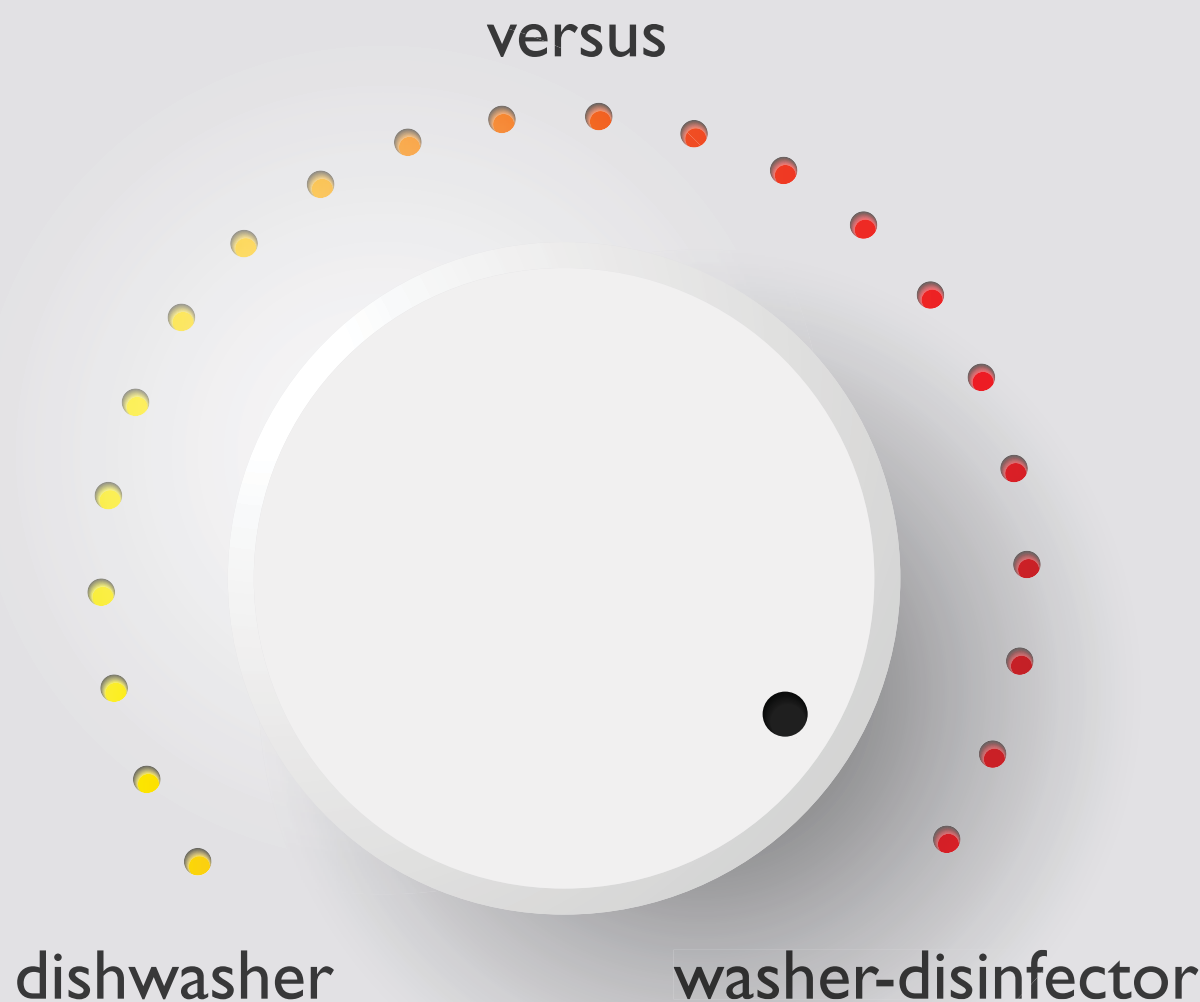


Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann



An evaluation of the effectiveness of washer-disinfectors
and dishwashers for processing dental instruments

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DID YOU KNOW? *The total average net circulation for the Journal of the Irish Dental Association in 2013 was 3,499 copies per issue.*

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Ireland's lead in dentistry

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Policy and practice

Honorary Editor, PROFESSOR LEO STASSEN, announces a new series of clinical articles, and comments on the contents of this edition, including an interview with the Chief Dental Officer/National Oral Health Lead.

