replace departing colleague from end of July in long established practice. Modern well-equipped spacious surgery. Experienced friendly staff, hygienist, computerised, digital x-rays and OPG, sedation. Private and PRSI patients. Tel: 01-837 3714, or Email: rcahill@cahilldental.net.

Associate required for busy Dublin Northside practice. Long established practice, fully computerised, digital x-rays, only private and PRSI patients. Email: andrewhatherell@gmail.com.

Associate required for Waterford City practice. Candidates to be experienced in providing quality private care. Purpose built multi-surgery practice, fully digitalised and computerised. Orthodontist, periodontist and hygienist as part of existing team. All enquiries, please Tel: 086-230 7457 (evenings), or Email: dental.practice@live.ie.

Associate opportunity for immediate start in busy Galway city centre practice. Superb facilities including digital OPG, etc. Public–private mix. Call us now, Tel: 086-818 7373.

Experienced part-time associate required for growing practice in North Dublin. Start any time before September. For more information, please contact Justin, Tel: 087-761 2304, or Email: maccarthyj@gmail.com.

Dental associate wanted for busy GMS and DTSS practice in Dublin City Centre. Part-time. Email: levinedent@gmail.com.

Associate required for busy Northside Dublin practice. Long established, recently renovated surgery. Computerised with digital x-rays, motorised endo, etc. Friendly helpful staff. Contact by Email: banded@iol.ie.

Dentist required part-time in Dublin 24 to cover six-month maternity leave, starting July. Very busy, modern mixed practice with a full book. Contract may be extended. Please contact Sheena, Tel: 087-284 3750, or Email: squaredentalpractice@gmail.com.

Experienced/friendly dentist required for Mondays and Thursdays in a busy two-surgery modern practice in Dublin 15. Digital OPG/x-ray, orthodontist, friendly and supportive staff. Private, PRSI and GMS. Email: oaklanddental@yahoo.ie.

Locum required mid June until mid August, Carlow town. Best surgery conditions. Full book available. Please Tel: 087-266 6524 and leave message.

Locum to cover maternity leave or part-time associate required in busy Kerry practice, starting mid August. Replies to Martina and Riordan, Tel: 066-976 5635.

Locum dentist required to cover maternity leave in modern practice in Mid West (Limerick 30 minutes, Galway one hour). Excellent equipment, digital radiography. Starting end October 2009. Tel: 086-287 1468, or Email: judyomeara@eircom.net.

CLASSIFIED

Locum required in busy modern West Dublin practice for three to six months. Immediate start. Email: associate@gums.ie.

Experienced locum dentist required for a busy, modern dental practice in Galway City. Initial locum position with a view to permanent position in the future. Fully equipped and computerised (digital x-ray, OPG, oral surgeon, hygienist, etc.) Please Email: dental.care1@yahoo.ie.

Locum dentist required, full- or part-time, for busy modern surgery in Midlands town. Approx. last two weeks of August and first two weeks of September. Excellent equipment and support staff. Please Tel: 085-715 2287, and leave a message, or Email: cedar.clinic.dental.surgery@gmail.com.

Locum dentist required, full or part-time for modern surgery in Lusk, Co. Dublin. Approx. December 2009 and January 2010. Email: drenzlova30@yahoo.com.

Locum dentist required for modern Limerick city practice. Experience essential. Locum required from the start of November 2009 for six months to cover maternity leave. Please Tel: 061-335 226, or Email: ruthmurphy@gmail.com.

Sessions available in modern South Dublin orthodontic practice. Would suit oral surgeon, paediatric dentist, periodontist, prosthodontist, etc. Tel: 087-978 6460, or Email: johnlinnane@eircom.net.

Dental hygienist required for a busy, modern dental practice in Galway City. Fully equipped and computerised, Full assistance provided (digital x-ray, OPG, Cavitron, etc.) Email CV to: dental.care1@yahoo.ie.

Dental hygienist required one to two days per week, North Co. Dublin, from July. Tel: 087-799 6055.

Hygienist required part-time for practice in Dublin SW. Fully computerised, digital x-ray and intra-oral cameras. Email ada@smileclinic.ie.

Full-time dental nurse required to cover maternity leave from the beginning of September 2009 in practice in Celbridge. Tel: 087-275 0934.

PRACTICES FOR SALE/TO LET

For sale – Co. Galway. Very busy primary care facility/medical complex. No dentist in the town. Huge hinterland. Excellent surgery space, fully serviced. Two/three surgeries. Low rent. CAT cabled. Excellent opportunity. Low start-up costs. Tel: 086-807 5273, or Email: niall@innovativedental.com.

To let – ground-floor office space in Waterford. Next door to doctor's surgery. Full planning permission for dental surgery. Reasonable lease terms. Contact William, Tel: 087-2785 239, or Email: shaunacianeoghan@eircom.net.

Dental practice required to purchase in Cork City. This would suit a practitioner who would like to continue working for some years without the burden of running the practice. Email: andrewcox@iol.ie. Confidentiality assured.

Surgery to let to specialist on a sessional basis. Separate entrance and waiting area. Digital OPG, computerised. Mallow – the crossroads of Munster. Tel: 086-178 4603 after 6.00pm.

Prime property for rent, ideal for dental practice, in Belmullet, Co. Mayo. Part of new multidisciplinary medical centre including general practitioners. Large GMS and private practice. Great need for dental practice in town. Very lucrative opportunity. Tel: 087-925 8012, or 097-82434.

