Volume 55 Number 2 April/May 2009

IDA
irish dental association

Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann

IV access

STEP BY STEP GUIDE

Annual Conference
Skillkenny Preview

Crisis Management

Corsodyl Mint Mouthwash

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The gold standard treatment for gingivitis.

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- Manages aphthous ulceration
- Medicinal product

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Product Information for Corsodyl Mint Mouthwash Corsodyl 0.2% w/v Mint Mouthwash - Chlorhexidine Digluconate 0.2% w/v (as Chlorhexidine Digluconate Solution).
Abbreviated prescribing information: Please consult the summary of product characteristics for full prescribing information.
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 applicances, 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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References: 1. Hoffman T, Bruhn G, Richter S, Netuschil L, Brecx M. Clinical controlled study on plaque and gingivitis reduction under long-term use of low-dose chlorhexidine solutions in a population exhibiting good oral hygiene. Clin Oral Invest (2001) 5; 89-95.

Further information is available on request from:
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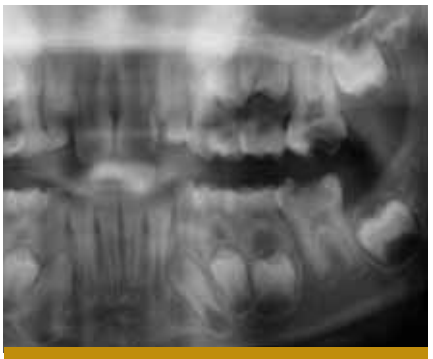

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Skillkenny, the new Faculty and good science

Times are difficult for all. The IDA is playing its part in trying to relieve some of the problems (p64 and p66). It is hoped that HSE will listen and more importantly act in resolving these issues. The small snippet on the Glennon Insurance Scheme (p66) is there for the observant. The quiz by Dr Ciara Scott highlights a common problem seen by dentists and in particular Dental Schools. It is hoped that most of us get the answers right! Cork Dental School and Hospital (p71) show off their Colgate–Palmolive prize winners in their final dental undergraduate and first year dental hygienist student exams. Congratulations to the winners. Dental amalgam is back on the agenda. What a waste (p72). There are European regulations we need to be aware of and follow.

Annual Conference

Skillkenny (pp75 – 78) looks like the place to be April 22 – 25. There is something there for everybody and more importantly an opportunity to get ahead on the CPD points. It also gives us the opportunity to say goodbye and thanks to Dr Ena Brennan for a job well done and welcome in Dr Donal Blackwell.

New Faculty and CPD

The Irish Faculty of Primary Dental Care (p81) is a welcome pathway for general dental practitioners to develop their career, continue professional development and set standards. Every initiative should be looked on positively and it is hoped that the Faculty of Dentistry in Ireland and the new Primary Dental Care Faculty can work closely together to avoid the schism that occurred in the UK with two Faculties vying for a similar group of postgraduate students. An exam must be fit for purpose, valid, reproducible and reflect the educational standards of a postgraduate dentist after a minimum of two years training/education. The Editorial Board of the Journal has set up a sub-committee to look at how the Journal can work with the Faculties/IDA to produce relevant educational articles for these early postgraduates to help them pass these exams. Every practitioner should develop a portfolio and it is planned to write an article on what should be in a portfolio and why. Specialist training/general dental practice training are additional to the above exams. In Ireland, the MFD is at present the minimum entry requirement into specialist training. Congratulations to Dr Frank Ormsby and his group.

Europe (p82) remains active but quite bureaucratic as the Directives on 'Application of patients' rights in cross border healthcare', 'European Workforce for Health', 'Patient Safety', 'Fluoride' and 'Tooth Whitening Products' draw to a close.

Hypomineralisation, sensitivity and IV access

The scientific articles bring three important papers to our notice. 'Molar incisor hypomineralisation: clinical management of the young patient' highlights the need for early vigilance in the vulnerable six-to-eight year old. If caught early, conservative regimes may help but often because of the extent of the disease there is a need for early specialist (orthodontic/paedondontic/endodontic and unfortunately oral/maxillofacial) surgery.

'Factors associated with postoperative sensitivity of amalgam restorations' confirms what we all have experienced but highlights those patients that we should particularly warn about this problem – the young, females and those with significant sensitivity before the placement of the filling. The depth of the cavity and the extent of the cavity were other factors. How can we decrease these symptoms?

'IV access in dental practice' is a 'how to do it article' on a technique that should be relatively simple. Practice makes perfect and the more you do, the better you get. IV access is a competency set in the Dublin Dental School for our graduating dentists and it is hoped that this article will take the difficulty for many out of the technique.

Practice management

Our practice management section highlights the Regulations on Ionising Radiation and tells us in a very easy to follow manner what we need to do to get licensing of dental x-ray equipment (pp100-101). We have also written a simple pull-out sheet for those in general practice on the Guidelines on Antibiotic Prophylaxis for Bacterial Endocarditis (pp102 – 103) and our patients.

Looking forward to seeing you in Kilkenny.

Leo F. A. Stassen

Prof. Leo F. A. Stassen
Honorary Editor

Looking forward to a busy conference

In her final President's News, Dr Brennan looks ahead to Skillkenny and encourages members to respond to the forthcoming survey.

Skillkenny 2009 is now fast approaching! The conference, which takes place from April 22-25 next promises to be both educational and fun for all members of the dental team. The organising committee has worked very hard on securing a varied and interesting line up of national and international speakers for the conference. Topics include oral surgery, digital radiography, ceramic restorations, NICE Guidelines, paediatric dentistry, dentists and their finances, dental tourism and much much more. The scientific programme will be complemented by a variety of planned social events including the golf simulator, President's Golf Competition, music night on Thursday night and the highlight of the social calendar – the Annual Dinner. We are delighted to welcome President Mary McAleese and her husband Dr Martin McAleese as our guests at this event and I would encourage you all to attend.
Registration for the conference can be made by contacting IDA House.

Annual General Meeting

The introduction of the AGM into the Annual Conference for the first time in 2008 was an outstanding success. This year's AGM will take place on Thursday April 23 at 10.00am and I urge all members to attend. This is your AGM and it gives you the members the opportunity to have your say on any particular issue of concern for you and the Association.

Mandatory continuing professional development

Members will now be well aware of the Dental Council's intention to introduce mandatory continuing professional development (CPD) from January 2010, which will be a prerequisite for continuing registration on the Dental Council register.
The Dental Council has requested that dentists keep a record of their CPD hours from January 2009. CPD will be based on a five-year cycle, during which each dentist will have to complete at least 250 hours of CPD, a minimum of 75 of which must be verifiable. Failure to comply with mandatory CPD will result in erasure of an individual's name from the Register of Dentists.
The CPD Committee of IDA has made great progress in the last 12 months to assist dentists in meeting the challenges of mandatory CPD in the future and I congratulate them in all their efforts.

Clinical audit

Members will be aware that dentists are now legally required to perform clinical audits in radiology in accordance with Dental Council guidelines. A working group made up of Drs Andrew Bolas, Eamon Croke, Maurice Fitzgerald and Maurice Quirke have put together a 'Dental Practice Radiography File' which will allow practitioners to collate all relevant information and data in order to conduct an internal audit in every dental practice. The file, if compiled correctly, will allow practitioners to meet all Dental Council criteria and meet their legal obligations. The working group is running Clinical Audit Workshops at the annual conference in Kilkenny to assist practitioners with putting together this proposed radiography file for the dental practice and I encourage you all to attend one of the workshops.
I would also like to congratulate and thank the working group for all of their hard work and commitment to this task.

Membership survey – please participate

The Association is organising a survey of all the members (see IDA News) to ascertain your views on the organisation. This is a very important undertaking and will help to shape the future of your Association. Therefore, I strongly recommend that you take the relatively short amount of time required to fill in the survey form when you receive it and be sure to return it to Behaviour & Attitudes as requested.

Bidding farewell

It is with regret that this is my last President's News as I step down as President of the Association at the AGM on Thursday April 23 next. I have thoroughly enjoyed my contribution to the *Journal of the Irish Dental Association* and I wish to compliment Professor Leo Stassen and his editorial board on producing a wonderful journal for the dental profession in Ireland.
I would like to take this opportunity to wish Donal Blackwell every success during his year as President and I look forward to reading his President's News in the forthcoming editions of our Journal.

Ena Brennan

Dr Ena Brennan
President,
Irish Dental Association

Playing our part

Dear Editor,

God be with the days when, in the relative absence of specialists, dentists met their patients' needs as best they could. Today, a wide range of specialties is accessible, reducing the frustration and stress of trying to achieve high standards in multiple disciplines. Concomitant to such progression, there has also been the evolution of a hierarchy of care. Although it is desirable that excellence in healthcare be available to as many as possible, regrettably, in a market economy, privilege rather than need primarily determines access. The economic downturn is likely to exacerbate this imbalance. Further, an as yet unknown dispensation waits round the corner. A bubble has burst and recovery is very uncertain. Reaching out is the new social mantra.

Are we prepared as a profession to play our part? I proffer a few suggestions. Desire for excellence, together with respect for skilled expertise, may have deterred some from expanding their own skill base, opting to refer. For others, the motivation may be avoidance of hassle: difficult patients or procedures, sometimes both. Fewer will be able to afford specialist fees (or in some cases inflated fees around 'special' items). Maybe there is a halfway house, facilitating patients' needs where they, rather than we as a profession, are now at.

Dusting off that endodontic, periodontal or surgical kit may help towards narrowing the skills gap. Interestingly, there is no shortage of implant/cosmetic courses, implying that these are well subscribed to, narrowing the skill base between specialist and general dentist. The same cannot be said about more mundane pursuits such as minor surgery, interceptive orthodontics, or removable prosthodontics. Over correctness may also be an issue. It is desirable to know one's limits, but there are times when it is healthy to stretch boundaries. Patients rarely if ever sue where a measured and well-communicated attempt is made to meet their needs.

There is no implied threat here to specialist expertise. On the contrary, without exception, I have always found our dental experts generous and supportive in sharing that expertise, though 'perfect' slide shows may in future prove anachronistic in efforts to encourage an expansion of reasonably good general dental care.

At the end of the day we all may be judged by worldly criteria of success, such as how happy or wealthy or ideal we appear. But in the idiom of cultural critique, the real will cherish or admonish depending on how well we deal with limitation: our own, and that of others, including patients. And may God be with us on our way.

Yours Sincerely

Brian Merry

bpmerry@eircom.net

MEMBERSHIP SURVEY

The Association is currently preparing the most comprehensive survey of dentists to date, to establish the needs and priorities of the profession and how the Association can best address these priorities. Behaviour & Attitudes Ltd, Ireland's leading independent market research agency, have been commissioned to conduct the survey, which will be essential to plotting the future course of the Association to best meet the needs of dentists.

It should take no more than 20 minutes to complete the questionnaire. Dentists will be provided with a self-addressed questionnaire to return to the agency and Chief Executive, Fintan Hourihan, asks that every dentist would please make an effort to participate.

Delegation meets Government and HSE

Representing the IDA at a consultation on the DTSS and DTBS in March (from left) were: Fintan Hourihan, CEO; Dr Helen Walsh, Chair, GDP Committee; Drs John Nolan and Maurice Quirke. The Department of Health and Children; the Department of Social and Family Affairs; and, the HSE were in attendance.

General practitioner issues

The IDA has written to all general practice members informing them of the Association's endeavours to resolve a number of issues on their behalf. CEO Fintan Hourihan stated that the Association is acutely conscious of the difficulties facing dentists in independent practice, and is making every effort to alleviate these difficulties. The issues involved include:

DTBS and DTSS fees

In the light of the Government's decision to call for a reduction in professional fees to dentists and other healthcare professionals, the Association has received invitations from the Departments of Health and Children and of Social and Family Affairs to make submissions as part of the consultation exercise relating fees. The IDA will make the case that there should not be a reduction in fees.

DTSS fees increase

The Association has sought confirmation from the HSE as to when payment will be arranged of the fees increase due with effect from January 1, 2009, to dentists participating in the DTSS.

Assurances regarding over 70s

The IDA has contacted the National Director of PCCC in anticipation of the fact that significant numbers of over 70s will continue to present for treatment under the DTSS scheme even though they may be in excess of new income limits applied. The Association has sought assurance that in the event of some patients having their medical cards withdrawn subsequently, dentists will not be penalised in being refused professional fees for treating such patients in good faith.

DTSS – post processing review

The Association contacted the HSE to convey serious concern at the introduction by them, without consulting the Association, of a review by medical card holders of treatment provided by DTSS-participating dentists. The Association expressed strong concerns regarding terminology used in the questionnaires, and insisted on the withdrawal of such communications to patients and for all returns to be destroyed promptly.

Proposal to the Minister for the Environment

The Association recently made proposals to the Minister in relation to patient safety imperatives that derive from new legislative provisions being introduced. Specifically, support was requested for the following measures:

1. The need to promote infection control practices.
2. The introduction of a grant or accelerated tax allowances in relation to the installation or upgrading of equipment for the safe disposal of waste materials.
3. Assistance for the installation of digital radiography equipment through provision of a once off grant or accelerated tax allowances.

Call response/queues – Department of Social Welfare

The Association has over the past number of months received an increase in the volume of calls from members regarding the call response/queue times from the Department of Social Welfare on enquiring as to whether or not a patient is covered for treatment under the scheme. The Association has demanded an improvement in the service provided.

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Dentists and limited liability partnerships

The IDA has written to the Company Law Review Group, clarifying the Association's position regarding the public consultation on limited liability partnerships.

It has been suggested that groups of dentists currently operating in partnership could convert to a limited liability partnership. These are new entities that have become available in recent times and are seen as a hybrid of a company and a partnership. The Association understands that there are significant tax and pension benefits associated with establishment either as incorporated entities or limited liability partnerships.

The Association raised concerns regarding the effect of such partnerships on issues of liability and the dentist's individual duty of care to the patient. The Association is advised that a problem could arise within a limited liability partnership where a number of individuals are in practice and then an action is subsequently made against such a partnership. In such an eventuality, there would be the possibility that the dentist with personal liability may not have appropriate professional indemnity and in those situations, the patient would be left uncompensated if there were no alternative means.

The Association does not have a formal position on the appropriateness of limited liability partnerships or indeed incorporation, but understands that, as matters stand currently, such arrangements may not be consistent with the provisions of the Dentists Act 1985.

The ultimate view of the Irish Dental Association is that there must be absolute clarity on these matters, and equally that there must be a level playing field for all dentists in practice.

Over-riding all other factors, the Association believes that the integrity of the dentist–patient relationship and the duty of care to the patient owed by a dentist is not compromised in any way by any changes in company law.

IDA continues to lobby Oireachtas committee

IDA Chief Executive Fintan Hourihan has written to Deputy Seán O'Fearghail, Chairman of the Oireachtas Joint Committee on Health and Children, re-stating the Association's recommendations on oral health, which were submitted as part of a presentation by an IDA delegation to the Committee on January 29. Fintan expressed the Association's gratitude for the opportunity to meet with the Committee, and highlighted a number of specific recommendations for the Committee's consideration:

1. The need for the Oireachtas to expedite amendments to the Competition Act 2002 in order to allow the IDA to engage fully with the HSE and other agencies on all contractual matters.
2. The need for the State to apply supports to general dental practices by way of accelerated tax reliefs on capital spending, as well as considering grant support for support staff and moving towards computerising records.
4. The appointment of a Chief Dental Officer in the Department of Health and Children, with an appropriate team, is long overdue.
5. The urgent need to fill all vacant front line clinical posts in the Public Dental Service.
6. Education grants to support dentists in pursuing mandatory continuing dental education (CDE).
7. The need for a review by Government of the implications for dentists and patients arising from the decision to restrict tax relief for MED 2 items at the standard rate in the 2009 Budget.
8. The need for the timely implementation of the Orthodontic Review Group's recommendations.

Fintan stated the Association's willingness to elaborate on these proposals at any time.

The Lyttle Cup

The Lyttle Cup will be played on Saturday May 23 next at Baltray Golf Club, Co. Louth. This annual tournament between the Irish Dental Association and the Northern Ireland Branch of the British Dental Association is being played on Saturday this year to accommodate the Irish Open. Tee times are reserved from 10.30am to 12.30pm. All enquiries to Ciaran Allen, Tel: 047 71400, or Email: ciaranallendental@eircom.net.

Insurance scheme

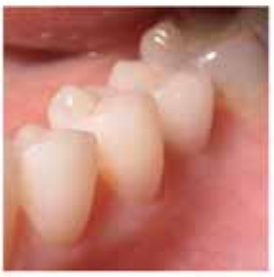
The IDA Insurance Scheme in conjunction with Glennon Insurance has proven very successful to date for the many members who have requested quotations for their motor, home or dental practice insurance. Some members have stated that they have made up to 50% savings on quotations from Glennon compared to their current provider. As a member of the IDA, you can avail of discounted rates. For further information, contact Glennon Insurance quoting your IDA membership number.

PDS Seminar goes to the sunny south east

Plans for the PDS Seminar 2009 are well underway. The Committee is delighted to be heading back to the ever-popular Whites of Wexford for this year's event. An excellent line-up of national and international speakers has been confirmed at the event and we hope to continue from the great success of last year's event in Meath. A strong emphasis will be on the 'Team Day' on Thursday, October 8, when all members of the dental team are encouraged to attend.

As continuing professional development becomes mandatory for dentists from January 2010, this annual event will become even more important for dental professionals employed by the HSE to attend.

The seminar takes place from October 7-9 next. So don't miss out, put the dates in your diary today!



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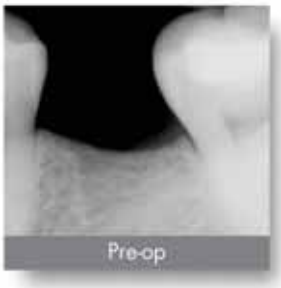

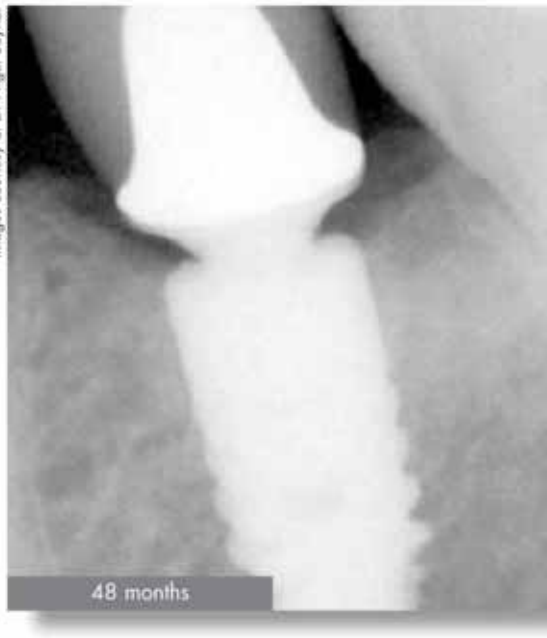

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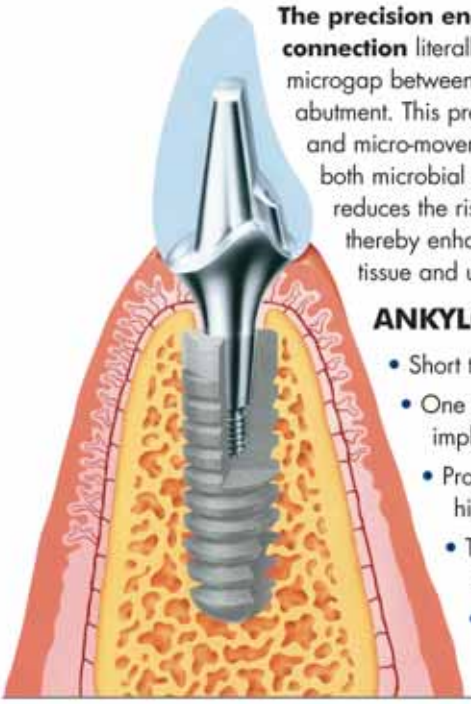

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DENTSPLY FRIADENT

ABOVE LEFT, from left: Speakers Dr PJ Byrne; Dr Naomi Rahman; Dr Eamon Croke; and Metro Branch President Dr Dermot Cavavan.