For some time, the Editorial Board has been keen to augment the contents of your *Journal* (which you rate so highly in readership surveys) with strong and practical clinical articles. After some considerable work, we have planned a series of articles that are designed to be helpful to the general dental practitioner. First up in this series is a step-by-step approach to restoring class II cavities with composite resin utilising the bulk filling technique. It has been written by Dr Una Lally, to whom we are most grateful. It is well illustrated with excellent photographs. While the Editorial Board has planned a series of articles, contributions – indeed, ideas for contributions – are very welcome. Just contact Journal Co-ordinator, Fionnuala O'Brien, at the Association's office.

Speaking with the profession

The interview with Dr Dympna Kavanagh in this edition is important beyond the obvious significance of a Chief Dental Officer and National Oral Health Lead talking to her professional *Journal*. We face multiple challenges arising from the scarcity of resources for oral health, and from the fact that our structures are based on an oral health policy that is 20 years old. Despite the many reservations expressed about the part-time nature of Dr Kavanagh's appointment, it would be churlish not to recognise that there appears to be a very sincere desire on her part to build a new and worthwhile oral health policy. In that endeavour, she has sought the contribution of the profession and she should receive it. Many of us have reached varying degrees of frustration with the Irish public health system. Dr Kavanagh may be a focal point for a lot of that frustration, anger, annoyance and, in some instances, despair. However, we need to get to a better place, so we will need to work together on this – despite the backdrop.

Don't miss Kilkenny

The Association's Annual Conference always impresses. This year's committee has brought together a strong panel of speakers, complemented by excellent hands-on courses, and a comprehensive trade show. Many aspects of dentistry are covered, but given my own daily workload, I must encourage as many of you as possible to attend Sheila Galvin's session on diagnosis and management of white

patches. For the athletes everywhere, Gerry Duffy will tell us the secrets of doing multiple ironman triathlons – and winning. The Association's AGM takes place on the Thursday evening and socially, there is the Annual Dinner, the golf, and a fun run.

Peer reviewed

In the context of dentistry, dishwashers don't work. They are not effective for cleaning instruments and they do not disinfect them either. We are grateful to Hugh O'Connor and Nick Armstrong for their valuable work. We might have suspected, but now we know the science – washer-disinfectors do work.

Stephen Anderson reports on a case study from the Dublin Dental University Hospital where a 77-year-old female presented with a large floor-of-mouth swelling, which turned out to be an epidermoid cyst.

Save a fortune

There are many compelling moral arguments in favour of dentists being members of their professional association. Even if it costs money, dentists should generally support their profession. However, it doesn't cost money. It saves members huge sums of money. Elaine Hughes sets out the details in this edition. If you are not a member, it's costing you thousands of euro.



Leo F. A. Stassen

Prof. Leo F. A. Stassen
Honorary Editor

The year that was

Outgoing President DR SEÁN MALONE laments his year at the helm of the Association.

This is the last time that I will be writing a President's news. I can't believe that my year as President of the Irish Dental Association is coming to an end. It has been an amazing experience; with travel to Copenhagen, London, New York, and New Orleans. I also had the opportunity to visit many regional branches, and I wish to thank them all for the welcome that they gave me. I particularly enjoyed the HSE Conference in Mullingar. Because I work in private practice, I do not meet dentists working in the HSE very often and I was made very welcome.

My aim during my presidential year was to do what I could to raise morale in the profession. What did I see that made me think that better times are on the way?

Presentations at recent practice management seminar

The young dentists were confident, ethical, successful, and above all, they put their patients' welfare first. I am now of the older generation, and I feel confident that the profession is in good hands.

The Sensitive Dentist Awards

I have spoken about this before, it's not only the winner that is important to note, but all the stories of dentists helping patients beyond the call of duty and not expecting anything in return.

The Dental Act

I feel confident that the new Dental Act will be of benefit to our profession. The Association is lobbying particularly for: compulsory CPD; foundation training; licensing of practices; and, recognition of specialists. We won't get everything that we want, but we will be better off than we are now.

The Dental Forum

This initiative, which was brought about by the Association and the deans of the three dental schools, brought all the stakeholders in Irish dentistry together for a stimulating conference, which will be reflected in a policy document that has the agreement of the IDA, the dental schools in Dublin and Cork, and the Faculty of Dentistry RCSI. This puts us in a far stronger position in the Department of Health than if we were arguing separately.