Excellent opportunity to acquire friendly, modern dental surgery in ideal west of Ireland location, two-surgery practice with tremendous potential for expansion. Extremely favourable terms of contract. Please Contact Orla, Tel: 087-122 8407, or email: dentalpractice08@gmail.com.

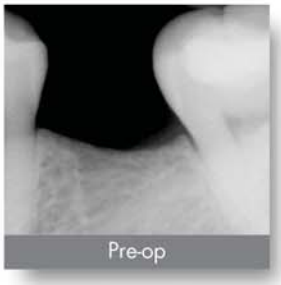
Premises to let. Spacious room in medical/physiotherapy centre available for rent. Ideal for dental/orthodontic practice. Free parking. Full secretarial cover. Access seven days. Location: Glasnevin. Adjacent to DCU. Tel: 01-804 0659.

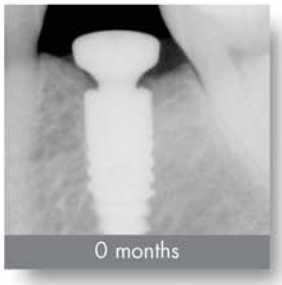
Co. Galway dental practice for sale. Large town 30 minutes from Galway. Long established, busy, modern three-surgery, computers, digital, OPG, etc. Building recently renovated, all new equipment. PRSI and private, very high gross. Building for sale/low rent. Email: dentalpractice4sale@gmail.com.

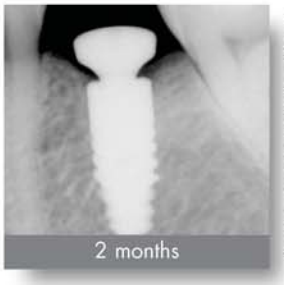
EQUIPMENT FOR SALE

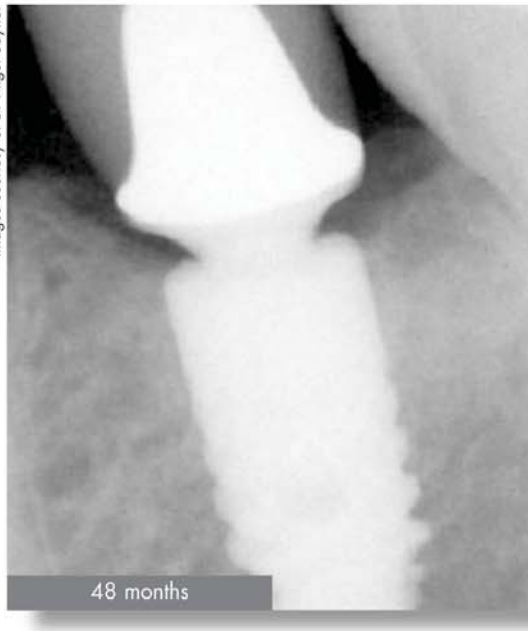
For sale – Two dental chairs. Suitable for second surgeries. Side units and lights attached. Offers. Tel: 087 207 1077.

Confidence of lasting natural aesthetics









Images courtesy of Dr Nigel Saynor

"I have been placing Ankylos implants since 1999, after using numerous other 'top brands'. But, nothing compares to the performance and long term aesthetics found with Ankylos".

Dr Nigel Saynor
Bramcote Implant Centre

"The morse taper connection forms a gas tight junction that the body then sees as 'one piece', thus allowing repositioning of the biologic doughnut causing bone to grow up and over the head of the implant".

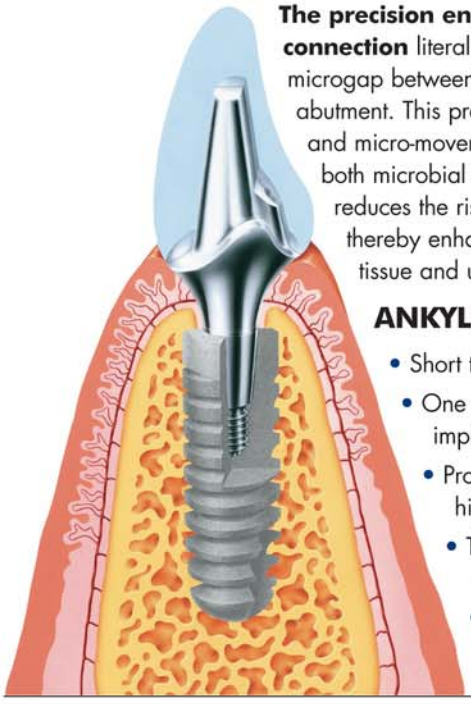
Dr Phil Bennett
Lyme Bay Dentistry

"The system is very accurate to work with and offers an extensive range of abutments. With Ankylos it is easier for the dentist to achieve a precise impression, and abutments are always a positive fit".

Steve Taylor
Taylor Dental
Technology Centre

Precision engineered for outstanding clinical performance

The lasting natural aesthetics and long term stability of ANKYLOS implants result from the system's unique taper connection. The exact fit between the implant and the abutment helps maintain healthy supporting tissues and reduces the risk of implant failure.



The precision engineered conical connection literally eliminates the microgap between the implant and the abutment. This prevents microbial leakage and micro-movement. The avoidance of both microbial and mechanical irritation reduces the risk of inflammation, thereby enhancing recovery of soft tissue and underlying bone.

ANKYLOS®

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- Surface microstructure favours osseointegration

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