ABOVE, from left: Dr Fiona Crotty; Dr Susan O'Loughlin; and, Lorraine Bresnan, CD Soft.

FAR LEFT, from left: Dr Noel Kavanagh; Dr Mary Reddy; and, Dr David Vard.

LEFT, Dr Sean O'Seachnasaí; and, Dr Breda Hennelly.

Metro Branch members embrace technology

'Mastering Technology' was the theme at the recent IDA Metro Branch Annual Scientific Day.

There was a strong turnout in the Hilton Hotel on February 27 to hear a distinguished group of speakers tackle issues around the technology available to the dental practice.

After the welcome and introduction from outgoing Metro Branch President, Dr Dermot Canavan, Dr PJ Byrne gave a general overview of computer-guided implant placement. He explained that this process allows for greater precision, and facilitates minimally invasive treatment with fewer after effects, illustrating his presentation with a number of clinical cases that demonstrated the advantages and limitations of these techniques.

Drs Eamon Croke and Glenn McEvoy next discussed common problems with implants, citing the role of the literature, and of reviewing the records of the defence societies, to identify the problems that can arise, and how to avoid them. They particularly highlighted the need for maintenance of training standards, and the importance of communication with the patient, particularly with regard to ensuring that patient expectations of treatment are realistic.

Dr Naomi Rahman gave a clear and concise explanation of the new Dublin and Cork Dental Hospitals' guidelines on antimicrobial chemoprophylaxis for infective endocarditis. Dr Rahman summed up the background to the revision of the guidelines, discussing the different international viewpoints and the reasons behind the Irish decision to follow the American Health Association guidelines. She outlined which patients should now be covered by antibiotics, as well as which should not, and emphasised the importance of educating patients on the reasons behind the new protocols.

After a coffee break, during which delegates had ample time to view the various trade stands, incoming Metro Branch President Dr Linda Elliott gave an overview of the new twisted endodontic files. She discussed the history of endodontic instrumentation, and gave a detailed look at the anatomy of various files – their features, and how they can fracture. She then went on to discuss the new SybronEndo twisted file, which claims to address many of the common problems encountered by dentists.

Dr Kevin Gilmore spoke on restoration of endodontically treated teeth, specifically the dos and don'ts of posts: when to use them; what size they should be; what type to use, and what cement to employ. He

ABOVE, from left: Keith Morgan, SybronEndo; Dr Michael Burke; Dr Harry Kavanagh; and, Dr Jim Doody.

LEFT, from left: Dr Monica Ryan; Dr Jennie Waldron; and, Dr Mary-Clare Walsh.

discussed aesthetics versus function, and the importance of restoring form and function for the patient.

Dr Paul Moore looked at the pros and cons of operating microscopes in the general practice. He used his own practice experiences to demonstrate the improvements in precision for the practitioner, in communication with patients and colleagues, and the benefits to the dentist's posture and eyesight.

The final presentation before lunch came from Mr Dylan Murray, plastic surgeon and former dentist, who hugely impressed the audience with a fascinating and extraordinary account of his work in reconstructive surgery, particularly his passion, craniofacial surgery.

After lunch, Steve Cartin of Cartin Coaching and Management gave some valuable advice on marketing the dental practice. He spoke about how dentists can work to attract and keep new patients with careful marketing strategies that work within the Dental Council guidelines, and keep the patient's welfare to the forefront at all times.

Finally, Dr Wilson Coulter, Reader/Consultant in Microbiology at Queens University Belfast gave the audience an overview of decontamination of reusable instruments.

In the afternoon, a range of round table discussions gave delegates the opportunity to discuss many of these issues in more detail with the speakers, and other distinguished guests.

Industrial relations news

The IDA has confirmed that the Public Dental Surgeon's Committee of the Association has accepted Labour Court recommendations regarding their dispute with the HSE. IDA CEO Fintan Hourihan has written to the HSE Employers Agency to formally confirm this acceptance, and to request confirmation arrangements for payment of arrears, suggesting that this should issue as soon as possible.

IDA supports members in Cork dispute

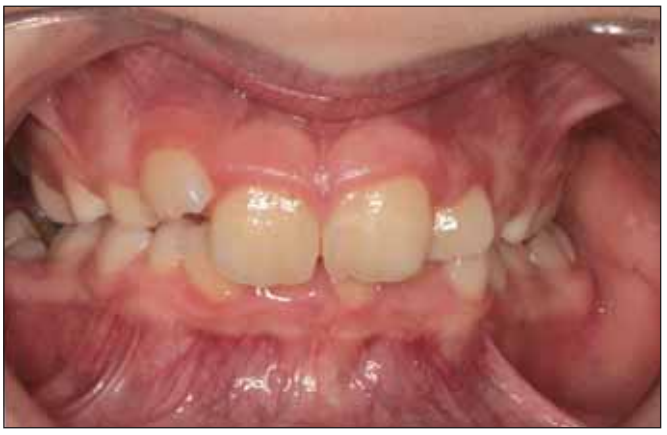
The IDA has written to Professor Finbarr Allen of Cork University Dental School & Hospital regarding the unilateral contractual/work practice changes for part-time tutors. The letter reiterated the Association's belief that the manner in which the staff concerned have been treated thus far by UCC is completely unacceptable and that the timing of this controversy, forced by the College, is particularly unfortunate for the students concerned. The Association remains of the view that it cannot be forced to negotiate with a significant threat hanging over members' terms and conditions of employment.

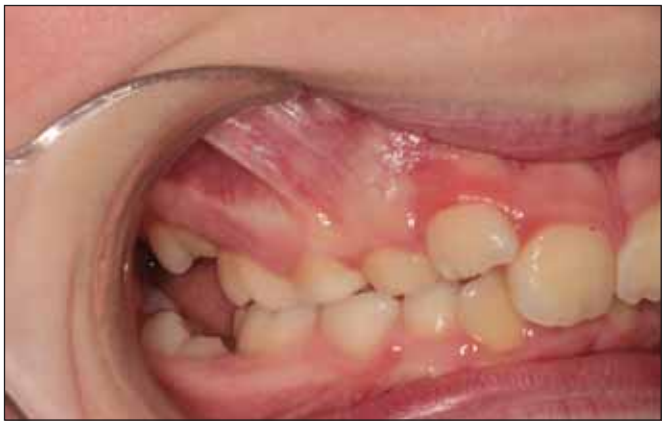
The Association has suggested a number of cost saving and income generating proposals to the College, and requested responses to a number of other queries. The letter stated the Association's willingness to collaborate constructively with UCC on the matters concerned.

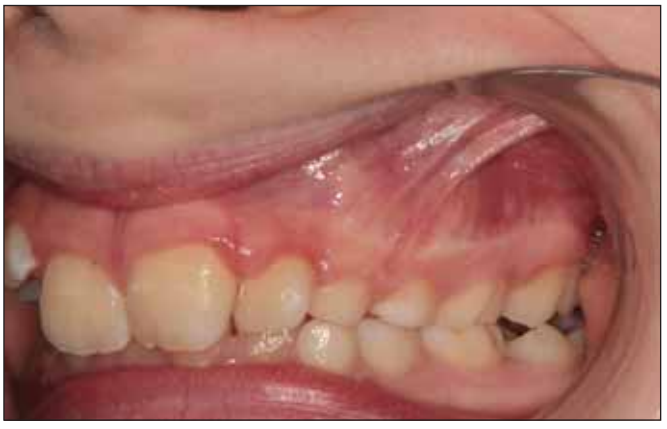
Quiz questions

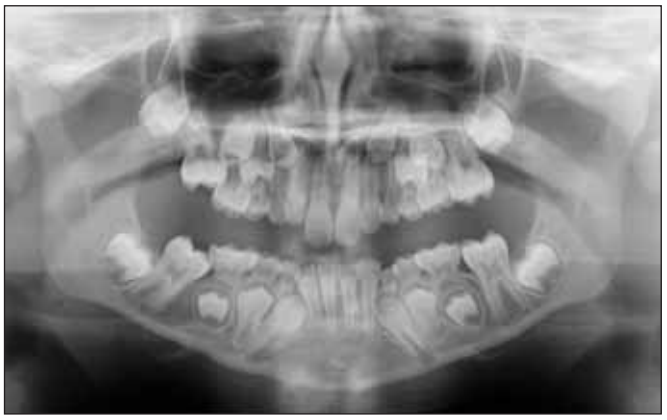
Quiz set by DR CIARA SCOTT, specialist in orthodontics.

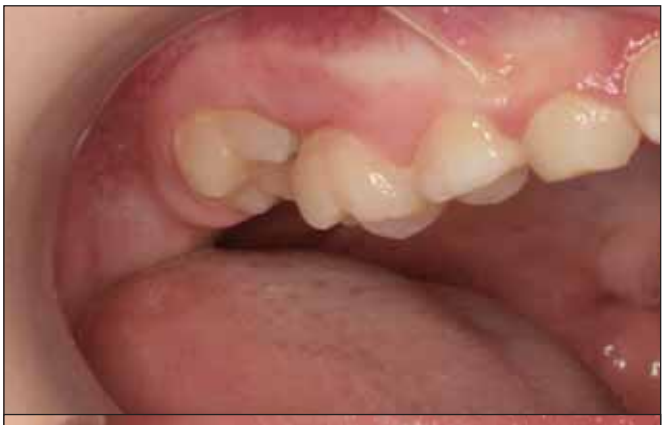
1. What clinical problem has this 8½ -year-old boy presented with?
2. What is the prevalence and aetiology of this disorder of eruption?
3. How can this be managed?

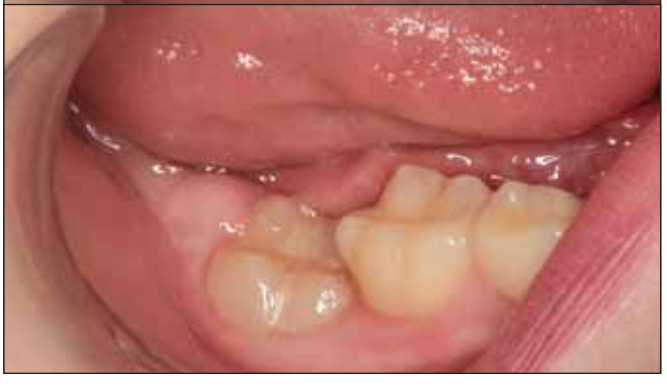












Answers on page 98.

Cork Dental School and Hospital Annual Prizegiving

Professor Finbarr Allen, Dean of the Dental School and Hospital, University College Cork; Eimear Casey, centre, winner of the Colgate-Palmolive Hygiene Award, which is awarded to the student obtaining the highest mark in first year dental hygiene exams; and, Aoife Moran, Colgate-Palmolive.

Professor Finbarr Allen, Dean of the Dental School and Hospital, University College Cork; Barbara Carey, centre, winner of the Colgate-Palmolive Prize in Preventive Dentistry for the Best Performance in Preventive and Paediatric Dentistry; and, Aoife Moran, Colgate-Palmolive.

CDSoft launches sample website

CDSoft has launched www.cdsoft.ie/demodental, a sample dental website targeted towards Irish dentists. This announcement follows the IDA Metro Branch Annual Scientific Day February, where Mr Steve Cartin made some interesting comments about practice management and marketing. Mr Cartin discussed the Dental Council's revised marketing policy, and suggested various marketing approaches to Irish dentists that can benefit their dental practice.

www.cdsoft.ie/demodental is a sample website that allows prospective customers to 'window shop' before they make an appointment. It includes a location map, a section on the various types of procedures that are available at the surgery and the facility for prospective patients to book appointments online and upload their personal medical history.

David Walsh, Business Systems Director, CDSoft Ltd. and, right, a screen shot of the new website.

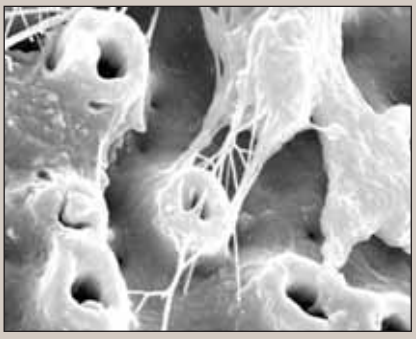
CDSoft urges all dentists to visit this site and get a feel for ways to market their practice. This website is just a sample and CDSoft would welcome all feedback and suggestions, which in turn will lead to better ways to market your practice, thus increasing your ability to turn prospective patients into new patients and new patients into loyal customers.

Two new products

GC UK has recently added two new products to their Minimal Intervention programme range. GC Saliva-Check Mutans shows whether a patient carries a high level of *Streptococcus mutan* in the saliva. According to the company, this chair-side diagnostic tool demonstrates whether a patient is at further risk of caries development, without the need for bacterial cultures.

Dry Mouth Gel is a unique, sugar-free product that has been specifically developed to help relieve dry mouths. With a unique neutral pH, it provides ultimate patient comfort combined with an immediate soothing effect.

Several announcements from Nobel Biocare



According to the company, in vivo testing has proven that the moderately rough TiUnite surface enhances the speed at which implants osseointegrate.

At the 144th Annual Chicago Dental Society Midwinter Meeting, Nobel Biocare launched state-of-the-art NobelProcera technology, materials and products, and presented long-term (seven-year) clinical data which, the company says, confirms the success of TiUnite.

With its latest introductions, together with the long-term success of its clinically proven implant surface, Nobel Biocare reinforced its commitment to the market and dental professionals by offering science-based solutions, which exceed the clinical and aesthetic needs of patients.

The 2009 launch of NobelProcera includes a new high-tech optical scanner, the new generation of prosthetic software, and an expanded material product portfolio for the range of cost-effective Nobel Biocare treatment options, particularly for edentulous indications.

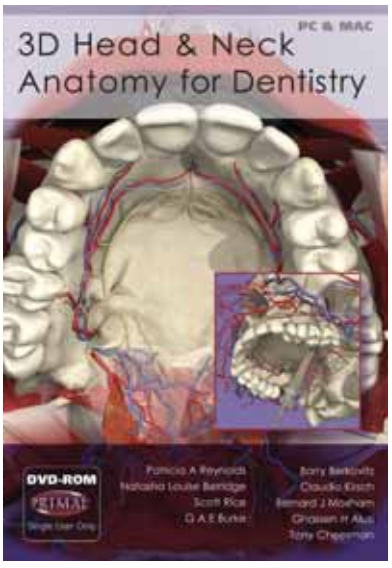
In May 2008, Nobel Biocare introduced its new implant, NobelActive, to the market, delivering exceptional initial stability and allowing for more natural-looking aesthetics. More than 130,000 NobelActive implants were sold in 2008, and for 2009, Nobel Biocare is adding additional lengths, as well as new innovative prosthetic solutions, to the NobelActive product range.

The root-shaped NobelReplace Tapered Groovy implant system has become the most used implant system in the world, having sold more than four million implants to date. The system was designed to perform well in a broad range of bone types, and satisfy both surgical and restorative clinicians' requirements.

The company has also announced a major upgrade of its treatment planning software NobelGuide. According to the company, NobelGuide 3D planning software provides a user-friendly environment that digitally integrates prosthetic demands with the patient's anatomy based on computerised tomography scans.

Nobel Biocare celebrates the tenth anniversary of the development of its proprietary titanium oxide dental implant surface, TiUnite. According to the company, in vivo testing has proven that the moderately rough TiUnite surface enhances the speed at which implants osseointegrate. As a result, the time at risk for implant failure is dramatically reduced during the critical first three months of healing. This effectively shortens treatment times and increases the survivability of immediately loaded TiUnite implants.

3D anatomy software for the dental profession



UK company Primal Pictures has launched a new DVD-Rom developed specifically for the dental profession. According to the company, '3D Head & Neck Anatomy for Dentistry' is a new resource for practising dentists, providing an encyclopaedic 3D image library and reference material to enhance consultations, presentations and teaching.

Users can choose from more than 100 3D views including images of the head, neck, face, oral and nasal cavities, dentition, individual teeth in 3D and cross section, nerves, larynx and pharynx, sinuses, eye and brain. The DVD-Rom also features specialised clinical content, including 3D views of progressive dental conditions such as caries and gingivitis, as well as interactive 3D nerve views of intra-oral injections.

A single user licence DVD-Rom costs €270. Multi-user licence and student pricing is available on request.

The State and the professions

Dermot McCarthy, Secretary General of the Department of the Taoiseach and Secretary General to the Government, addressed members of the Irish Inter-Professional Association on 'The State and the Professions' with particular emphasis on partnership, at the King's Inns in Dublin recently. Pictured at the event were (from left): Sean O'Laoire, President of the Royal Institute of Architects of Ireland; Michael McSweeney, President of the Association of Consulting Engineers of Ireland; and, Dr Helen Walsh, Chairman, GDP Committee of the Irish Dental Association.

Name change and acquisition

Initial Medical Services (formerly known to dentists as Healthcare Waste Management Services) is a leading provider of professional clinical waste solutions to public and private dental practitioners nationwide. The company is a fully licenced, permitted company specialising in the packaging, transport and disposal of all types of clinical, dental, pharmaceutical, bio-hazardous, chemical and controlled healthcare related wastes.

As part of Rentokil Initial Plc, one of the largest business services companies in the world, Initial Medical Services (IMS) has recently acquired Medentex GMBH, the largest amalgam waste treatment facility in Germany. Over 20 years in operation, Medentex services the amalgam and dental waste of over 26,000 dental customers. According to the company, Medentex personnel have passed on their expertise in dental waste management to the Initial Medical Services team. This knowledge has enabled IMS to provide the most modern, cost effective solution for the filtration, separation, collection and treatment of amalgam waste.