From the meetings that I have had in the HSE, I feel that they are aware of the dire straits that many practitioners are suffering, due to the underfunding of the medical card scheme and the collapse of the PRSI (although that is not the responsibility of the HSE). I am confident that we are high in priority for available funding.

The Dental Complaints Resolution Service

This has been a resounding success under the stewardship of Michael Kilcoyne. The more complaints which can be settled in this way, the less litigation there will be and our DPL yearly payments will reduce ultimately.

Increased membership of the IDA

This is to the benefit of the profession. Firstly, it gives us a stronger voice when negotiating with the Department of Health. Secondly, increased membership subscriptions allow us to give more resources to services for our members.

Hygienists and nurses

I was honoured recently to be a guest at a meeting organised by the IDHA and the IDNA in the Dublin Dental Hospital. There was a large turnout and the youth and enthusiasm was inspiring for me.

I would like to thank all the staff at IDA house, all the honorary officers, and all the members of the committees who give generously of their time. I would also like to thank the Metropolitan Branch of the IDA, for nominating me for president. It has been a great honour to be your president and I will remember this year for the rest of my life. Lastly, I want to wish Dr Peter Gannon, our incoming president, every success. I hope that he has as good a year as I had, and I wish him a great conference in Kilkenny.

Slán agus beannacht,



Dr Seán Malone, IDA President





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1. Bleeding Index Reduction DOF 1 – 2013 (LAEBBA0001).
50.9% reduction in whole-mouth mean Bleeding Index at 4 weeks.
2. DOF 2 – 2013 (LNRPLT0006).

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Advanced Defence against gum disease

Overhaul of dental legislation sought

At a recent meeting with the Department of Health, the Association emphasised its support for an overhaul of the legislation regulating the practice of dentistry. Chief Executive, FINTAN HOURIHAN, reports.

The Department of Health is now meeting the major stakeholders before the heads of a new Dental Bill are prepared. The Association had already lodged a comprehensive submission on this issue. At our meeting, the nine-strong Association delegation emphasised its support for stronger safeguards for patients and the licensing of dental practices. The Association also stated its view that the inspection of dental practices should be carried out by the Dental Council.

The Association believes that the Dental Council should be composed of an equal number of dentists and non-dentists, while there should be a majority of dentists on fitness-to-practice committees. The IDA also believes that dentists should not be identified at fitness to practice hearings until, and unless, they are found to have committed sanctionable offences.

The notion of direct access for hygienists and therapists was discussed at great length. While dentists support expanding the scope of practice for hygienists, concern remains that there must be recognition of the fact that only qualified dentists are trained to provide the complete range of dental care and treatments. The role of dentists and their primary role in undertaking full dental examinations and prescribing x-rays needs to be properly understood and protected in their interests of patients and promoting better oral health. The distinction between direct access within the dental practice and independent practice was strongly emphasised by the IDA. Direct access within the practice alongside the dentist could only be supported where there are clear obligations to ensure patients are regularly examined by dentists.

Extending the divisions of the specialist register to accommodate specialities recognised in common law jurisdictions such as the US, Canada, the UK, Australia, and New Zealand was also called for by the IDA.

This should not undermine the entitlement of general dental practitioners to provide aspects of care which are provided by specialists assuming they possess the necessary skills, expertise, and experience.



Association delegation to the Department of Health, from left: Ms Sarah Gill; Drs Maher Kemmoona and Andrew Bolas; Mr Fintan Hourihan; Ms Elaine Hughes; Drs Sean Malone, Ryan Hennessy, Mark Condon, and Ronan Perry.

In addition, the IDA called for a repeal of the existing ban on incorporation of practices.

The Association called also for an appropriate definition of dentistry to be included in the new legislation given the dangers faced by non-qualified persons offering to take impressions, to provide tooth whitening and other treatments that are more appropriately provided by dentists. The dangers associated with clinics that arrange examinations in hotels and other non-clinical settings before arranging treatment (or, very often, over-treatment) overseas, was also mentioned.

In a similar vein, the Association called for strong safeguards to be introduced to regulate advertising. Mandatory CPD regulated by the Dental Council, was also strongly endorsed by the Association. A copy of the Association's submission on the new dental legislation is available on request to IDA House.

Faculty of Dentistry RCSI ASM to be held in October

The Faculty of Dentistry RCSI's Annual Scientific Meeting (ASM) 2014 will be held in Dublin on October 30-31, 2014. The title of this year's ASM is 'Controversies in Dentistry', and will include lectures on: caries management (including "seal or save"); orthodontics (including "six month smiles"); the role of fluoride; drug therapeutics and the dental practitioner; adhesion; radiology; endodontics; and, oral surgery. Confirmed overseas speakers include: Amr Morsi (New York), St John Crean (Preston); Avi Bernerjee (London); Mark Hector (Dundee); Chris Deery (Sheffield); and, Ross Hobson (Newcastle). Many accomplished national speakers will also address the meeting,

including: Hal Duncan (endodontics); Garry Fleming (adhesion); and, Brian Bourke (orthodontics). On Friday afternoon, a special Leo Sheridan lecture session, entitled "Current controversies in the surgical management of head and neck cancer" will be delivered by Brian Schmidt (New York) and David Vaughan (Aintree, Liverpool). The meeting will be of interest to dental practitioners in Ireland and overseas, as well as graduates. Those who wish to register interest for this meeting should email the Faculty office at: facdentistry@rcsi.ie. Please note that the Friday afternoon (Head & Neck cancer session) will require separate registration.

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Letter to the Editor



From left: Margaret McGrath, head and neck cancer nurse; Gerry Collins; and, Lia Mills, author and cancer survivor.

Dear Sir,

Gerry Collins died on March 2, 2014. He left a legacy of achievement in many areas of his life – most recently in the area of increasing

awareness about cancer in Ireland. Gerry was diagnosed with throat cancer in 2008. Following his recovery from this disease, he gave freely of his time and expertise to support the foundation of Mouth, Head and Neck Cancer Awareness Ireland. He took part in the first Mouth Cancer Awareness Day in 2010 and also in 2011. He worked on the development of a brochure entitled Mouth, Head and Neck Cancer with the Dental Health Foundation, Irish Cancer Society and the University Dental Schools in Cork and Dublin.

He was involved with the Molar Rollers, a Dublin Dental University Hospital cycling group, who raised funds for mouth cancer by cycling to London in 2011.

In 2013, Gerry was diagnosed with terminal lung cancer. He did not let this defeat him or reduce his commitment to life in any way. During the last months of his life, he worked to make anti-smoking advertisements with the HSE smoking cessation service – Quit.ie. These have been broadcast on the national media.

Gerry was a true hero and his good work will live on.

Regards,

Denise MacCarthy,
Mouth Cancer Awareness Ireland

Quiz

Submitted by Dr Ciara Scott.

A 15-year-old male presents with a Class I malocclusion with well aligned arches. URC is retained (see **Figures 1, 2, and 3**).

The arches were otherwise well aligned, with little need for orthodontic treatment.

Periapical radiographs were taken to locate the permanent tooth (**Figures 4 and 5**).

1. How can you locate the unerupted permanent tooth clinically and radiographically?
2. What do the radiographs show?
3. How can you describe the canine tooth position? How common is this?
4. What technique may offer more information in determining the prognosis of the UR2, UR3, and planning treatment?

Answers on page 102.

April/May 2014

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Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Correction

The answer to the quiz in the last edition of the Journal (p45) stated that the patient had been aware of progressive periodontitis. This is incorrect and the sentence should have read: "The patient had been unaware of this."

The author of the quiz, Dr Seán Malone, had submitted the correct version and we apologise for any confusion caused.

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have discontinued them. Our supplies are low, and we are now faced with a critical shortage. If any *Journal* readers have unused sets of these crowns languishing in a cupboard, the paediatric dentists at Our

New Dean of Faculty in RCSI

Dr John Walsh, a native of Dublin and graduate of Trinity College, Dublin, has been elected as the new Dean of the Faculty of Dentistry at RCSI. Dr Walsh is also a graduate of the paedodontic programme at Indiana, and the orthodontic programme at Seattle. A Fellow of the RCSI, Dr Walsh was the first European to successfully complete the American Board of Paediatric Dentistry in 1989.

Dr Walsh paid tribute to his predecessor Professor Gerard Kearns, and said that he looked forward to working with colleagues to enhance clinical training and dental practice.

Lady's Children's Hospital Crumlin would be delighted to have them. Please contact Kirsten FitzGerald by email at kirsten.fitzgerald@olchc.ie if you think you can help.