Dental amalgam still remains the most popular form of filling material used by the dental profession and usually consists of 50% mercury by weight. Although there has been a reduction in the amount of dental amalgam being used, its mercury content, still remains an environmental problem. Article 4 of the Waste Directive (75/442/EEC) requires that waste must be disposed of without endangering human health or the environment and as such amalgam waste can no longer be discharged down drains to enter the water system. Furthermore amalgam waste from dental care is listed as "hazardous" under the European Waste Catalogue code 18 01 10*. Hazardous Waste is subject to the requirements of the EU Hazardous Waste Directive (91/689/EEC) and the Irish Waste Management Act, 1996 (S.I. No.10), amendments (S.I. No. 146 of 1998, S.I. No. 166 of 1998 and 2002 (S.I. No 36).

All waste amalgam from dental care, is subject to the requirements of these regulations. It is the producers responsibility to ensure that the waste amalgam is segregated, stored, transported and treated in compliance with these regulations. This is a complex process to be undertaken by all producers of hazardous waste, a company such as Initial Medical Services can help with a waste management plan that would help this process run more smoothly.

Amalgam separators

Amalgam separators are an effective way of reducing harmful waste, preventing more than 95% of waste amalgam entering the waste stream. Best practice would suggest that an amalgam separator should be fitted in all dental facilities that use amalgam, not just those that are newly-built. The exact number and placing of the separators will depend on the size and configuration of the facility, they will however need to be placed in such a way to protect all routes by which amalgam may enter the drains.

Amalgam waste has to be stored separately from other waste produced and consigned to a waste management facility with a licence or permit to handle amalgam waste. The regulations prohibit the mixing of hazardous waste with non-hazardous waste, if this should occur all the waste is treated as hazardous, resulting in unnecessarily high waste treatment costs.

Protect your pension fund against stock market falls

With stock markets falling so considerably in the last 18 months, many dentists are looking at their pension funds and wondering what is the best thing to do with their hard-earned pension savings.

What to do when your funds are falling

In certain cases we are recommending to clients that they move their existing savings to a capital secure bond that gives them exposure to the stock markets when they recover. The three-and-a-half-year bond creates a floor for your pension fund, which it can't fall below. This, in essence, stops the upset of seeing your funds continually dropping, which is extremely disheartening. The bond itself has a stock market exposure to it so that if it recovers you will benefit from the gains. Investing in a prudent manner like this gives you the best of both worlds because you have security and potential growth.

Pay your premiums monthly rather than annually

Paying your pension contribution once a year increases the investment risk to your pension fund. By making just one single contribution in November each year you are at the mercy of the markets at that time. If you make your contributions on a monthly basis you get an average of 12 prices within the year. If markets are falling, by investing monthly you benefit by getting a cheaper price each month. Whereas if markets are high and you invest once in a year you can end up with a falling pension fund value very quickly.

Your regular contributions

Because you will need considerable savings in your pension to be able to retire, you need to maintain your regular contributions. For peace of mind you need to invest your regular premiums into funds that have a relatively safe mix of cash, bonds and some equities (depending on your age). At some stage stock markets should turn around again so make sure you can change your investment strategy again in the future.

In summary

The three key things to do to protect your pension are:

1. Move existing savings to a bond that will protect your capital and offer stock market growth in the event of recovery;
2. Reduce your risk by making your pension contributions monthly rather than annually; and,
3. Pay your regular monthly contributions to a secure fund that has reduced stock market exposure until we see some recovery.

Omega Financial Management

JOHN O'CONNOR can be contacted at 01 288 4272, or by email at john@omegafinancial.ie.

What is income protection?

Income protection is a type of insurance which provides you with a replacement income if you are unable to carry out your usual work due to any illness, injury, disability or accident.

Why would you need it?

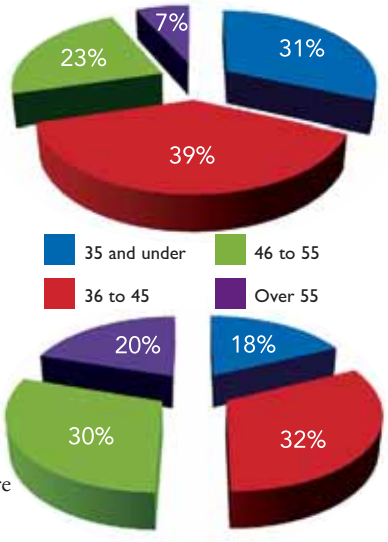
Self-employed dentists are not entitled to social welfare benefits in the event of them being unable to work. This means that if someone breaks a leg in a skiing accident, for example, they literally have no income coming in to support themselves and their families. Public service dentists may be entitled to an ill health pension and some state benefits, which would be quite paltry in comparison to their earnings. One of the great features of this cover is that you get tax relief on your premiums to Irish providers. This reduces the cost considerably.

What is the likelihood of ever having to make a claim?

Here are some figures in relation to the claims experience of one of the main dentist income protection providers:

Female analysis

It is quite staggering to see that 70% of female claimants are 45 years of age or under. 26% of female claims were for musculoskeletal disorders, 14% were for accidents and 12% were for psychiatric disorders. In fact, only 15% of claims were related to cancers and cardiovascular diseases.



Male analysis

Similar to their female counterparts, the higher claims statistics were with psychiatric disorders (18%), musculoskeletal disorders (24%) and accidents (14%). It is interesting to note that exactly half of male claimants were over 45 and half under.

In summary

Because there is little or no safety net for dentists if they cannot work due to illness, protecting yourself with income protection is essential.

Omega Financial Management

DECLAN EGAN can be contacted at 01 288 4272, or by email at declan@omegafinancial.ie.

Something for everyone at Skillkenny

Once again, this year's IDA Annual Conference is not to be missed.

From implants and oral surgery, to antibiotics and pain management, this year's IDA Annual Conference offers a fascinating range of presentations for the whole dental team. The speakers are once again leaders in their respective fields, and bring their expertise to the beautiful Hotel Kilkenny.

The extensive trade show will feature all the latest developments in equipment and technology, and delegates will have plenty of time to view everything the industry has to offer.

The social programme will provide a particular highlight this year, with the attendance of President Mary McAleese and her husband Martin as guests of honour at the Annual President's Dinner on Friday April 24 – surely an occasion not to be missed!

WEDNESDAY 22 APRIL

Practical skills addressed

In the Wednesday pre-conference session, delegates will have two opportunities to attend sessions on paedodontics (with Drs Barbara Coyne and Evelyn Connolly) and oral surgery (with Dr Mark Diamond), which will run in the morning and again in the afternoon. There are also two full-day courses: endodontics with Drs John Dermody, Maria Jennings and Johanna Glennon; and, composite layering, with Dr Paddy Crotty.

THURSDAY 23 APRIL

Association business and topical issues

On Thursday morning, the focus will be on vital Association matters as the IDA Annual General Meeting once again takes place as part of the Annual Conference. This is a perfect opportunity for delegates to participate in the running of the Association, and all are encouraged to attend. Other sessions on the day include 'Problem solving in endodontics', 'Digital radiography', and the intriguingly titled 'Perio from the beginning to the Obama period and beyond'. The thorny issue of dental tourism will also be addressed by Prof. Brian O'Connell.

A Parallel programme in the Orchard Suite will feature presentations on antibiotic prophylaxis for infective endocarditis, and root canal irrigation, as well as a talk on the legal issues that affect dental practioners.

Meanwhile, the hygienists' programme will address pain and local anaesthesia, and finance issues for hygienists.

FRIDAY 24 APRIL

Audience participation

On Friday, Dr Tiernan O'Brien invites delegates to learn from their errors in implant dentistry, while presentations on good planning to avoid complications in implant dentistry, and minimising pain with optimum local anaesthetic techniques, will add to the sum of delegates' knowledge. Dr Jimmy Steele will explore teeth and dentistry early in the 21st century, and Drs Michael Ormonde and Paul Dowling will 'Ask the audience' about treatment decisions in orthodontics. Afternoon sessions will include presentations on socket placement and wisdom teeth.

The nurses' programme in the Orchard Suite will feature presentations on restorative dentistry, radiography and radiation safety, and medical emergencies in the dental surgery, among others.

Friday will also feature a technicians' programme, where such topics as fixed and removable restorations in implant dentistry, communications, and 'Are you running your lab or is your lab running you?' will be addressed.

SATURDAY 25 APRIL

Ending on a high

There are plenty of reasons to stay on until the afternoon on the final day of the conference, with topical presentations on 'Facial appearance. Any change?', 'Oral surgery in general dental practice', and 'PFM or all ceramic restorations…what's changed, what's stayed the same?' With such a stimulating array of topics, delegates will surely leave the Conference with plenty to think about as they return to work on Monday.

Help wanted

When we work in tandem we can achieve great heights. We'd like you to join us in our endeavours to improve the dental profession throughout the island of Ireland. Please complete the form and we'll send on the details of how you can help.

NAME

ADDRESS

TEL/EMAIL

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Sandyford, Dublin 18.
Tel: +353 1 295 0072
Fax: +353 1 295 0092
Email: info@irishdentalassoc.ie
www.dentist.ie

IDA
irish dental association

The trade show

As ever, this year's trade show will showcase the very best of equipment, medicines and supplies for all aspects of dental practice. The Association is very grateful to the dental trade for their continuing support of the Conference, and of the dental profession, and delegates are invited to take the time to tour the exhibition and see the amazing array of products and services available.

SILVER SPONSORS

1	VOCO GmbH
2	Listerine
3	Sensodyne
9	Straumann
4	SybronEndo/Kerr
5	Software of Excellence
6-7	Dental Medical Ireland
8	Promed

BRONZE SPONSORS

13-14	Dacus Dental/Plandent
19	Kodak Dental
20	Heraeus Kulzer
28	Omega Financial Management
29	MedAccount
32	Oral B
33	NSK
34	Coltene Whaledent
39	Optident/Choice

TRADE STANDS

11	McDowell and Service Dental Lab
12	Astra Tech
21	Healthcare Waste Management Services
22	Celtic Marketing
23	Image Diagnostic Technology
24	Karma Dental
25	DP Medical Systems
26	Dental Protection
27	Molar Ltd
30	Southern Implants
31	Septodent
35	Geistlich
36	CD Soft
37	Meda
38	Menarini
40	Ardagh Dental
41	Glennon Insurance
42	SDC Laboratories

Workshops and courses

Clinical audit

Dentists will be aware that Statutory Instrument (SI) 478 is the law requiring dentists to adhere to best practice in radiology, while also providing for the health protection of individuals against the dangers of ionising radiation in relation to medical exposures.

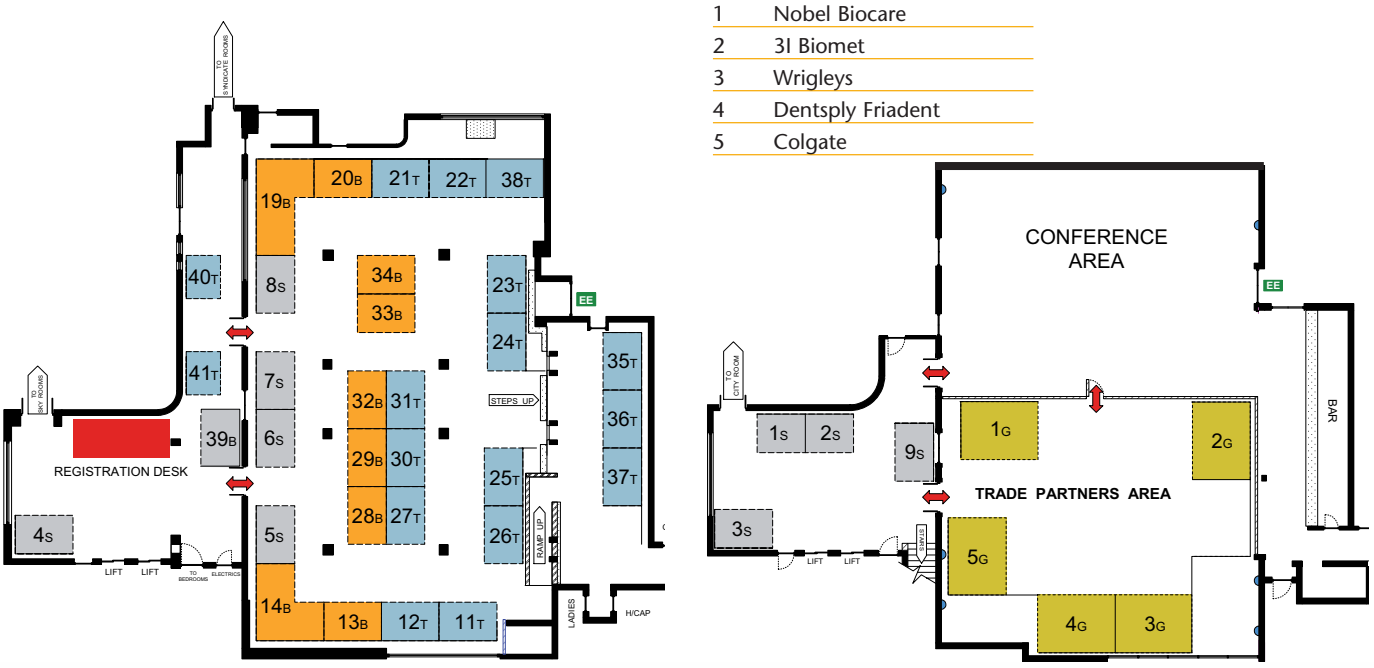
The IDA will run be running clinical audit workshops open to all registered delegates to educate dentists on their legal obligations on Thursday afternoon, Friday morning and Friday afternoon in the Parlour, Hotel Kilkenny.

CPR

CPR is a mandatory requirement for continuing dental education. All registered delegates will have the opportunity to partake in a CPR course on Thursday and Friday, April 23 and 24.

GOLD SPONSORS

1	Nobel Biocare
2	3I Biomet
3	Wrigleys
4	Dentsply Friadent
5	Colgate



A new President

At this year's conference, Dr Ena Brennan will step down as IDA President, and Dr Donal Blackwell will take on the role.

Continuing professional development

With continuing professional development (CPD) becoming mandatory for dentists from 2010, why not start early at this year's Annual Conference? All of the scientific sessions have been approved for CPD credit, and forms will be available for each morning and afternoon session at the accreditation desk in the Conference Registration area.

Awards

Dr Joe Moloney Award

This year sees the continuation of the Dr Joe Moloney Award, kindly sponsored by the Dental Health Foundation. This award will be given to the presentation judged as Best Table Demonstration by a panel of judges. A magnificent glass trophy will be awarded in perpetuity.

Tony Costello Memorial Medal

The competition for the Tony Costello Memorial Medal will be judged on a Table Demonstration or Poster Presentation of not more than 10 minutes on a subject applicable to general dental practice. The Irish Dental Association will make a grant of €400 per demonstration.

Social programme offers fun and philanthropy

This year's Annual President's Dinner will be an undoubted highlight of the Conference as the IDA is privileged to have President Mary McAleese and her husband Martin as guests of honour.

This year, the President's Golf Competition will take place at the spectacular Mount Juliet Golf Club on Saturday April 25, but if that doesn't suit, you can always try the 'Golf Simulator' on Thursday April 23, which makes a welcome return after last year's successful debut. All proceeds will go towards the Belarus Dental Charity.

This charity will also be happy to take donations of old equipment, products, materials, etc. (all in good working order of course) for use in their four dental clinics in Chernobyl. An information desk will be available during the conference to deal with any donations, so get searching!

Don't forget the annual Trade Show Party on Thursday evening, which is sponsored this year by the IDA in recognition of the support of the dental trade for all IDA events.

IDT launches its NEW Low Cost Online service

SimPlant Conversions

From €45

From as little as €45 you can now have any CT/CBCT scans converted into SimPlant View (or SimPlant Planner for €15 more) and take advantage of all that SimPlant offers for implant Planning and Guidance.

Enjoy all of the great services you have experienced from IDT in the past but now at a more cost effective price.

- ✓ **NEW Easy to Use Online Booking**
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Many clinicians have a growing interest in dental implant placement utilizing the benefits of computed tomography (CT) and the desire to accelerate patient provisionalization.

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The instrumentation can allow you to perform cases more predictably and in less time.

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- ***Depth-Specific Instrumentation For Precise Preparation And Implant Placement***
- ***Control Of Hex-Orientation To Fabricate And Deliver Provisional Restorations Immediately Following Surgery***
- ***Open Architecture Compatibility That Provides Freedom To Choose Among Leading Planning Software Solutions And Surgical Guide Manufacturers***
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New Faculty launched

The Irish Faculty of Primary Dental Care was launched in Dublin recently. PAUL O'GRADY spoke to Dr Frank Ormsby about the Faculty.

"Several primary care practitioners, including myself, felt for some time that there was no career structure for those dentists who provide 90% of the patient treatment in this country. General dental practitioners both in private practice and in the public service also needed a way to be recognised for best practice in patient care. Add to this the imminent introduction of compulsory CPD in 2010 and we felt the time was just right to launch our initiative." So says Dr Frank Ormbsy, one of eight dentists who have worked for the last year to set up the new Irish Faculty of Primary Dental Care (IFPDC).

Meeting for the first time in April 2008, Frank and the group set out its primary objectives: to form a Faculty that would provide patients with best practice in dental care and a form of quality assurance; and, to provide a career structure for primary care clinicians. Speaking to the *Journal*, Frank explained that the three current forms of Irish postgraduate dental qualification (MGDS, MFD, and the Diploma in Clinical Dentistry) all served differing purposes, but that none served the vital need for career progression for the general dental practitioner.

"So", he continues, "we looked internationally for a structure that would raise standards for patients and provide a career structure for us. We found that the Faculty of General Dental Practice in England and Wales had succeeded in introducing a very comprehensive package to meet the many needs of primary care clinicians. In partnership with the Faculty of Dentistry in the Royal College of Surgeons in England, they had established the Membership of the Joint Dental Faculties (MJDF) programme. The MJDF programme is now considered by the Faculty of General Dental Practice and by the Faculty of Dentistry of the Royal College of Surgeons in England as the most appropriate type of foundation level postgraduate assessment to kick start all types of postgraduate training in dentistry. The key thing is that it is a route to recognised expertise in primary dental care but it can also serve as a gateway to a specialism, should any dentist choose to take that route."

"An aspect of the management of the Faculty that is essential to the steering group is that primary care practitioners will control and set the agenda for their profession for the future."

Dr Ormsby points out that the Irish Faculty of Primary Dental Care has put the necessary arrangements in place for the first group of Irish dentists to sit Part 1 of the MJDF in April 2010. While this is a significant development for primary care practitioners in Ireland, it is the desire of the IFPDC to work in partnership with the Faculty of Dentistry in the Royal College of Surgeons of Ireland (RCSI) to eventually provide an Irish equivalent to the MJDF, which would retain the core exam structure and thus retain international recognition.

Steering group: The eight dentists who spent the last year working to set up the Faculty of Primary Dental Care were: (back row, from left): Dr Tom Feeney; Dr Garry Heavey; Dr Frank Ormsby; Dr Paul McEvoy; and, Dr Kevin Dunne. Seated, from left: Dr Mary Ormsby; Dr Peter McGonigal; and, Dr Orla McGeary.

An attractive element of the MJDF programme is the submission of a Portfolio of Evidence. The Portfolio essentially contains the paperwork required to confirm that a dentist is complying with all necessary regulations. It is the intention of the Irish Faculty to provide a service whereby dentists who do not wish to take on the examination aspect of the MJDF will be provided with assistance by the Faculty in compiling a Portfolio of Evidence. This document will provide patients and regulators with evidence of best practice and statutory compliance.

Membership

The Steering Group that led to the formation of the Faculty wrote to approximately 1,300 primary care practitioners in 2008. Since December 2008 the Faculty has built up a membership of almost 300 dentists and hopes to attract others in the wake of the launch function and its associated publicity. An aspect of the management of the Faculty that is essential to the steering group is that primary care practitioners will control and set the agenda for their profession for the future. "We're delighted that in such a short space of time we have succeeded in gaining the support of so many of our colleagues. It's the first step in what we believe will be a very important development for primary care dentists in Ireland," says Frank.

Patients' rights and workforce issues

Honorary CED Treasurer TOM FEENEY gives a summary of recent developments in Europe.

Draft Directive on the application of patients' rights in cross-border healthcare

The draft Directive continues to be discussed in the European Parliament, where votes in several committees were delayed as a result of a debate on the correct legal basis for the Directive. The vote in the ENVI committee remains scheduled for March 12, and the vote in the plenary for April 21 to 23. The draft Directive is likely to be discussed by EU health ministers at the Employment, Social Affairs, Health and Consumer Affairs Council of June 8-9, 2009, but many officials, including EU Health Commissioner Vassiliou, have already signalled that the adoption of the proposal could be delayed at least until the autumn. Among the most controversial issues are the scope of prior authorisation from national authorities for patients to obtain treatment abroad, the obligation for Member States to set health and safety standards, and the possible negative effects of increased patient mobility on vulnerable national healthcare systems.

Green Paper on the European workforce for health

The European Commission has so far received very few replies in the open consultation on the European healthcare workforce. The consultation runs until the end of March and the replies will feed into the Commission's decision on the way ahead. Two options being considered are a White Paper and a Council recommendation. The Commission expects that most responses will focus on issues of recruitment, training and retraining, and professionals' mobility. The CED Internal Market Task Force discussed the Green Paper at its meeting on January 31 and will prepare a CED reply for the consultation.

Patient safety

The European Parliament's ENVI committee began discussing the proposal for a Council recommendation on patient safety, including the prevention and control of healthcare-associated infections, on February 17, 2009. The ENVI rapporteur, Amalia Sartori, generally welcomed the proposal, but suggested that concrete targets for reduction of infections be set (20% by 2015), that more nurses specialising in infection control be recruited, and that education on resistance to antibiotics for medical and paramedical professions be promoted. The vote on the report in the ENVI is scheduled for March 31 and the vote in the plenary for April or May. Meanwhile, the proposal for Council recommendation on patient safety is also being discussed among representatives of Member States in the Council, who are reportedly positive about the document. However, for procedural reasons the Council does not have to abide by the European Parliament's report and is not likely to agree on concrete targets for reduction of infections.

Fluoride

The European Commission is finalising a draft mandate on the evaluation of the potential risks that may be associated with exposure to fluoride from all sources. The mandate will include a review of the updated hazard/toxicity information on fluoride (since the 2005 evaluation), information on exposure from all anthropogenic and natural sources, and an evaluation of the most common substances that are used in water fluoridation. The Commission intends to submit this new mandate to the new Scientific Committees at the end of March 2009. The CED is in contact with the Commission.

Tooth-whitening products

The European Commission has again postponed the discussion on a proposal to amend the Cosmetics Directive in line with the opinion by the Scientific Committee on Consumer products, adopted on December 18, 2007. The Commission intended to present the proposal at a meeting in mid-February 2009, but now reports that it is still working on the document.

Molar incisor hypomineralisation: clinical management of the young patient

Précis

Molar incisor hypomineralisation, identified in recent years, is a relatively common dental finding. This article reviews its presentation and clinical management.

Abstract

Molar incisor hypomineralisation (MIH) is a common developmental condition resulting in enamel defects in first permanent molars and permanent incisors. It presents at eruption of these teeth. Early diagnosis is essential since rapid breakdown of tooth structure may occur, giving rise to acute symptoms and complicated treatment. The purpose of this article is to review MIH and illustrate its clinical management in young children.

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Introduction

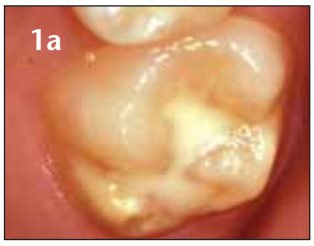
Molar incisor hypomineralistion (MIH) was introduced as a definitive clinical entity by Weerheijm in 2001.[1] She defined MIH as hypomineralisation of systemic origin affecting one, two, three or all first permanent molars (FPMs) and the permanent incisors. Enamel defects can range from mild opacities, white or yellow in colour, to severe enamel involvement, which breaks down rapidly shortly after eruption.[1,2,3]

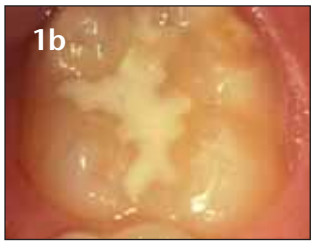
The severity of MIH may vary greatly. Some opacities, which appear mild, may have significant subsurface porosity leading to surface disintegration after eruption. This post-eruptive breakdown may manifest itself quickly once the affected tooth is under occlusal load.[1] Variability also exists in relation to the affected teeth. One to four molars may be affected and with varying degrees of severity. It may be asymmetrical but should an FPM be severely affected the contralateral molar is more likely to be affected.[2] Permanent incisor involvement is also variable. Frequently, the incisors are not affected and when involved, the severity of the hypomineralisation is usually less than that of the affected molars. Affected incisors rarely exhibit post-eruptive breakdown, and this is likely to be due to lack of occlusal loading on these teeth.[2,4]

Little data exists on the prevalence of MIH. In Europe, reported prevalence ranges from 2.4 to 25%.[5,6] MIH prevalence can be high in otherwise low caries populations.[7] The aetiology of MIH is unknown. Given the degree of enamel disruption that may present, an underlying prolonged systemic upset of ameloblast function is a likely explanation. Thus, a range of causative factors known to disrupt enamel formation, including environmental toxins, prematurity, asthma, exposure to dioxin, prenatal, perinatal and neonatal medical problems, respiratory diseases, low birth weight, disturbances of calcium/phosphate metabolism, otitis media and febrile childhood diseases have been considered in MIH.[1–5]

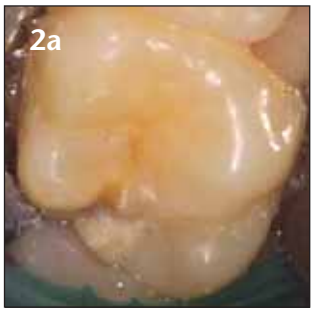
Problems specific to MIH in a young child

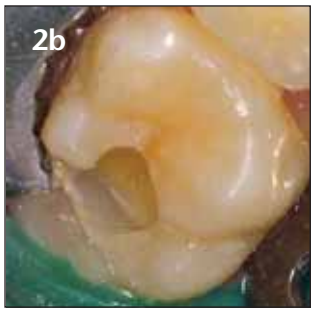
MIH presents with the eruption of the FPMs and permanent incisors. Therefore, at age six to eight years significant dental treatment may be required, which can prove a challenge in such a young age group. Hypersensitivity is a common complication of MIH, making oral hygiene and eating difficult, while further compromising the defective teeth.

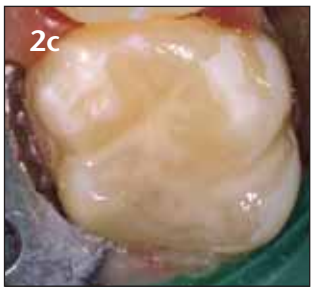




FIGURES 1a and 1b: *Clinical occlusal views of 'mildly' affected FPMs in a child aged seven years with MIH. Preventive fissure sealants are in place. Note that these molars must be kept under regular review. Any further post-eruptive enamel breakdown is best treated with a composite restoration.*







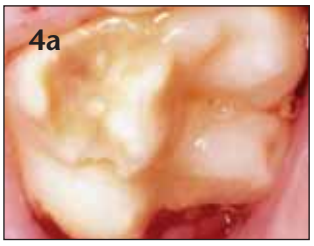
FIGURES 2a, 2b and 2c: *Pre-operative, preparation and postoperative clinical occlusal views illustrating the placement of a composite resin restoration in a 'moderately' affected maxillary FPM in a child aged eight years with MIH.*

FIGURES 3a and 3b: *Clinical occlusal views of failed composite restorations in two cases of hypopmineralised FPMs. As with fissure sealants, composite restorations must be reviewed regularly due to the ongoing risk of enamel breakdown in MIH.*

Hypersensitivity may also complicate the clinical management of MIH. When present, profound analgesia will be essential for all procedures. Therefore, even non-invasive preventive clinical procedures such as fissure sealants may pose significant discomfort for these young children, increasing their anxiety and causing behaviour management problems.

The rapid post-eruptive enamel breakdown that may arise in MIH poses another clinical problem for this group of children. By the time the affected molar is fully erupted, preventive measures may no longer suffice and a more extensive restoration is needed. Should the degree of severity warrant a more radical solution to care, an endodontic or orthodontic opinion should be sought. A combined team approach to treatment planning will maximise options and ensure the best treatment outcome. Incisor involvement may give rise to aesthetic problems, which again require early intervention to deal with unsightly defects or opacities.

Optimal treatment should be established on a case-dependent basis. The child's compliance, severity of hypomineralisation, occlusion, extent of treatment required, financial cost, investment of time, and the long-term prognosis of the teeth are just some of the many factors that may determine the appropriate treatment option.



FIGURES 4a and 4b: *Clinical occlusal views of a 'severely' affected maxillary FPM in a child aged eight years with MIH. A stainless steel crown providing complete crown coverage has been used.*

Management of affected first permanent molars in MIH

There is no universal classification for MIH. The hypomineralised areas have been classified by Alaluusua *et al*[5] as mild (colour change: white, yellow or brown), moderate (loss of enamel only) and severe (loss of enamel in associaton with affected dentine).

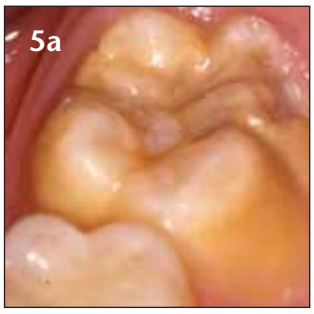
Fissure sealants are the treatment of choice in 'mildly' affected cases, where the enamel appears to be of good quality and clinical and radiographic investigations have confirmed that the molar is caries free (**Figures 1a and 1b**). It is important that even mild cases are checked regularly, at least two to three times annually. Post-eruptive enamel breakdown remains a risk. Should it occur, a composite restoration can be placed in an appropriate and planned timeframe.

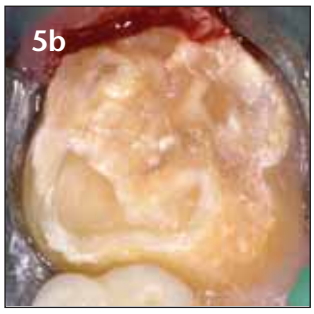
In 'moderate' cases, where the enamel/dentine defect is well demarcated and confined to one or two surfaces, composite restoration is the treatment of choice. Using standard etching, bonding and composite packing procedures, composite materials adhere well and show good occlusal wear resistance (**Figures 2a, 2b and 2c**).

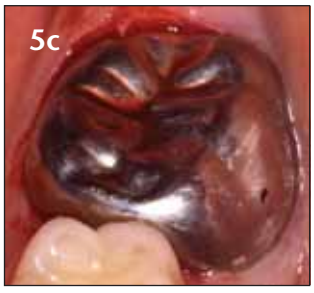
Following placement of the composite restoration using good isolation (ideally rubber dam), the remaining pits and grooves should be fissure sealed as an additional preventive measure.

Composite restorations in hypomineralised molars should be reviewed very frequently. Further breakdown of affected enamel can occur at the restoration margins. In this event, another larger composite restoration or a different treatment procedure, e.g., stainless steel crown, will be required.

In 'severe' cases of MIH there is frequently cuspal, with or without pulpal involvement (**Figures 4a to 5b**). The treatment options are either restoration or extraction. A combined endodontic-orthodontic opinion is essential in such cases. Factors such as the occlusion,







FIGURES 5a, 5b and 5c: *Clinical occlusal views of a 'severely' affected mandibular FPM illustrating the preparation and placement of a stainless steel crown. Note the chalky appearance of the enamel, which was friable and easily removed with a steel bur in a slow handpiece.*

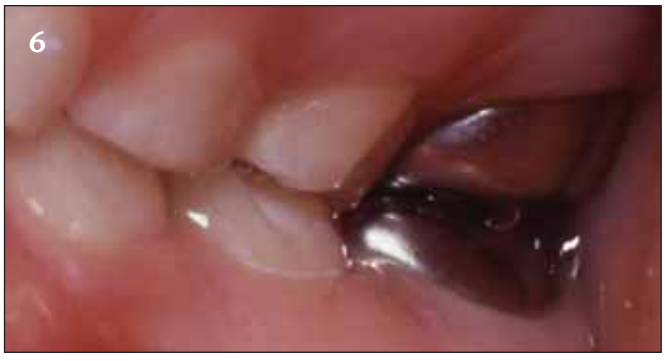


FIGURE 6: *Clinical buccal view of two 'severely' affected molars in a child aged eight years with MIH. Note that the correct occlusal height was achieved.*

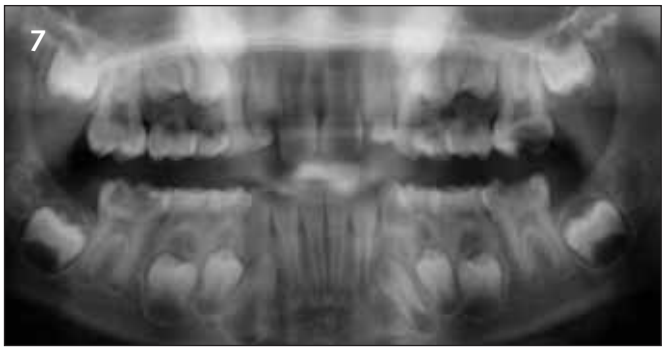


FIGURE 7: *Radiographic OPG view of a child aged eight years with MIH. All four molars are 'severely' affected. Note root development of the second permanent molars. In MIH cases where extraction is under consideration, it is important to check for the presence of the third permanent molars.*

presence or absence of crowding, overall dental development, missing or malformed teeth, and long-term prognosis will determine the decision to retain or extract the affected molars.

Where restoration is the chosen option, full molar crown coverage is the treatment of choice. Preformed stainless steel crowns (3M ESPE) are very successful in restoring hypomineralised molars. In addition to protecting the crown surface of the affected molar, stainless steel crowns eliminate tooth sensitivity and provide immediate protection from any further loss of tooth structure. Preformed stainless steel crowns are easy to fit, can be placed in one visit and do not necessitate any laboratory expense (**Figures 4a to 6**). The 3M ESPE crowns are anatomically contoured and come in a range of six different sizes for each molar. Glass ionomer cement-containing fluoride is the cement of choice. These preformed crowns are comparatively inexpensive and have been shown to last in excess of 10 years. It is advisable to replace them with custom-made crowns when the child reaches their late teenage years and gingival maturation is complete.

One precaution to be aware of when placing preformed stainless steel crowns on permanent molars is to ensure that they are inserted at the correct occlusal height. This is easily achieved by reducing the excess length of the preformed crowns with a curved scissors, then smoothing the margin with an abrasive stone and crimping with an Adams pliers, before cementing (**Figure 6**).

Another option for the management of 'severe' cases of MIH is extraction. However, this may be the least satisfactory approach. Depending upon the number of molars extensively affected, extraction of all four molars as part of a planned orthodontic treatment plan may be the most practical approach to care. The timing of extraction of FPMs is now less critical with the extensive use and availability of orthodontic fixed appliances. However, in cases where future orthodontic treatment is not an option, Jalevik and Moller[8] have shown that extraction of FPMs in MIH is still a good treatment alternative. Favourable spontaneous space reduction and development of the permanent dentition positioning can be expected without any intervention in most cases, if extractions are done prior to the eruption of the second permanent molars.

Symptomatic molars may pose a difficulty in ensuring that extractions are carried out at the optimum time. In such cases, a glass ionomer material can be used as an interim restoration to resolve symptoms. This provides time to allow the extractions to be carried out at the projected optimal time as in **Figure 7**.

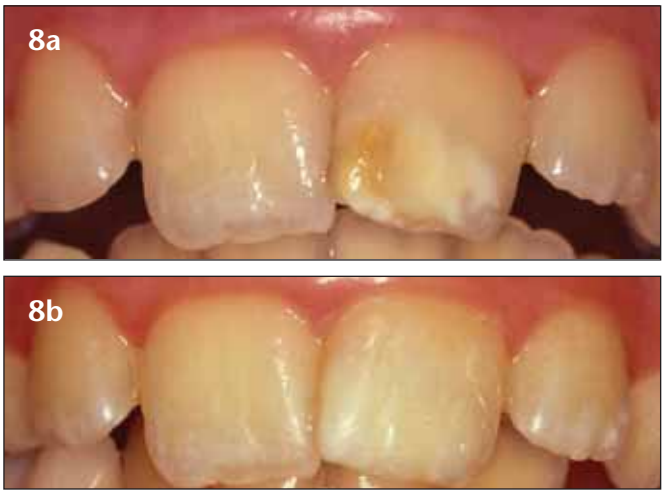
The endodontic option in the treatment of severely affected molars in MIH is a dilemma. The high level of compliance, time, effort, and financial cost in undertaking the endodontic treatment, with the subsequent need for crowning these molars in such young children, needs to be weighed against the long-term prognosis for these heavily restored teeth.