Futurabond U – Dual-curing universal adhesive



FIGURE 1: Self-etch



FIGURE 2: Selective-etch



FIGURE 3: Total-etch

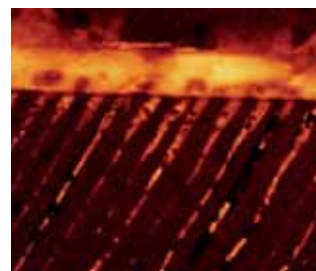


FIGURE 4: Reliable formation of resin tags in the dentine.

Source: Dr.-Ing. Ulrich Lohbauer, University of Erlangen/Germany, 2013

In recent years, the advances in adhesive dentistry have been tremendous. With Futurabond U, Voco claims the market's only true universal adhesive in a disposable applicator. Futurabond U offers practitioners a range of options for application, as much with regard to indications as to selection of the etching technique or the curing mode. According to the company, it allows practitioners to freely select how they wish to condition the dental hard tissue, depending on the individual clinical situation and their preferred way of working. The company also makes the following claims for Futurabond U.

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Contra-indications: Hypersensitivity to dexketoprofen, the excipients or other NSAIDs, NSAID induced attacks of asthma, bronchospasm, acute rhinitis, or nasal polyps, urticaria or angioneurotic oedema. Known photoallergic or phototoxic reactions during treatment with ketoprofen or fibrates. History of gastrointestinal bleeding or perforation related to previous NSAIDs therapy. History of or active peptic ulcer/haemorrhage, chronic dyspepsia or suspected peptic ulcer/haemorrhage, other active bleeding or bleeding disorders, Crohn's disease or ulcerative colitis, severe heart failure, moderate-severe renal dysfunction, severe hepatic dysfunction, haemorrhagic diathesis and other coagulation disorders, severe dehydration, during the third trimester of pregnancy and lactation.

Warnings and precautions: Caution in allergic conditions. Avoid use with concomitant other NSAIDs including COX-2 selective inhibitors. Use lowest effective dose for the shortest duration necessary to control symptoms. Gastrointestinal bleeding, ulceration or perforation which can be fatal, have been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of serious gastrointestinal events. When gastrointestinal bleeding or ulceration occurs withdraw treatment. The risk of gastrointestinal bleeding, ulceration or perforation is higher with increasing NSAID doses, in patients with a history of ulcer, particularly if complicated with haemorrhage or perforation, and in the elderly. The elderly have an increased frequency of adverse reactions to NSAIDs especially gastrointestinal bleeding and perforation which may be fatal. Commence treatment in these patients on the lowest dose available. Ensure cure of oesophagitis, gastritis and/or peptic ulcer before starting treatment. Monitor patients with history of GI disease. Special care with NSAIDs in patients with a history of gastrointestinal disease (ulcerative colitis, Crohn's disease). Consider combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors), and in patients requiring concomitant low dose aspirin, or other drugs likely to increase gastrointestinal risk. Monitor patients with a history of gastrointestinal toxicity, particularly when elderly, for unusual abdominal symptoms (especially gastrointestinal bleeding) particularly in the initial stages. Caution in patients receiving oral corticosteroids, anticoagulants, SSRIs or anti-platelet agents. Do not use with warfarin, other coumarins or heparin. Caution in patients with impaired renal function, receiving diuretic therapy or those who develop hypovolaemia. Ensure adequate fluid intake, may increase plasma urea nitrogen and creatinine. Caution in patients with impaired hepatic function. May increase some liver parameters. Monitor and advise patients with hypertension and/or mild to moderate heart failure. Special caution in patients with cardiac disease, especially episodes of previous heart failure. Monitor and advise patients with a history of hypertension and/or mild to moderate congestive heart failure as fluid retention and oedema have been reported. Some NSAIDs (particularly at high doses and long term treatment) may be associated with a small increased risk of arterial thrombotic events (e.g. myocardial infarction or stroke). Careful consideration before treating patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease. Similar consideration before initiating longer-term treatment of patients with risk factors for cardiovascular disease (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking). Serious skin reactions (some

of them fatal), including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis reported very rarely. Discontinue treatment at the first appearance of skin rash, mucosal lesions, or any other sign of hypersensitivity. Particular caution in patients with congenital disorder of porphyria metabolism, dehydration, directly after major surgery. If long term use necessary, monitor hepatic and renal function and blood count. Stop treatment at first signs of severe hypersensitivity reactions. Avoid use with varicella. Caution in patients with haematopoietic disorders, systemic lupus erythematosus or mixed connective tissue disease. As other NSAIDs, dexketoprofen can mask the symptoms of infectious diseases. Contains sucrose.

Interactions: Other NSAIDs, anti-coagulants, heparins, corticosteroids, lithium, methotrexate, hydantoines and sulphonamides, diuretics, ACE inhibitors, antibacterial aminoglycosides and angiotensin II receptor antagonists, peroxylidone, zidovudine, sulfonylureas, beta-blockers, cyclosporin and tacrolimus, thrombolytics, anti-platelet agents and SSRIs, probenecid, cardiac glycosides, mifepristone, quinolone antibiotics.

Pregnancy and lactation: Do not use in pregnancy, lactation or in women attempting to conceive.

Undesirable effects: As with other NSAIDs, the most commonly observed adverse events are gastrointestinal. Peptic ulcers, perforation or gastrointestinal bleeding, sometimes fatal, particularly in the elderly may occur. Common (1-10%): Nausea and/or vomiting, abdominal pain, diarrhoea, dyspepsia. Uncommon (0.1-1%): Insomnia, anxiety, headache, dizziness, somnolence, vertigo, palpitations, flushing, gastritis, constipation, dry mouth, flatulence, rash, fatigue, pain, asthenia, rigors, malaise. Rare (0.01-0.1%): anorexia, paraesthesia, syncope, hypertension, bradypnoea, peptic ulcer, peptic ulcer haemorrhage or peptic ulcer perforation, hepatic lesion, urticaria, acne, increased sweating, back pain, polyuria, menstrual disorder, prostatic disorders, peripheral oedema, liver function test abnormal. Very rare (<0.1%): neutropenia, thrombocytopenia, anaphylactic reaction including anaphylactic shock, blurred vision, tinnitus, tachycardia, hypotension, bronchospasm, dyspnoea, pancreatitis, hepatocellular injury, Stevens Johnson syndrome, toxic epidermal necrolysis (Lyell's syndrome), angioedema, facial oedema, photosensitivity reactions, pruritus, nephritis or nephrotic syndrome. Not known: laryngeal oedema, hepatitis, acute renal failure. As with other NSAIDs the following undesirable effects may appear: aseptic meningitis, which might predominantly occur in patients with systemic lupus erythematosus or mixed connective tissue disease; and haematological reactions (purpura, aplastic and haemolytic anaemia, and rarely agranulocytosis and medullary hypoplasia).

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Date of preparation: September 2013

References:

1. MIMS edition, November 2013

2. Keral 25 mg granules for oral solution Summary of Product Characteristics, last updated September 2013

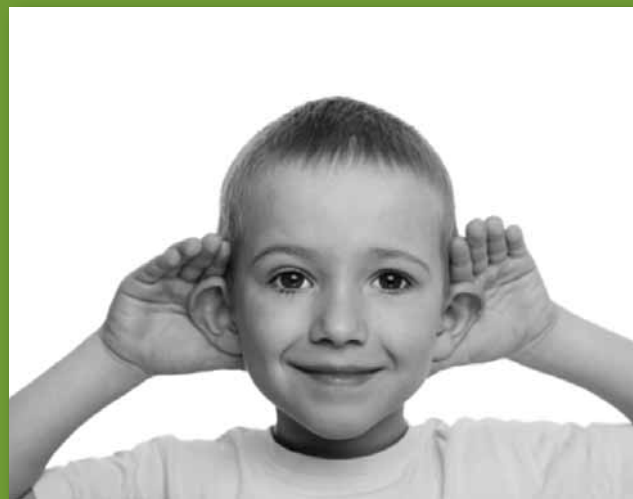
Open Wide

Kilkenny's Lyrath Estate Hotel host this year's IDA Annual Conference, providing three days of education, lectures, and social opportunities. RÓISÍN TREACY looks ahead to the event.



This year sees the IDA Annual Conference return to the Marble City of Kilkenny from Thursday to Saturday, May 15-17. The 'Open Wide' conference will see both national and international speakers address attendees, including the world-renowned Dr Didier Dietschi, and Dr Maurice Salama.