Management of hypomineralised incisors in MIH

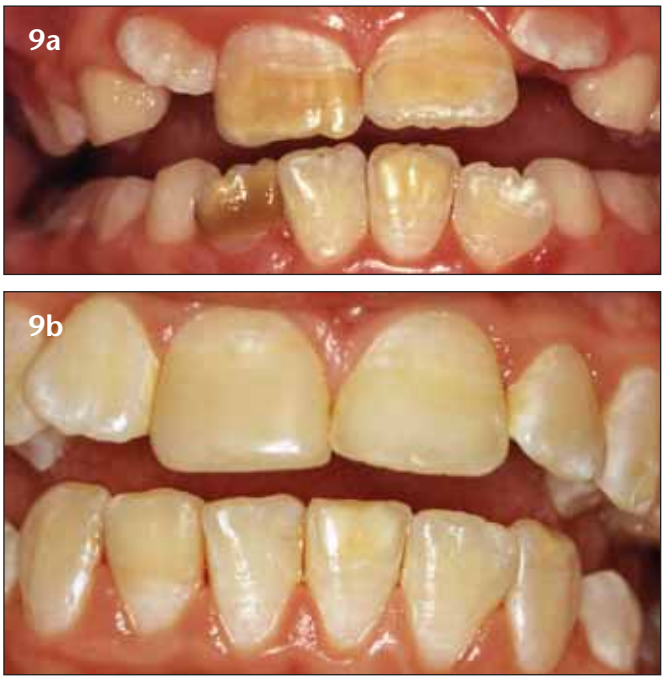
Incisor involvement is variable. Not all patients with MIH exhibit enamel opacities on their permanent incisors. However, the prevalence of this feature may exceed 30% in some populations.[9] Treatment of the affected incisors in MIH will be determined by the severity of the condition. Aesthetic considerations are the prime factors in intervention in such cases, as the affected incisors rarely exhibit post-eruptive breakdown since they are not subjected to the heavy occlusal loading sustained by FPMs.

The incisal opaque defects usually extend through the full thickness of

enamel so that acid/pumice micro-abrasion techniques tend to produce little improvement in appearance when used alone.[4] Bleaching may improve yellow brown discolouration but is unlikely to improve the underlying opacity. Unsightly opacities and defects on permanent incisors of young children can be successfully masked using direct composite veneers. Minimal enamel preparation is essential. Use of opaquers helps to preserve tooth structure and provides an improved aesthetic result (**Figures 8a to 9b**). These composite veneers can be modified or replaced with porcelain veneers later if desired, when dental and gingival development is complete.



FIGURES 8a and 8b: *Clinical pre-operative and postoperative views of a child aged nine years with a 'mildly' affected maxillary left central incisor treated with a direct composite veneer.*



FIGURES 9a and 9b: *Clinical pre-operative (nine years) and postoperative (11 years) labial view of a child with a number of incisor opacities. Direct composite veneers were used on the maxillary central incisors and on the mandibular central incisors and right lateral incisor (which was the most discoloured tooth).*

Conclusions

In recent years an increasing number of children are attending their dentist because of molar sensitivity, unsightly appearance of incisors or 'crumbling back teeth', all indicators of MIH. It is important that MIH is diagnosed early. This ensures that appropriate treatment can be provided and in an optimum timeframe. It also ensures that the risk and complications of post-eruptive enamel breakdown are minimised. A comprehensive assessment of the affected teeth, including clinical and radiological investigations, will determine the extent and severity of the condition. Referral for an orthodontic and/or endodontic opinion may be necessary in severe cases of MIH.

Treatment options are case dependent. Affected incisors can be treated successfully with conservative direct composite veneers. Treatment of affected molars may range from preventive fissure sealants, to composite restorations, to preformed stainless steel crowns. Extraction of severely affected molars is a viable option if done as part of a structured orthodontic treatment plan, taking into account the child's overall long-term dental health. Endodontic treatment may be required where retention of the severely affected molar is necessary. In all cases of MIH, it is essential that the young child be reviewed on a regular basis in order to assure their long-term dental health.

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Factors associated with postoperative sensitivity of amalgam restorations

Précis:
Younger patients, females, and pre-operative sensitivity to cold may be predictive of postoperative sensitivity following placement of amalgam restorations.

Abstract:
Postoperative sensitivity is a common clinical problem with restorative treatments. Study aims: To identify factors that may be predictive of reported postoperative sensitivity to cold following placement of class I and II amalgam restorations in primary carious lesions.

Materials and methods:
One hundred and twenty patients were recruited. Patients were telephoned on days two and seven postoperatively and asked about sensitivity to cold and its intensity. If sensitivity remained up to day seven, patients were also contacted on days 30 and 90.

Results:
Of the 51 teeth that had sensitivity at day two, 17 experienced mild pain, 26 were moderately painful and eight had severe pain. The percentage of females experiencing postoperative sensitivity was higher than that of males at days two, seven and 30 (P=0.000, 0.016 and 0.028, respectively). Younger patients reported significantly more postoperative sensitivity than older ones at day two (P=0.010) but not at days seven and 30 (P=0.157 and 0.877). Postoperative sensitivity did not differ among the different tooth types at days two, seven and 30 (P=0.219, 0.236 and 0.338, respectively), nor with respect to class I and class II cavities at days two, seven and 30 (P=0.219, 0.769 and 0.259, respectively). Patients who had some pre-operative pain had significantly more postoperative sensitivity (P=0.000, 0.000, and 0.004 at days two, seven and 30, respectively).

Conclusions:
Regression analysis suggested that younger patients, females, and pre-operative sensitivity to cold might be predictive of postoperative sensitivity following placement of amalgam restorations.

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Introduction

Postoperative sensitivity following the routine placement of an amalgam restoration continues to be an unpredictable problem in restorative dentistry.[1-3] It is usually encountered during the first few days following placement of the restoration,[4] although its incidence and severity varies between studies. In one study, about one-quarter of patients with new amalgam restorations experienced postoperative pain,[5] while elsewhere, half of the study subjects reported postoperative sensitivity.[1]

Microleakage around the margins of the newly placed restoration is believed to be one of the main causes of postoperative pain. The most accepted explanation for tooth sensitivity is known as the hydrodynamic theory.[6] According to this theory, fluid movement in the dentinal tubules will be interpreted as pain by pulpal mechanoreceptors.

Corrosion products from dental amalgam are believed to produce a gradual reduction of postoperative sensitivity through obliteration of the tooth restoration interfacial space.[7] However, this may take several months to occur, and a variety of bases and liners have been used to compensate for the initial period of postoperative sensitivity.[8] Cavity varnishes have been routinely used under amalgam restorations to act as interim sealers while corrosion products form.[9] Traditionally calcium hydroxide was used as

a cavity liner,[10] but more recently, dentine bonding agents and amalgam bonding have gained popularity as cavity liners.[11,12,13] The use of glass ionomer cements as a base under amalgam restorations has been found to reduce sensitivity to cold.[14] Furthermore, disinfection of the cavity preparation prior to restoration is gaining wider clinical acceptance.[15,16]

Studies have shown that the depth of the cavity is a significant factor to be considered in relation to postoperative sensitivity.[17,18] On the other hand, Gordan *et al* found no clinical difference in postoperative sensitivity experienced by patients following placement of amalgam restorations in cavities of different depths.[19]

Many biological variables, treatment factors and restorative considerations can potentially have an effect on the outcome of restorative treatment. However, few attempts have been made to study these variables. In a previous paper, we found that both the depth of the lesion and the nature of cavity treatment affected the postoperative sensitivity reported by patients.[20] There is little published information regarding other factors that may also contribute to the occurrence and severity of postoperative sensitivity. The purpose of this study was to identify variables that may be predictive of postoperative sensitivity reported by patients following restoration of primary carious lesions with amalgam restorations.

Material and methods

Patients attending for routine restorative care at the Faculty of Dentistry, Jordan University of Science and Technology, were consecutively screened for inclusion in the study on the basis of the following criteria: each patient had to have a diagnosis of a primary carious lesion that required either a class I or a class II amalgam restoration, the diagnosis having been established by clinical examination and verified by standard bitewing radiographs. Patients having replacement amalgam restorations were excluded from the study, as were those who were taking medications that could interfere with pain perception. Patients who were obviously apprehensive and anxious about the treatment were also excluded from the study. All other patients were randomly distributed to the various groups. Fully informed consent was obtained from patients for their participation in the study. The research was approved by the Deanship of Research, Jordan University of Science and Technology, as well as the University's Human Rights Committee.

One hundred and twenty patients were included. All the restorations were placed by dental students working under the close supervision of members of staff of the Department of Restorative Dentistry who, in turn, had been fully apprised of the purpose of the study by the investigators.

Lesions limited to the outer one-third of dentine were excluded from the study, with the result that the sample comprised patients with middle third and inner third lesions only. For each of the two groups, patients were randomly and evenly assigned among one of five groups based on the treatment of the dentine after cavity preparation, and a group that received no pre-treatment prior to amalgam placement (**Table 1**). Patients with pre-operative symptoms were included in the study. Manufacturers' instructions were followed for each pre-treatment material that was used.[18] After that, teeth were restored with a dispersed-phase amalgam (Amalgam 48, TNMC Medical Devices Ltd., Guildford, UK), carved and burnished. Restorations were carefully checked for appropriate occlusion.

Table 1: Materials used in the study.

Group	Manufacturer	Clinical procedure
1		▸ Rinse with water ▸ Dry without desiccating ▸ Amalgam condensation
2	Life Regular Set, Kerr, Salerno, Italy	▸ Rinse with water ▸ Dry without desiccating ▸ One layer Life applied ▸ Amalgam condensation
3	Copalite Varnish, Cooley & Cooley Ltd, Houston, TX, USA	▸ Rinse with water, dry without desiccating ▸ Two separate coats applied ▸ First layer dried with air syringe, second layer air dried ▸ Amalgam condensation
4	Vitrebond, 3M ESPE, St Paul, MN, USA	▸ Rinse with water, then dry gently ▸ Vitrebond applied, light cured for 40 seconds ▸ Amalgam restoration placed
5	Single Bond, 3M ESPE, St Paul, MN, USA	▸ Etch for 15 seconds and rinse for 10 seconds ▸ Moisten ▸ Single Bond applied, and light cured for 20 seconds ▸ Amalgam restoration placed
6	Consepsis, Ultradent Products Inc., UT, USA	▸ Two separate coats applied ▸ Each layer air dried for 40 seconds ▸ Amalgam restoration placed

All patients were contacted by telephone on days two and seven postoperatively. They were questioned about the presence or absence of postoperative sensitivity to cold. If sensitivity was reported, they were asked to specify its intensity according to an ordinal rating scale from 0-3: zero: no sensitivity; one: slight sensitivity; two: moderate sensitivity; and, three: severe sensitivity. Any patient who was found to experience sensitivity or discomfort seven days after placement of the restoration was contacted again at 30 days and 90 days to assess the degree of sensitivity at those times.

After data collection, the results were entered into a computer and differences in reported postoperative sensitivity with respect to gender and age of the patient, tooth type, tooth location (upper or lower jaw), classification of the cavity and presence or absence of pre-operative pain were analysed using the Mann–Whitney rank sum test and the Kruskal–Wallis test at a significance level of $P<0.05$, with SPSS Software, version 11 (SPSS, Chicago, IL, USA). After dichotomisation of variables, postoperative sensitivity (present or absent), age of the

Table 2: Frequencies of degrees of severity of postoperative sensitivity according to gender at day two.

Gender (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
Male (55)	9	6	0	15 (27.3)
Female (65)	8	20	8	36 (55.4)
Total (120)	17	26	8	51 (42.5)

Wilcoxon rank sum (Mann–Whitney) at days two, seven and 30, P=0.000, 0.016, 0.028.

Table 3: Frequencies of degrees of severity of postoperative sensitivity according to patient age (years) at day two.

Age (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
11-20 (20)	2	9	0	11 (55.0)
21-30 (47)	9	11	3	23 (48.9)
31-40 (26)	6	2	5	13 (50.0)
41-50 (17)	0	4	0	4 (23.5)
51-60 (7)	0	0	0	0 (0.0)
61-70 (3)	0	0	0	0 (0.0)
Total (120)	17	26	8	51 (42.5)

Kruskal–Wallis test at days two, seven and 30, P=0.01, 0.157, 0.877.

Table 4: Frequencies of degrees of severity of postoperative sensitivity according to tooth type at day two.

Tooth (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
Upper molar (44)	5	8	5	18 (40.9)
Upper premolar (20)	4	2	0	6 (30.0)
Lower molar (51)	8	15	3	26 (50.9)
Lower premolar (5)	0	1	0	1 (20.0)
Total (120)	17	26	8	51 (42.5)

Kruskal–Wallis test, P=0.219.

Table 5: Frequencies of degrees of severity of postoperative sensitivity according to jaw at day two.

Tooth (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
Upper jaw (63)	9	10	5	24 (38.1)
Lower jaw (57)	8	16	3	27 (47.4)
Total (120)	17	26	8	51 (42.5)

Wilcoxon rank sum (Mann–Whitney), P=0.325.

Table 6: Frequencies of degrees of severity of postoperative sensitivity according to class of cavity at day two.

Cavity type (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
Class I (75)	8	18	3	29 (38.7)
Class II (45)	9	8	5	22 (48.9)
Total (120)	17	26	8	51 (42.5)

Wilcoxon rank sum (Mann–Whitney), P=0.322.

Table 7: Frequencies of degrees of severity of postoperative sensitivity in relation to presence of sensitivity before restoration at day two.

Pre-operative sensitivity (n)	Degree of postoperative sensitivity			Total (%)
	Mild	Moderate	Severe	
Absent (79)	16	7	1	24 (30.4)
Present (41)	1	19	7	27 (65.9)
Total (120)	17	26	8	51 (42.5)

Wilcoxon rank sum (Mann–Whitney), P=0.000.

patient (≤30 years or >30 years) and tooth type (premolar or molar), multivariate logistic regression analysis with postoperative sensitivity as the dependent variable was performed. The odds ratios (OR) and 95% confidence intervals (CI) were calculated.

Results

The study sample was made up of 55 males and 65 females. **Table 2** shows the frequencies of different degrees of postoperative sensitivity according to gender at day two postoperatively. The percentage of females with postoperative sensitivity was significantly higher than that of males at day two (P=0.000), seven and 30 postoperatively (P=0.016 and 0.028, respectively).

There were significant differences among the different types of treatment/liners, with dentine treatment with chlorhexidine producing the fewest sensitive teeth, followed by the cavity varnish group; however, the differences between liners was not significant at day 90.[19]

The age of the patients ranged from 16 to 65 years, with a mean age of 28 years. The distribution of sensitivity among the age groups on day two is shown in **Table 3**. A statistically significant difference between the age groups was evident at day two (P=0.01), but not at days seven and 30 (P=0.157 and 0.877, respectively). When the total sample was grouped into ≤30 year olds (n=57) and >30 year olds (n=63), the difference between the two groups at day two was significant (P=0.001), but not at days seven and 30 (P=0.104 and 0.593, respectively).

Table 4 shows the frequencies of positive reports of postoperative sensitivity according to tooth type. Molars outnumbered premolars in the total number of teeth restored, and no significant differences among the different types of teeth were evident at day two, at one week and at one month (P=0.219, 0.236 and 0.338, respectively). Similarly, there was no significant difference in reported sensitivity between teeth in the upper and lower jaws at day two, at one week and at one month (P=0.325, 0.902 and 0.231, respectively) (**Table 5**). Frequencies of different degrees of severity of postoperative sensitivity according to class of cavity showed no significant difference between the two groups at day two, at one week and at one month (P=0.219, 0.769 and 0.259, respectively) (**Table 6**).

Table 7 shows the degree of sensitivity at day two in relation to the presence or absence of pain before treatment. Significantly more patients with pre-operative sensitivity experienced postoperative

Table 8: Results of multiple logistic regression analysis, with postoperative sensitivity as dependent variable.

Parameter	Estimate	P-value	Odds ratio	95% CI
Constant	-5.627	0.012		
Gender	1.068	0.020	2.911	1.182 – 7.168
Age	0.720	0.060	2.055	0.971 – 4.350
Tooth type	0.754	0.124	2.126	0.813 – 5.564
Jaw	0.448	0.229	0.639	0.308 – 1.326
Cavity	0.194	0.689	1.214	0.469 – 3.143
Depth	1.068	0.016	3.094	1.234 – 7.757
Pre-operative pain	1.125	0.006	3.080	1.183 – 8.016

sensitivity at day two, at one week and at one month, and the sensitivity in these individuals was also more severe than those without pre-operative pain (P=0.000, 0.000, and 0.004, respectively).

The total number and percentage of patients with postoperative sensitivity at days two, seven, 30 and 90 were 51 (42.5%), 31 (25.8%), nine (7.5%) and zero (0%), respectively. The decreasing reports of sensitivity from day two through to day 30 were significant (P=0.000).

The results of the multivariate regression analysis are presented in **Table 8**, showing that the factors that had a significant effect on postoperative sensitivity were: gender (OR 2.82, CI 1.213-6.575), age (OR 2.05, CI 0.97-4.35) and the presence of pre-operative pain (OR 3.08, CI 1.18-8.02).

Discussion

In clinical studies, variations among operators and patients can be confounding factors. A limitation of this study was the large number of dental student operators. All of the procedures were, however, carried out under close supervision, which might reduce this effect, as might the fact that students may be more inclined to achieve a level of standardisation of technique. Moreover, because the current study is a clinical-based study, all attempts were made to reduce the variability between patients by assigning excluding and including criteria. However, apparently in clinical-based studies, it is almost impossible to eliminate all the variations between large numbers of subjects. To limit any potential cause of perceived pain to one source as much as possible, viz. the study tooth, and therefore not risk confounding the outcome with any other newly restored teeth that were not part of the study, it was ensured that patients in the study received only one restoration each over the duration of the follow-up period. For the same reason, the restoration of differently treated cavities in the same patient would have been an obvious source of error, and was thus excluded as an option. The determination of cavity depths for the purpose of allocating patients to groups was performed radiographically, and confirmed clinically. Lesions in the outer third of dentine were excluded from the study because previous research found that such lesions had less postoperative sensitivity than others.[19]

Microleakage is considered to be a significant cause of postoperative sensitivity, arising from the hydrodynamic effect.[21] According to Brännström,[22] cold water may affect the pulp through microleakage along the interfacial gap of newly placed amalgam restorations that have not yet self-sealed. Microleakage would rapidly create a temperature gradient, resulting in a rapid pulpal response to a cold stimulus. In this study, we used admixed amalgam. Admixed particle alloys have demonstrated less microleakage than spherical particle alloys in laboratory tests.[23]

The prevalence of postoperative sensitivity varies widely among studies. The frequency of postoperative pain was found to range from around 50% in some studies,[4,24] to around 75% of the teeth restored with amalgam in others.[2] In the present study, the prevalence of postoperative sensitivity was around 40%, 30%, 10%, and 0% at days two, seven, 30 and 90, respectively. The reason for the variation in the results between the different studies may be explained on the basis of different materials used, different techniques and different study sample sizes.

Previous research found teeth restored with posterior composite and amalgam restorations not to be different between molars and premolars in their responses to cold stimuli, although teeth in the upper arch were more sensitive to cold stimuli than teeth in the lower arch.[2] In the present study, there was no difference in postoperative sensitivity to cold between different types of teeth or between upper and lower jaws. The difference between results could be due to sample size, our sample having comprised 120 patients while the other study had only 27 subjects.[2] Furthermore, in our study, only one restoration per patient was permitted, while in the cited study between three and four restorations per patient were placed, which, as discussed earlier, can affect the patient's interpretation of the pain response.