The introduction of two parallel sessions on both Friday and Saturday offers a choice of lectures to attendees. Although a programme relevant to all members of the dental profession will still be held on Friday, an alternative programme will also be on offer to those interested in more specific clinical subjects.



Presentations will take place on all three core CPD subject areas of infection control, oral radiology, and medical emergencies.

As ever, the conference will include a wide variety of social activities for members, including golf, the Annual Dinner, and a fun run.

The conference gives members a chance to have their say on issues affecting the dental profession in Ireland. The IDA AGM takes place at 6.00pm on Thursday, May 15, and all members are urged to attend this important meeting.

Pre-conference programme

Delegates will have a choice of attending four pre-conference courses in Kilkenny this year, all of which take place on Thursday, May 15.

Drs Naomi Rahman and Seamus Rogers will give two half-day courses on oral surgery, in which participants will have the opportunity to first watch the techniques on a large screen, and then practice on a model under the instruction of Naomi and Seamus.

The subject of endodontics will be covered by Dr Pat Cleary in a full-day, hands-on course, entitled: 'Developing your routine for endodontics'.

Dr Maurice Salama will present a full-day lecture on the role of TEAM in reconstructive aesthetic dentistry. The diagnosis of deficiencies, as well as the varied treatment options, will be heavily discussed during this course.

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Journal of the
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Speaker

Emergency medicine back to basics

A review of the preparation for, and effective management of, potentially life-threatening situations that can arise.

The fourth course on offer focuses on composites, and will be presented by Dr Didier Dietschi, with the support by Dr Paddy Crotty. The two half-day, hands-on courses aim to help members of the dental profession understand the multiple factors influencing the quality and long-term behaviour of tooth-coloured posterior restorations and to master the clinical application of direct posterior composite restorations with a focus on layering and sculpting techniques.

Lecture programme

This year's lecture programme covers a wide-ranging number of topics. For Team Day on Friday, May 16, the team programme features lectures from: Nick Armstrong on infection control; Conor McAlister on an Irish dental project in Africa; Kellie O'Shaughnessy on oral health promotion; and, Paddy McCann on mouth cancer.

Meanwhile, the alternative programme sees a number of more specialist topics covered, including: an update on panoramic radiography, by Nick Drage; tips for extractions in practice, by Justin Moloney; and, removable partial dentures in practice by Edward Cotter.

The two programmes will merge in the evening for the final two lectures of the day; a presentation of 'Murder and mayhem: Some aspects of forensic dentistry' by David Whittaker; and, a motivational speech from Gerry Duffy on the habits of high achievers.

Saturday's programme of events will cater for each professional group, with parallel sessions for dentists, and separate sessions for dental nurses, dental technicians, and dental hygienists. The dentists' programme will cover topics ranging from clinical photography in dentistry, to minimally-invasive cosmetic dentistry. Dental nurses can avail of lectures covering dental radiography and endodontics. Technicians will attend lectures on maxillofacial prosthetics and



Drs Naomi Rahman and Seamus Rogers

Oral surgery for the general practitioner

This course will cover practical tips for the general dental practitioner in minor oral surgery. It is aimed at giving the general practitioner the skills to surgically remove teeth or roots in general dental practice.



Dr Pat Cleary

Developing your routine for endodontics

A hands-on course demonstrating assessment of teeth for endodontic treatment including: diagnosis; determining suitability for treatment; and, estimating difficulty in treating successfully.



Dr Maurice Salama

The role of TEAM in reconstructive aesthetic dentistry

This presentation will focus on a defined algorithm for the interdisciplinary team of the restorative dentist, periodontist, and orthodontist to successfully reconstruct the soft tissue foundation for all restorative options in anterior tooth replacement.



Dr Didier Dietschi

supported by Dr Paddy Crotty

Metal-free posterior restorations: direct techniques

This course will review decision criteria for the treatment of posterior teeth with direct techniques, and discuss the main incremental options as well as recent 'simplified' filling techniques.



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Dental
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splints. While, the hygienists' programme covers diabetic patients, and communicating periodontal disease.

Clinical workshops

The subjects of this year's clinical workshops include: the collection, usage, and protection of patients' data; and, CPR/medical emergencies. Workshops on data collection will focus on the legal requirements surrounding patient information and records, while a CPR course will give delegates the opportunity to refresh their knowledge on the practice.