Postoperative pain following endodontic therapy has been reported to be no different between males and females, although younger people experienced higher pain levels.[25] In this study, the percentage of females with postoperative pain after routine amalgam fillings was almost three times higher than in males, while younger patients also reported postoperative sensitivity twice as frequently as older ones. This is most likely due to occlusion of dentinal tubules due to secondary dentine formation as an ageing phenomenon.[26]

Previous research found that gender and pre-operative pain experience are important risk factors for pain after successful root canal treatment.[27,28] Our results concur broadly with their conclusions, with the most important factor associated with postoperative pain being the presence or absence of pain before placement of the restoration.

Although the difference was not statistically significant, class II cavities had more postoperative sensitivity than class I cavities (49% vs. 39%). This difference might be explained by the fact that around two-thirds of class II cavities were in the inner third of dentine, while only around one-third of class I cavities were that deep. As the cavity becomes deeper, dentinal tubules increase in number and become wider in diameter.[29] These morphological factors could explain why deeper cavities had more reports of postoperative sensitivity, as well as pain of greater severity.

The present results also agree with previous findings inasmuch as the

degree of postoperative pain decreased with time.[4,16,19] The proportions of those reporting postoperative sensitivity reduced steadily: 43% at two days, 26% at seven days, 8% at 30 days, and none at 90 days.

In interpreting the results of this study, it should be remembered that the results obtained apply to the materials used and the prevailing clinical conditions. Having been carried out in a teaching setting, it cannot be considered representative and thus is not fully applicable in routine dental practice. A further limitation of this study was contacting patients on the phone postoperatively rather than by clinical examination, which may have detracted from reporting accuracy. For greater clarification of the outcomes in general practice, a similar practice-based study seems warranted.

Conclusions

The prevalence of postoperative sensitivity to cold following placement of routine amalgam restorations was 42% at day two postoperatively. Postoperative sensitivity to cold decreases after the first week both in prevalence and severity. Among the different factors that might affect the occurrence of postoperative cold sensitivity, and thus be predictive of the condition, are the depth of the cavity, gender, age and the presence of pre-operative pain. Tooth type, arch location and class of cavity had no effect on the occurrence of postoperative sensitivity to cold after amalgam restoration.

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SCIENTIFIC

IV access in dental practice

Abstract

Intravenous (IV) access is a valuable skill for dental practitioners in emergency situations and in IV sedation. However, many people feel some apprehension about performing this procedure. This article explains the basic principles behind IV access, and the relevant anatomy and physiology, as well as giving a step-by-step guide to placing an IV cannula.

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Introduction

The use of IV access is very common in hospital practice. It is a very effective way of administering fluids and medications. While gaining IV access in patients is a skill seldom used by most dental practitioners, as it is not a requirement of the medical emergencies and resuscitation guidelines,[1] it is relatively easy, once mastered. Dentists should familiarise themselves with this skill, as it is invaluable in administering IV medications such as antibiotics. Dentists who carry out sedation routinely should have received training in the techniques for placing IV cannulae; others may not have received any training in these techniques. The lack of sufficient training may not become apparent until IV access is necessary, such as in the administration of IV antibiotics before transfer to a hospital environment.

The following is a brief explanation of the basic principles, techniques used and complications involved in gaining successful IV access.

Basic principles

IV access is most readily achieved with a peripheral IV cannula. This consists of a slender plastic tube approximately 2.5cm long. This houses a metal inducer needle, which is used for insertion into a vein, usually in the back of the hand or the antecubital fossa of the arm. At the end is a plastic hub, through which fluids and drugs are administered. This is then secured with an adhesive dressing.

An important point to note is that flow rate through the catheter is proportional to the diameter to the power of four. This is according to Poiseuille's law. Poiseuille discovered that increase in flow is proportional to the fourth power of the diameter.[2] Therefore, doubling the diameter of the cannula will increase the flow rate by a factor of 16.

In emergency situations, a needle and syringe technique may be used to inject medications; however, this is a less safe and less stable arrangement than using a secured IV cannula.

Relevant anatomy of the forearm and hand

The veins of the forearm and hand are commonly used in IV access. There is variability in these veins, but common patterns are found.

The veins that drain the fingers unite on the dorsum (back) of the hand to form three large veins, known as the metacarpal veins (**Figure 1**). These drain into the lateral cephalic vein (which is on the thumb side) and medial basilic vein (which is on the little finger side),[3] and can be identified at the hand and wrist.

Of note, the cephalic vein lies in close proximity to the radial artery. This is of little significance in most patients; however, a more superficial position of the radial artery has been reported in up to 1% of cases.[4] This group may be at higher risk of radial artery damage during cannulation.

In the antecubital fossa, the cephalic vein (located laterally) and basilic vein (located medically) are located at the skin fold between the forearm and upper arm (**Figure 2**). Here, both veins are connected by the median cubital vein, which is often visible.

There are several important structures in the antecubital fossa, including the brachial artery, median nerve and cutaneous nerves of the forearm. While these are further below

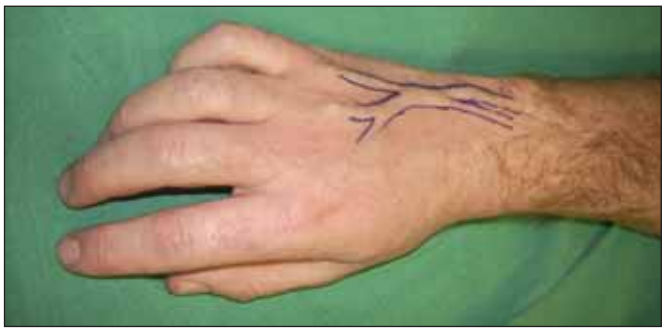


FIGURE 1: *Some of the veins (highlighted) on the dorsum of the hand.*

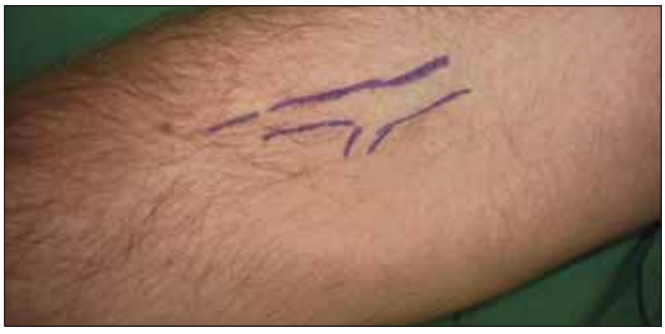


FIGURE 2: *The cephalic and median veins in the antecubital fossa (highlighted).*

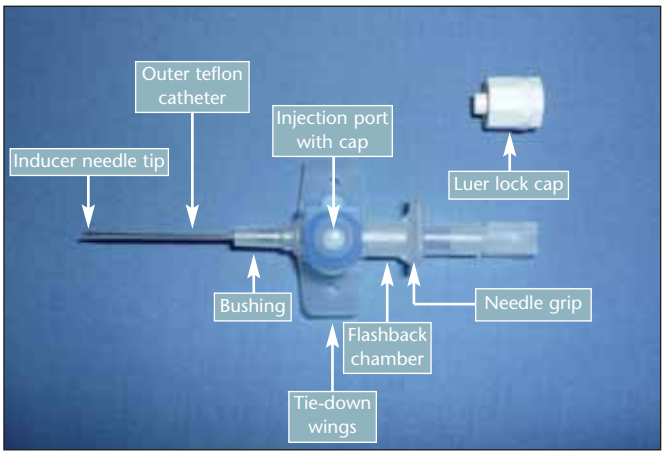


FIGURE 3: *Cannula with the components highlighted.*

FIGURE 4: *Withdrawal of the inducer needle.*

FIGURE 5: *Cannula with the inducer needle withdrawn and the luer lock cap in place.*

the surface of the skin than superficial veins, the brachial artery can be displaced to a more superficial position in up to 9.4%[5] of the population. Since these structures are located more medially, the risk of damage is reduced by selecting veins that lie more laterally in the antecubital fossa.

Relevant physiology

Normal arterial blood pressure is 120/80mmHg. The higher figure represents systolic pressure (pressure generated when the heart contracts) and the lower figure represents diastolic pressure (the lowest pressure that occurs between heart contractions). Pressure in the veins is significantly lower (approximately 10mmHg) than arterial pressure, but this varies with position of the limb.

Tourniquets are used to make veins dilate and make it easier to inject into, or cannulate, the vein. The force applied by the tourniquet should be sufficient to block the vein (but not the artery) and stop blood flowing back through the vein to the heart. This will cause dilation of the vein and allow for easier identification of the vein and placement of the cannula.

The 'triple response' refers to the vascular changes in the skin in response to mild mechanical injury. In practice, this means that mild tapping on the skin with the flat of the hand causes dilation of the veins, which will improve access. Mechanical activity, such as asking the patient to repeatedly form a fist, will cause further engorgement of the veins. This is due to increased activity and a build-up of metabolites locally in the blood vessel. Finally, the application of heat, in the form of a warm, damp cloth, or by placing the patient's hand in warm water (care must be taken to ensure that the temperature is not so high as to cause burns or skin damage), will cause dilation of the vein. Blood vessels dilate in the presence of heat in an attempt to cool the body.

Indications for IV line placement

1. IV sedation.
2. Administration of drugs, e.g., antibiotics.
3. Administration of fluids.
4. Emergency situations – IV access should be obtained early since it will become more difficult if the patient deteriorates.

Complications of IV access

1. Failure of cannulation.
2. Extravasation (entry into the surrounding tissue) of drugs or fluids.
3. Damage to local structures.
4. Bleeding and haematoma formation.
5. Inflammation of the vein or surrounding skin.
6. Fracture of needle or shearing of the cannula.

Preparation for IV access

Preparation is the key to good IV access. It is important that you have all the necessary supplies with you when you place an IV line. In general practice, it is wise to have a kit ready (in case of emergency), including the following:

1. Gloves and protective equipment.
2. Tourniquet.
3. Cannulas of appropriate size (14- to 25-gauge).
4. Alcohol swabs.

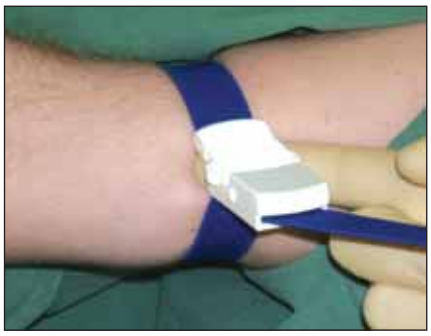


FIGURE 6: *Application of tourniquet.*

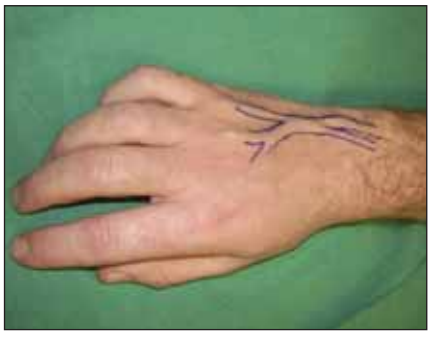
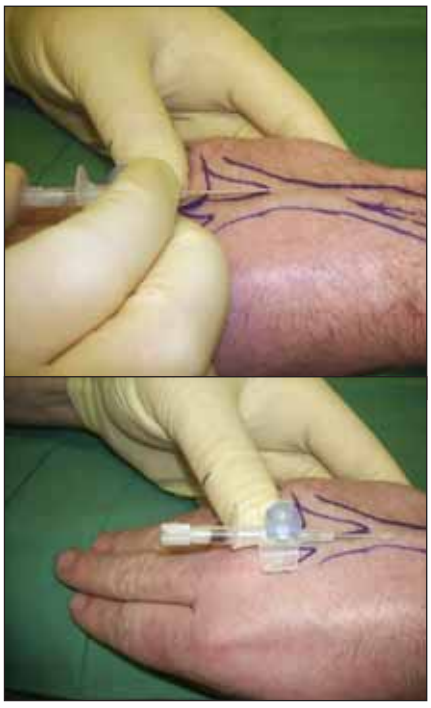
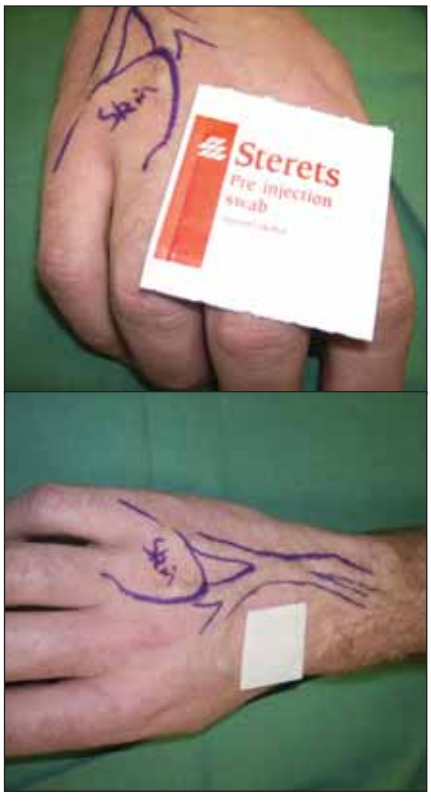


FIGURE 7: *The veins are distended on the dorsum (back) of the hand. They have been highlighted with a marker for the purpose of this demonstration.*

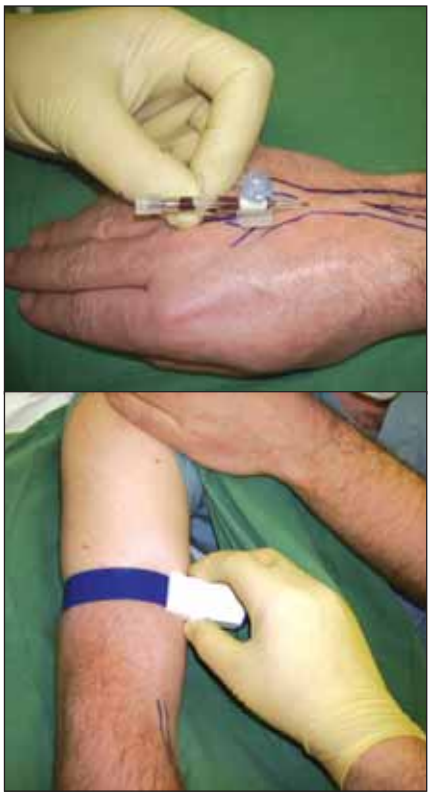


FIGURES 10 and 11: *Insertion of the cannula into the vein. Note the 'flashback' of blood into the chamber.*

FIGURES 14 and 15: *The arm is raised above the level of the heart. The blood can be seen in the chamber.*



FIGURES 8 and 9: *Pre-injection alcohol wipes are used to clean the skin.*



FIGURES 12 and 13: *The cannula is further advanced after the inducer needle is released. The tourniquet is released.*

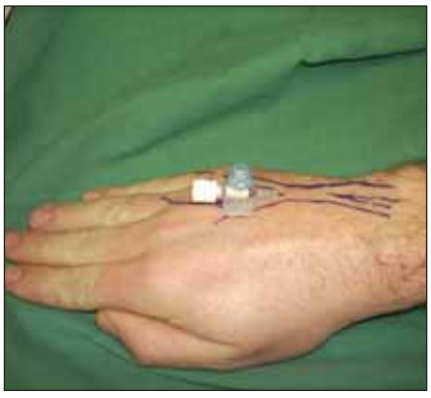
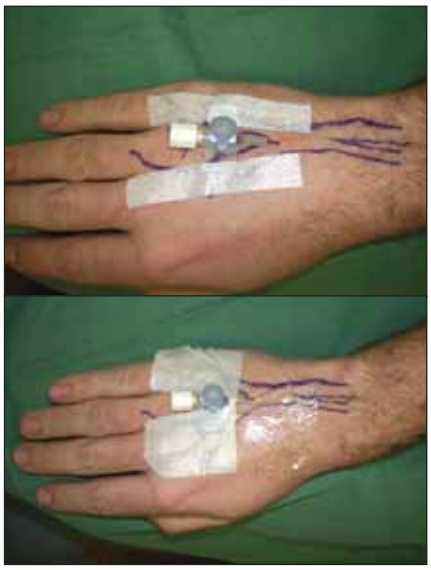
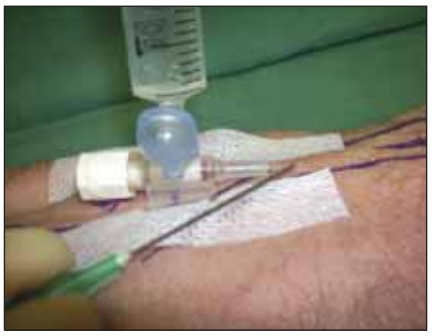


FIGURE 16: *The cap is placed before the arm is lowered. Blood can be collected from the cannula at this stage.*



FIGURES 17 and 18: *The cannula is secured with an adhesive dressing. There are many methods.*

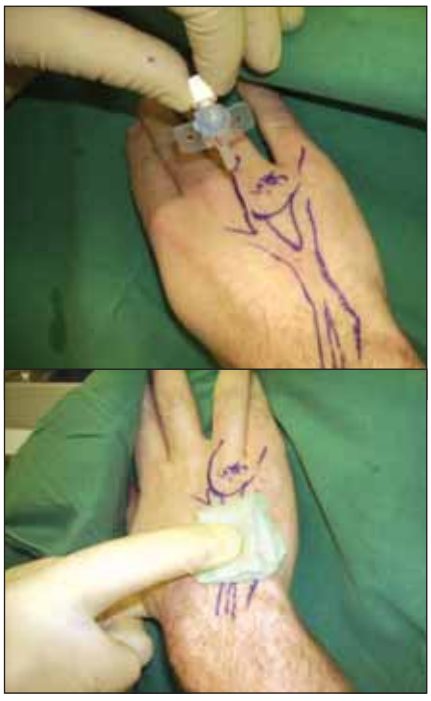


FIGURES 19 and 20: *The cannula is flushed with 0.9% saline. There is no evidence of rapid swelling as the saline is injected, which suggests successful entry to the vein. Please note that the needle in Figure 20 is for demonstration purposes only.*

5. Sharps disposal box.
6. Adhesive dressing to secure the cannula in place.
7. Saline flush.
8. Sterile gauze.
9. Syringes and drug regimes.

Technique

1. Ensure that you have all of the necessary equipment.
2. Examine the patient's veins.
3. Put on gloves.
4. Apply the tourniquet to the patient's arm with a finger inside to prevent excessive tightness and/or trapping of the skin. The dorsum (back) of the hand is commonly used since the veins are easily accessible, it is easy to support and the risk of damaging important structures is very low.
5. Re-examine the veins.
6. The veins in **Figure 7** have been highlighted with a marker pen. Remember, veins that you can see and feel are always better than veins that you can see.
7. Select a vein that is easy to access. Clean the skin overlying the vein with the alcohol swab and allow it to dry (reduces pain) (**Figures 8 and 9**).
8. Remove the needle cover and orientate the needle to the vein. Stabilise the vein by stretching the skin near the vein (but not over the vein) with the thumb of your non-dominant hand. This prevents movement of the vein/skin during insertion of the catheter. Skin and vein movement can make IV access more difficult.
9. Approach the vein from a low angle with the needle bevel facing up, advancing through the skin firmly but slowly.
10. At the end of the hub, there is a small see-through chamber. This is where you observe for flashback. Flashback is when the needle enters the vein, and blood is seen to enter this chamber. At this stage, you will know if you have successfully entered the vein (**Figures 10 and 11**).
11. Advance the catheter slowly, 3mm into the vein.
12. At this stage, hold the cannula between your thumb and index finger. With your middle finger, hold the inducer needle steady while sliding the cannula off the inducer needle through the skin and into the vein. The stabilisation of the inducer needle will help to prevent perforation of the vein, which would cause the needle and cannula to enter the tissue outside the vein (extravasation).
13. Remember at this stage to keep the tension on the skin and vein. Continue advancing the catheter slowly into the vein (**Figure 12**).
14. Release the tourniquet at this stage (**Figure 13**).
15. Ask the patient to raise their arm above the level of the heart, as shown in **Figures 14 and 15**. This prevents leaking of blood when the inducer is removed.
16. The inducer needle can now be removed further out of the cannula. As this is done, blood should be visible in the plastic line section of the cannula and will drain into the vein via the line. Air does not enter the vein, since the vein collapses.
17. Gently advance the cannula fully into the vein and place the cap on the end (**Figure 16**). Fully remove the inducer needle and dispose of it safely in the sharps box.
18. Secure the hub with adhesive dressing. Drugs can be given and bloods can be taken from the line at this stage if necessary (**Figures 17 and 18**).
19. Flush the IV with a 0.9% saline solution to ensure that it is running properly and has not infiltrated. Signs of infiltration include pain and rapid swelling. If this happens, the IV will need to be replaced in another vein (**Figures 19 and 20**).
20. Drugs and fluids can be administered through the cannula at this stage.



FIGURES 21 and 22: *The hand is raised above the level of the heart. The cannula is slowly removed and the sterile dressing is used to control any bleeding.*

FIGURE 23: *Safe disposal of the cannula.*

Removal of IV cannula

1. Remove all adhesive dressings.
2. Raise the hand above the level of the head. This will cause the blood to drain out of the veins (**Figure 21**).
3. Hold a piece of sterile cotton wool in the non-dominant hand. Remove the cannula slowly with the dominant hand (**Figure 22**). It will not bleed.
4. Place the sterile cotton wool over the wound and secure in place with medical adhesive tape. This will control any minor bleeding once the arm is lowered.
5. Ensure that the IV cannula is safely disposed of in a sharps disposal container (**Figure 23**).

Conclusion

While IV access is a procedure that is seldom used in general dental practice, it is a potentially useful one. As with any procedure, practice makes perfect. Opportunities to practise are few and far between unless the practice undertakes IV sedation. The authors recommend that dental practitioners seek training in IV access, either as part of a medical emergencies course, phlebotomy course or sedation course.

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A review of guidelines for sedation, anaesthesia and alternative interventions for people with special needs

Glassman, P.

There are significant numbers of people in our society with disabilities or other special needs. Their number and percentage are growing, in some cases dramatically. Many of these individuals need special support in order to receive dental treatment. Modalities that can be used to provide dental treatment include pharmacological approaches to produce various levels of sedation or anaesthesia. In addition to the use of medications, there are also techniques that employ behavioural or psychological interventions. In some circumstances, physical support or protective stabilisation is used. There are also social supports and prevention strategies that can impact the individual's preparation for and need for dental treatment.

This review of the numerous guidelines that have been published for the use of sedation and anaesthesia to facilitate the delivery of dental treatment indicates that there are fewer guidelines for the inclusion of behavioural or psychological interventions, or for the incorporation of social supports or prevention strategies. In addition, most published guidelines do not include considerations for people with special needs. There is a need for increased research and documentation of combined treatment modalities, and these combined approaches need to be incorporated into guidelines for patient care for people with special needs. There is also a need to advocate for reimbursement systems that support all appropriate treatment options so that practitioners can be free to recommend treatment options based on the efficacy and safety of each option.

Spec Care Dentistry 2009; 29 (1): 9-16.

Current thinking in temporomandibular joint management

Sidebottom, A.J.

The management of temporomandibular joint (TMJ) disorders in secondary care has progressed through the 1990s from a condition dealt with by generalists to one with an increasing number of surgeons with a sub-specialist interest. Within this latter group there is a subgroup of those with a specific training towards joint replacement surgery.

Increasingly, patients who previously had surgery for pain are being managed with non-surgical options. Alternative pain management regimens, with the introduction of botulinum toxin as well as tricyclic medication, have reduced the need for any invasive management. The surgical management of the TMJ was revolutionised by the introduction of arthroscopy in the late 1970s. The use of arthroscopy and arthrocentesis has led to a reduction in indications for open joint surgery. There is no longer a perceived need to correct internal derangement with disc repositioning surgery. The primary management of acute restriction of opening and joint pain is now with arthrocentesis and arthroscopy.

Degenerative and ankylotic conditions of the joint can be safely treated by the use of alloplastic joint replacement, which has less morbidity and more predictable outcomes than costochondral grafting, with the latter still the method of choice in children.

The revolution continues with the introduction of national guidelines and databases supported by BAOMS.

British Journal of Oral and Maxillofacial Surgery 2009; 47 (2): 91-94.

One-stage full-mouth disinfection versus quadrant and full-mouth root planing

Swierkot, K., Nonnenmacher, C.I., Mutters, R., Flores-de-Jacoby, L., Mengel, R.

Objective

The aim of this study was to test the hypothesis that one-stage full-mouth disinfection (FMD) provides greater clinical and microbiological improvement compared with full-mouth scaling and root planing (FM-SRP) within 24 hours and quadrant scaling and root planing (Q-SRP) in patients with generalised chronic periodontitis.

Material and methods

Twenty-eight patients were randomised into three groups; 25 patients

completed the study and were the basis for analysis. The Q-SRP group was scaled quadrant-wise at one-week intervals. The other groups received a one-stage full-mouth scaling with (FMD) and without (FM-SRP) chlorhexidine. At baseline, and after one, two, four and eight months, clinical parameters were recorded and microbiological analysis was performed.

Results

All three of the treatment modalities resulted in significant clinical improvement at any time. There were only group differences after one and two months: in the FM-SRP group there was a significantly higher reduction of probing depth and bleeding on probing compared with the other two groups. The bacteria could be reduced in every group although this reduction was only significant for *Prevotella intermedia* in the FMD group eight months after treatment.

Conclusion

All three treatment modalities lead to an improvement of the clinical and microbiological parameters; however, without significant group differences after eight months.

Journal of Clin Periodontology 2009; 36 (3): 240-249.

Assessment of pulp vitality: a review

Gopikrishna, V., Pradeep, G., Venkateshbabu, N.

Background

One of the greatest diagnostic challenges in clinical practice is the accurate assessment of pulp status. This may be further complicated in paediatric dentistry where the practitioner is faced with a developing dentition, traumatised teeth, or young children who have a limited ability to recall a pain history for the tooth in question. A variety of pulp testing approaches exist, and there may be confusion as to their validity or appropriateness in different clinical situations.

Aim

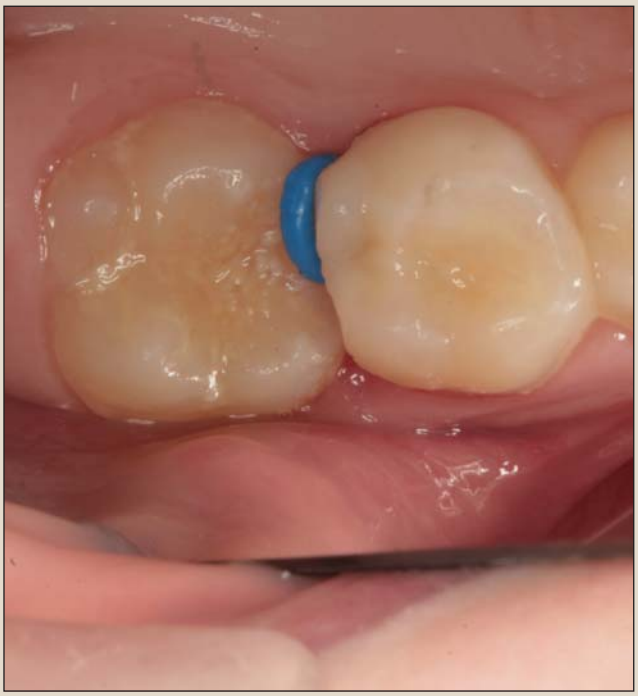
The aim of this paper is to provide the clinician with a comprehensive review of current pulp testing methods. A key objective is to highlight the difference between sensitivity testing and vitality testing. A biological basis for pulp testing is also provided to allow greater insight into the interpretation of pulp testing results. The rationale for and methods of assessing pulpal blood flow are described.

International Journal of Paediatric Dentistry 2008; 19 (1): 3-15.

Quiz answers

Answers to quiz (from page 70).

1. The upper right and lower right first permanent molars are impacted.
2. Prevalence is 2-6% in non-cleft children, higher in cleft lip and palate patients.
   Aetiology can be associated with:
   a. Hereditary (familial tendency); and,
   b. Local. Causes can include:
      1. Tooth size discrepancy with larger first molars.
      2. Small maxilla.
      3. More mesial path of eruption.
      4. Local crowding.
3. Impacted first molars can be prone to food packing and over eruption of opposing teeth. Sometimes the impaction is reversible and self corrects, but this is less common after the age of eight, so interception is indicated.
   a. Brass wire separator or orthodontic separator in the contact can encourage eruption in mild to moderate impactions.
   b. Disc the distal aspect of the second primary molar to aid dis-impaction. This can be done without local anaesthetic with a diamond bur with a non-cutting tip (to avoid damage to the first molar).
   c. Separating spring.
   d. Extraction of the second primary molar to allow the first permanent molar to erupt. This is indicated when the first molar cannot be dis-impacted with less invasive means, when there is marked resorption of the E root, or where access is required to treat caries in the first molar.



The distal aspect of URE has been disked to allow placement of an orthodontic separator. This can be reviewed fortnightly.

Extraction of the primary molar will lead to a more mesial eruption of the first molar, and further space loss for the second premolar, so the first molar may need to be distalised later as part of an orthodontic plan or a premolar may need to be extracted.

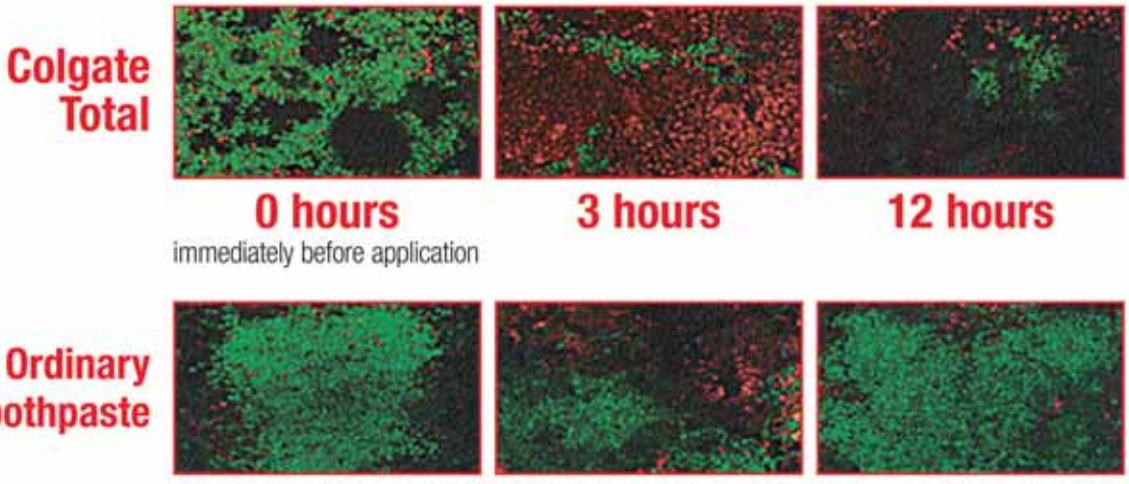
Quiz set by Dr Ciara Scott, specialist in orthodontics.

Think all toothpastes work the same?

It's the copolymer in Colgate Total that makes it unique

As you know, dental plaque can be mechanically removed but within two hours of cleaning, pioneer colonies of bacteria attach to the tooth surface and the plaque reforms.

Due to its unique patented antimicrobial formulation of triclosan and copolymer, brushing with Colgate Total impedes the development of dental plaque for up to 12 hours.



In vitro sequential photomicrographs showing relative proportions of dead and viable plaque bacteria after application of Colgate Total vs ordinary fluoride toothpaste

Green: live growth
Red: dead bacteria

Because the copolymer helps ensure delivery and retention of the active ingredient, triclosan, on the surface of the teeth and gingivae, Colgate Total provides a sustained antibacterial effect for up to 12 hours.

- Its sustained antibacterial action helps reduce dental plaque by up to 98%[1,2*]
- It helps reduce the number of sites with gingival bleeding by up to 88%[1,2*]

IRISH DENTAL APPROVED ASSOCIATION

0.32% sodium fluoride, 0.3% triclosan

Proven 12-hour antibacterial protection

Reference: 1. Panagakos FS *et al. J Clin Dent* 2005; 16 (Suppl): S1–S19.
2. Garcia-Godoy F *et al. Am J Dent 1990*; 3 (Spec Issue): S15–26.
• vs ordinary fluoride toothpaste.

Colgate Total

PRODUCT INFORMATION. Product Summary. Trade Name of the Medicinal Product: Colgate Total Toothpaste. **Indication:** To reduce dental caries, to improve gingival health, to reduce the progression of periodontitis. **Contraindications:** None known. Individuals with known sensitivities should consult with their dentist before using. **Special Warnings and Special Precautions for Use:** Children under 7 use a pea-sized amount for supervised brushing. If using fluoride supplements, consult your dentist. **Interactions with Other Medicaments:** None known. It is important to note that as for any fluoride containing toothpaste in children under systemic fluoride therapy, it is important to evaluate the total exposure to fluoride (fluorosis). **Undesirable Effects:** None known. **Legal Class:** GSL. **Product Authorisation Number:** PA320/5/1. **Product Authorisation Holder:** Colgate-Palmolive (UK) Ltd., Guildford Business Park, Middleton Road, Guildford, Surrey GU2 8JZ. **Recommended Retail Price:** €2.19 (50ml tube), €3.85 (100ml tube), €4.35 (100ml pump). **Date of Revision of Text:** February 2005.

Photograph courtesy of DMI

Licensing of dental x-ray equipment – what's required?

AISLINN MACHESNEY takes us through the process to obtain a licence to use an x-ray unit in dental practice.

To use a dental x-ray unit in Ireland, you are required by law (Radiological Protection Act, 1991 (Ionising Radiation) Order 2000 [S.I. No. 125 of 2000]) to have a licence from the Radiological Protection Institute of Ireland (RPII).

It is a condition of the licence that the licensee complies with the RPII's Code of Practice for Radiological Protection in Dentistry. This Code outlines the radiation safety procedures that are to be followed and the criteria of acceptability for dental x-ray units, and requires the licensee to have a quality assurance programme (QA) that will assess the equipment against these criteria every two years. A copy of the Code can be downloaded from the RPII website (www.rpii.ie).

In each practice, one person should be assigned responsibility for radiological protection (this is normally a dentist), to ensure that there is a policy for all radiological procedures, and to ensure the safety of all staff, members of the public and patients. The process to obtain an x-ray licence is as follows:

1. **Appoint an approved radiation protection advisor (RPA)**
   An RPA is an individual or organisation that is approved by the RPII to provide advice on radiation protection issues. Each dental practice must appoint an RPA who will assess the surgery, and the design and layout of the room in which the x-ray equipment is to be located, to ensure that it complies with radiation protection requirements. They will advise on all relevant legislation and radiation protection matters relating to the custody and use of x-ray units, and the commissioning and quality assurance (QA) testing of the unit.
   Once the RPA is satisfied that everything is in order, they will provide a report stating that the facility is suitable for the proposed dental radiography (a list of approved RPAs can be obtained from the RPII website).
   A risk assessment must be carried out by the dentist in conjunction with the RPA to identify the risks associated with using a dental x-ray unit (see guidelines on RPII website).

2. **Before you acquire a dental unit, apply to the RPII for a licence**
   It is an offence to use or have custody of an x-ray unit without a licence. To do so may lead to prosecution, which can result in a substantial fine and/or a term of imprisonment. Therefore, you must apply for a licence prior to getting an x-ray unit. A licence application pack can be obtained by contacting the RPII (Tel: 01 269 7766). To apply for a licence you must send in:
   - an application form (completed by the owner or principal dentist);
   - a plan of the surgery;
   - RPA reports on radiation protection matters; and,
   - a completed radiation risk assessment.

   Upon receipt of the above, the RPII will forward an invoice to the applicant detailing the application and licence fee payable. The application fee is €533 and the licence fee will be calculated on the basis of the duration of the licence (€299 per annum).

3. **Obtain a licence for commissioning purposes**
   Provided the application is in order, the RPII will issue a licence for commissioning purposes only, allowing the dentist to take custody of the x-ray unit and authorising such tests that are necessary to commission the unit. At this point, the dentist is not authorised to use the unit on patients.

4. **Have the unit installed**
   The supplier of the x-ray unit can then install the unit and give the dentist a report confirming that the unit has been installed correctly.

5. **Have the unit commissioned**
   The dentists must then arrange with their appointed RPA for the unit to be commissioned, i.e., verify that the unit is performing in accordance with the manufacturer's specifications.

6. **Report to the RPII**
   The dentist then sends the RPA's commissioning report and the supplier's installation report to the RPII.

7. **Have 'commissioning' provision removed**
   The RPII will then remove the restriction "for commissioning purposes only" from the licence, provided that it is satisfied with all results of the RPA's commissioning tests.

8. **Carry out regular QA testing**
   The dentist must ensure that QA testing is carried out on each x-ray unit every two years. This testing must be carried out by the RPA and any deficiencies corrected.
   All x-ray equipment must be maintained and checked by a suitably qualified person. A full QA check must be carried out every two years by an appointed RPA to keep a licence renewed. A record should be kept of all dates and the results of all checks and servicing.

Use of thermo luminescent dosimeters (TLDs)

This is a device to measure your exposure to external radiation and should be worn by all dentists and DSAs working with ionising radiation. Nominate one staff member to obtain the dosimeters from the RPII and allocate them to all staff. The dosimeter should be worn clipped to your uniform with the label facing away from you. When not in use, store it away from all sources of radiation and corrosive chemicals or excessive heat. The dosimeters should be sent to the RPII every two months for checking.

In conclusion, there is a lot of information to take in, in relation to dental x-ray licensing. It is important to fully acquaint yourself with the current legalisation and guidelines.
The RPII's website gives all the required information (www.rpii.ie). It is also important to have a written policy in your practice, with an appointed member of staff responsible for all aspects of radiological protection. It is also a requirement to keep a record of all checks and servicing.

The author would like to acknowledge the assistance of David Dawson of the RPII in the preparation of this article.

Dr Aislinn Machesney is a dentist based in Dublin.

Infective endocarditis prophylaxis

Summary information for dentists.

Numerous different guidelines on prophylactic regimes for infective endocarditis have been proposed, including those from the American Heart Association (AHA) 2007, *Journal of the American Dental Association* (JADA) 2008, Australian Prevention of Endocarditis Guidelines 2008, British Society for Antimicrobial Chemotherapy (BSAC) 2006, the National Institute for Clinical Excellence (NICE) 2008 and the *Journal of the Irish Dental Association* 2008.

These new guidelines have been met with some nervousness among dentists, cardiologists and patients. The subject has become confusing because of different recommendations by different authorities worldwide.

In summary, the benefit of antibiotic prophylaxis for patients with cardiac conditions is unproven. The risk of an allergic reaction to amoxicillin is low. There is a real issue about the unnecessary use of antibiotics in general. Dentistry should be based on 'clinical evidence'. It is important to have an agreed policy and to provide summary guidance on antibiotic prophylaxis for infective endocarditis for practitioners until the scientific evidence is available.

Antibiotic prophylaxis prior to invasive dental treatment should be given to patients with a history of:

- prosthetic cardiac valve;
- previous infective endocarditis;
- cardiac transplantation recipients who develop cardiac valvulopathy;
- congenital heart disease (CHD)*;
  - un-repaired cyanotic CHD, including palliative shunts and conduits;
  - completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first six months after the procedure†; or,
  - repaired congenital heart defect with residual defect at the site or adjacent to the site of a prosthetic patch or a prosthetic device (which inhibit endothelialisation).

* Except for the conditions listed above, antibiotic prophylaxis is no longer recommended for any other form of CHD.

† Prophylaxis is recommended for the first six months because endothelialisation of prosthetic material occurs within six months after the procedure and then prophylaxis is unnecessary

Dental procedures for which endocarditis prophylaxis is recommended:

- all dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa.

Dental procedures for which endocarditis prophylaxis is not recommended:

The following procedures and events do not need prophylaxis:

- routine dental anaesthetic injections through non-infected tissue;
- taking dental radiographs;
- placement of removable prosthodontic or orthodontic appliances;
- adjustment of orthodontic appliances;
- placement of orthodontic brackets;
- shedding of deciduous teeth; and,
- bleeding from trauma to the lips or oral mucosa.

Antibiotic prophylaxis for dental procedures

Population	AGE >10 years	5-10 years	< 5 years	Timing of dose before procedure
General	amoxicillin 3g po	amoxicillin 1.5g po	amoxicillin 750mg po	1h
Allergic to penicillin	clindamycin 600mg po	clindamycin 300mg po	clindamycin 150mg po	1h
Allergic to penicillin and unable to swallow capsules	azithromycin 500mg po	azithromycin 300mg po	azithromycin 200mg po	1h
Intravenous regimen expedient	amoxicillin 1g iv	amoxicillin 500mg iv	amoxicillin 250mg iv	just before the procedure or at induction of GA
Intravenous regimen expedient and allergic to penicillin	clindamycin 300mg iv*	clindamycin 150mg iv *	clindamycin 75mg iv *	just before the procedure or at induction of GA

* Given over at least 10 min.

Where a course of treatment involves several visits, the antibiotic regimen should alternate between amoxicillin and clindamycin.

Pre-operative mouth rinse with chlorhexidine gluconate 0.2% (10 mL for 1 min).

Patient Information Sheet

Changes in guidelines on the need for antibiotics if you have a heart murmur, valve or other heart condition. Please still tell the dentist if there are any changes in your condition.

As a result of recent literature searches and reviews by the American Heart Association (AHA), the National Institute for Clinical Effectiveness (NICE) in the UK, an expert Group in Australia and a review by clinicians in the Dublin and Cork Dental Schools and Hospitals, the recommendations regarding the need for antibiotics for those patients with heart disease, before dental treatment, have changed. Both the American and UK Groups found that the benefit of antibiotic prophylaxis for dental treatment is unproven. The NICE (UK) committee have recommended no antibiotic cover for any patients previously classified as "at risk" of infective endocarditis – infection in the heart – following dental treatment, while the AHA (America) has recommended cover only for specific groups of people deemed to be at a particularly high risk of developing infective endocarditis.

There are many responsibilities to be considered in both deciding to give an antibiotic prophylaxis or not. There are concerns about the risks of taking an antibiotic unnecessarily (anaphylaxis/nausea/ diarrhoea/vomiting) and the complications and mortality (risk of death) of developing infective endocarditis.

Infective endocarditis is an inflammation of the inner lining (endocardium) of the heart, particularly affecting the heart valves, due to bacteria and other infectious agents. It is rare, with an annual incidence of less than 10 per 100,000 cases in the normal population but it is serious if it happens and we all need to watch out for the symptoms and signs.
Patients may be receiving conflicting advice from different specialists/practitioners/doctors/dentists and there is the potential for confusion.

The revision of previous guidelines will allow research (randomised, controlled clinical study) to be undertaken. This would not have been possible in the past (it was deemed to be unethical) but will clarify the best evidence-based option in the future. This is a very good outcome of this discussion.

Prevention of dental disease cannot be overemphasised in all patients but particularly those at risk of developing infective endocarditis.
Those at risk include:

1) patients with prosthetic (artificial) cardiac valves;
2) a history of having had infective endocarditis;
3) cardiac transplant patients, who develop cardiac valvulopathy (damaged valves);
4) some Congenital Heart Disease (CHD) - patients with unrepaired cyanotic CHD, including palliative shunts and conduits;
5) completely repaired congenital heart defect with prosthetic material or devices, whether placed by surgery or by catheter intervention, during the first six months after the procedure; or,
6) repaired congenital heart defect with residual defect at the site or adjacent to the site of a prosthetic patch or a prosthetic device.

Your cardiologist/doctor will know which heart condition you have.

Chlorhexidine (an antimicrobial) mouthwash should be used five minutes before the start of a procedure. We are advocating that patients with the cardiac conditions above should be covered by antibiotic (antimicrobial) prophylaxis with 3g oral penicillin (Amoxycillin) or 600 mg clindamycin, if an allergy to penicillin exists, echoing the BSAC (British Society for Antimicrobial Chemotherapy) guidelines of 2006.

We hope that you understand why there has been a change and more importantly that we are interpreting the facts and information in the way we consider best for your future treatment. If you have any problem, please ask and we will be quite happy to discuss this with your cardiologist, surgeon or medical practitioner.

SIGNED:	DATE: DD / MM /YYYY

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 May 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:
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Tel: 01-856 1166 Fax: 01-856 1169 Email: pat@thinkmedia.ie

POSITIONS WANTED

Dentist with five years experience seeks full/part-time position in Dublin and the surrounding areas. Email: cordis@iol.ie.

Highly skilled senior dental surgeon seeks full-time associate position within radius of Dublin. Email: dsurgeon1@gmail.com.

Experienced hygienist seeks full-time position in Dublin/Wicklow area. Good references available. Immediate start. Tel: 085 753 8626, or Email: eitsoneill@hotmail.com.

POSITIONS VACANT

Full-time associate required for immediate start to replace departing colleague in busy north Cork dental practice. Half hour from Limerick, three quarters of an hour from Cork. Tel: 063 81088 or 087 767 1515, or Email: mu_sorrento@hotmail.com.

County Wexford: associate required for busy, vibrant practice in south east market town. Long-term view. Four surgeries, hygienist, OPG, intra-oral camera. Fully qualified support staff. Good public/private mix. Full book guaranteed. Tel: 087 250 7830, or Email: rogersdental@eircom.net.

Full-time associate wanted for Dublin city centre practice. Full book. Tel: 085 771 3677, or Email: 1casana@eircom.net.

Associate required from April 1 for busy two-person practice in west Dublin. Four days a week at present with potential for five. Modern surgery with hygienist, digital OPG and I/O x-rays. Tel: 087 834 4001, or Email: jpdheaney@eircom.net.

Associate dentist and hygienist required for busy expanding modern three-surgery dental practice OPG. One hour from Dublin. Coole Dental Surgery near Mullingar. Immediate start. Tel: 044 966 1777, or Email: drmulrooney@yahoo.com.

Associate wanted, Lucan, Dublin, March/April, replacing departing colleague. Excellent support staff, equipment. Ideally experienced, fluent in English, ethical and efficient. Excellent remuneration. Contact Brian, Tel: 086 168 6056.

Caring, conscientious, experienced (minimum three years) dental associate required for busy family practice. Dublin northside. Two surgeries, hygienists and good support staff. Please reply with CV to northsidedentcare@gmail.com.

Dublin 1. Associate dentist wanted for Fridays (GMA, PRSI, private patients). Apply with CV to surgerydental@hotmail.com.

Enthusiastic associate required for full-time position in long-established Dublin 15 practice. PRSI and private only. Tel: 085 134 9776.

Galway city centre practice seeks part-time associate. Fully digitalised, very modern. Great working environment. Immediate start. Email: emmet@smiles.ie.

Part-time associate required – Thursday and Friday – for Co. Meath practice. 30 miles from Dublin. Private and PRSI only. Tel: 046 943 3189 after 7.00pm.

Locum associate required July/August '09, Lucan, Dublin. Excellent support staff, equipment. Experienced, ethical and efficient. Excellent remuneration. Contact Brian, Tel: 086 168 6056.

Dentists required – Dublin west, Dublin 1 and south east. Must have full Irish registration. Willing to work with all types of patients – PRSI, GMS and private. Excellent conditions and facilities. Immediate start. Email: emmet@smiles.ie.

HSE general dental surgeon, at least 12 months experience required. Start immediately for six-month contract (full-time). Busy children's service, Blanchardstown, Dublin 15. Contact Jane or Vida, Email: jane.renehan@hse.ie.

Locum required for busy and friendly dental practice in Midleton, Co. Cork. Position available from April 2009 to cover maternity leave. Please Tel: 086 173 3861 after 8.00pm.

Locum to cover maternity leave or part-time associate required in busy Kerry practice starting mid August. Replies to Box No. J209.001.

Locum to cover maternity leave or part-time associate required in Dundalk practice. Very modern. Starting mid May. Tel: 042 933 7033 during office hours.

Locum dentist required for four weeks starting March 30 in Bandon, Co. Cork. Tel: 086 824 6241.

Locum dentist required for part-time position to cover maternity leave, June '09. Kilkenny city. Email: yvonne_finlay@hotmail.com.

Three-month dental locum required from July to October 2009. One hour north of Dublin, hours negotiable. Fully computerised, three-surgery practice, OPG, visiting hygienist, orthodontist and oral surgeon. Please Tel: 086 823 7145, or Email: bfeedental@hotmail.com.

Paedodontist sought for specialist practice in Maynooth, Co. Kildare. Email: ronan.perry@pearls.ie.

Othodontist required – 20 minutes from Dublin. Part-time initially to supplement existing orthodontist. Four-surgery, modern, very busy family practice. Massive ortho potential. Fully computerised, OPG, excellent staff. Great place to work. Partnership possible longer term. Email: info@ratoathdental.ie.

Busy, modern, innovative dental practice in south west Dublin seeking hygienist to work within our full-time hygiene department for two days a week – Thursdays and Fridays. Tel: 087 972 7091, or Email: terrie@smileclinic.ie.

Full-time position available for enthusiastic hygenist in Dublin west area. Please Email CV to nick.armstong@hse.ie or post to Nick Armstrong, Principal, Rowlagh Health Centre, Rowlagh, Dublin 22.

Dental nurse required for computerised Dublin city centre practice, part-time with view to full-time. Email: info@shelbourneclinic.ie.

PRACTICE WANTED

Practice wanted. Seeking dentist looking to retire/relocate/stay on as associate. Within one hour's drive of Cork city – Tipperary, Kerry, Cork, Waterford. Tel: 086 858 5064.

PRACTICES FOR SALE/TO LET

New spacious consulting rooms available in Dublin 2. Superbly located, four minutes from St Stephen's Green and Luas. Would suit a general practitioner, consultant, dentist or paramedical staff. First letting (2,000 square feet) after complete refurbishment with modern facilities. Tel: 086 852 4540.

Opportunity for a new dental practice in thriving town near Galway, in association with a vibrant medical practice. Tel: 091 553135, or Email: seamusobeirn@gmail.com.

Fully equipped dental surgery available at Vhi SwiftCare Mahon, Cork. Latest Pelton & Crane Unit, Sirona G5 OPG, and Bridges Software. Available weekdays 8.00am-5.00pm.

Practice for sale, Dublin south west. Very busy long established top class general practice. No medical card. Stable and expanding area – wide open. Single surgery, ample room to expand. Well equipped. Excellent gross, high profits. Superb staff. Tel: 086 807 5273, or Email: niall@innovativedental.com.

Practice for sale, Dublin south west. Well established general practice. Two surgeries (only one used at present). Computerised with modern equipment. Tel: 01 280 6414, or Email: steven@medaccount.ie.

Unit for rent, Northbrook Clinic, Ranelagh, Dublin 6. Ample parking. Tel: 01 406 8155.

For sale – superb location north west. Huge hinterland. Very busy practice. New patient numbers high. 75% private. Good staff. Endo, C and B, implants referred out. Two well equipped Siemens surgeries. Immediate sale – discounted price. Tel: 086 807 5273, or Email: niall@innovativedental.com.

CLASSIFIED

Ideal opportunity for practitioner requiring a surgery at a second location. Please Email: fiona.cahill@vhiswiftcare.ie.

Practice for rent. Dental practice in medical complex, west of Ireland. Only dentist in town. Great staff. Large new patient numbers. Active hygienist, four days. Very large profits – low overheads. Option to purchase in the future. Immediate occupancy. Tel: 086 807 5273, or Email: niall@innovativedental.com.

For sale, south Dublin. Superb location. Long established top class part-time restorative practice. Very low overheads. Ample room to expand. Well equipped surgery – can be digitalised. Good referral base. Dentist retiring – low asking price. Tel: 086 807 5273, or Email: niall@innovativedental.com.

For sale, north Dublin. Extremely busy two-surgery. First class equipment – OPG. Fully computerised. Great qualified staff. Two miles M50. Excellent figures. Highly suitable for associate with a view medium/long-term purchase. Tel: 086 807 5273, or Email: niall@innovativedental.com.

Premises with planning permission for dental practice for sale on the main street of Thomastown, Co. Kilkenny. Tel: 056 770 2220, or 086 035 4502.

Shop unit and waiting room to let in Gorey Shopping Centre, Gorey, Co. Wexford. Ideal for dentist. Tel: 053 948 0534.

Fully equipped dental surgery available at Vhi SwiftCare, Dundrum. Latest Pelton & Crane Unit, Sirona G3 OPG, and Bridges Software. Available weekdays 8.00am-3.00pm. Ideal opportunity for practitioner requiring a surgery at a second location. Please contact: fiona.cahill@vhiswiftcare.ie.

For sale, Co. Galway. Three-surgery practice 30 minutes from Galway city. Modern, established, completely renovated, all new equipment, fully computerised and digitised. Full book two-dentist four days hygiene. Ortho sessions. High gross and large footfall. Tel: 086 820 4740, or Email: dentalpractice4sale@gmail.com.

EQUIPMENT FOR SALE

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SERVICES TO DENTISTS

O'Reilly Legal Consultants. For legal advice on partnership and employment contracts, commercial/contractual documentation, health and safety legislation, debt collection, conveyancing and dental negligence claims. Contact Caroline O'Reilly Solicitor, Tel: 01 849 4226, Mob: 087 051 6526, or Email: info@oreillylegal.ie.

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DIARY OF EVENTS

April 2009

IDA Golf Society – President's Prize
April 25 Mount Juliet Golf Club

IDA Annual Conference – 'Skilkenny 2009'
April 22-25 Hotel Kilkenny
For further details contact the IDA, Tel 01 295 0072, or Email: elaine@irishdentalassoc.ie.

Irish Dental Association – Annual General Meeting
April 23 Hotel Kilkenny

May 2009

North Munster Branch Annual Scientific Day
May 1 Strand Hotel, Limerick
Presenter Dr Harris Fidelski. 9.00am to 5.15pm.

31st Asia Pacific Dental Congress – 'Emerging Trends and Practices of Dentistry – Managing the Next Wave'
May 7-11 Convention and Exhibition Centre, Hong Kong
Highlights of the programme can be downloaded from www.apdc2009.org.

Kerry Branch IDA – Scientific Meeting
May 14 Óstán Meadowlands, Tralee, 8.00pm
Speaker is Dr Stephen Cotter on 'Orthodontics'.

Irish Society of Dentistry for Children – Annual Scientific Meeting 2009
May 22 Clarion Hotel, Limerick
For further information, contact Dr Patrick Quinn, Tel: 063 89315, or Email: patrick.quinn@hse.ie.

IDA Golf Society – Lyttle Cup
May 23 Baltray Golf Club, Co. Louth
For further information, Email: ciaanallendental@eircom.net.

European Society of Dental Ergonomics – Annual Meeting
May 29-30 Kracow, Poland
Subject is 'Ergonomic solutions for problems in dental practice'. For further information, Email: secretary.esde@live.be.

September 2009

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

October 2009

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

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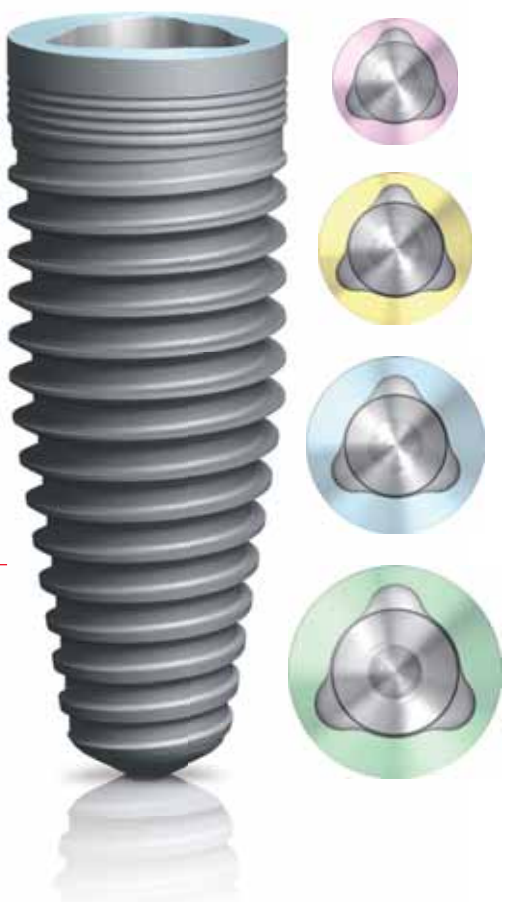

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