Social programme

This year's social programme is made up of both indoor and outdoor activities, guaranteeing there will be something for everyone. This year's President's Golf Competition takes place from noon on Thursday, May 15 in the spectacular Mount Juliet Golf and Country Club.

The competition will be followed by the annual trade show opening party on Thursday evening at 8.00pm, which will be officially opened by the newly inaugurated IDA President, Peter Gannon. All delegates and trade show sponsors are invited to the event, with the promise of

Don't miss...

DENTAL TEAM DAY, SATURDAY, MAY 17



Sheila Galvin

Specialist registrar in oral medicine, Dublin Dental University Hospital.

White patches – diagnosis and management

Common white patches of the oral mucosa, for example lichen planus, leukoplakia, candidiasis, frictional keratosis and smoking-related keratosis, will be discussed, along with some more unusual causes of white patches. Emphasis will be placed on important differential diagnoses not to miss. Initial management, need for referral, and referral pathways will also be covered.



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Conference preview

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fun, music, and drinks for all.

Later, a buffet supper will be held in the X Bar at Lyrath House from 9.00pm. Tickets are priced at €25 and are available from IDA House.

The highlight of the conference - the Annual Dinner - will take place on Friday evening at 7.30pm. As always, the dress code is black tie, and entertainment on the night will take the form of Brass & Co.

Saturday morning will see the return of the Fun Run around the beautiful surroundings of Lyrath Estate. All proceeds from the event will go to Focus Ireland in Kilkenny.

Awards

The two main awards presented at the Annual Conference each year, return for Open Wide 2014, along with our table and poster

demonstrations, which take place from 2.30pm to 3.30pm on Friday, May 16.

Dr Joe Moloney Award

The Dr Joe Moloney 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 no more than 10 minutes on a subject applicable to general dental practice. Each of the three dental schools may enter a team of a maximum of two people.

President's Golf Competition

The President's Golf Competition will take place at the spectacular Mount Juliet Golf & Country Club from noon on Thursday, May 15. For anyone who is registered for a pre-conference course on Thursday, May 15 and would like to play golf, there is the option to play on Wednesday, May 14 in the afternoon.



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FIGURE 1: Rubber dam isolation.



FIGURE 2: Amalgam removal with protection of adjacent tooth.



FIGURE 3: Completed preparations.



FIGURE 8: Frosted appearance following etching (occlusal perspective).



FIGURE 9: Sectional matrix in situ with wedging system.



FIGURE 10: Close up of matrix in situ.

Restoring class II cavities with composite resin, utilising the bulk filling technique

This article describes the clinical stages involved in restoring class II cavities with composite resin, utilising the bulk filling technique. This alternative to traditional layering methods has gained popularity due to increased efficiency, while managing the volumetric shrinkage associated with curing large volumes of composite resin.

STEP 1 Pre-operative assessment of the extent of the lesion to be restored. The shape and form of the existing restorations have not recreated ideal proximal contacts between adjacent teeth. A preoperative radiograph is useful here in predicting the depth of the carious lesion. The existing occlusal contacts should be assessed at this stage - aiming to maintain the existing occlusal contacts on tooth structure following restoration.

STEP 2 Anaesthesia and rubber dam application with clamp placement ideally

on the tooth distal to the tooth being restored, with isolation extending to the tooth anterior to the tooth being restored also (Figure 1).

STEP 3 Removal of the existing restoration with any secondary caries present. This step should be carried out under copious water irrigation with high volume suction to minimise mercury vapour generated. The adjacent teeth should be protected as required (Figure 2).

STEP 4 Careful assessment of sound tooth structure with a clear amelodentinal junction and liner application as required (Figures 3 and 4).

STEP 5 Ensure a dry field for bonding. If there is any bleeding at this stage, it is important to ensure haemostasis before proceeding. This should be easily achieved with either a haemostatic agent or supplementary intrapapillary infiltration of local anaesthetic for the vasoconstrictive

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FIGURE 4: Preparations.

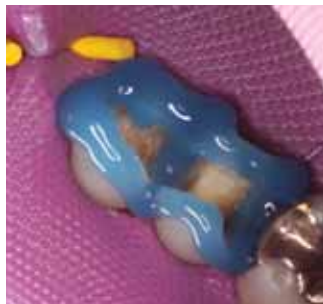


FIGURE 5: Enamel etching.



FIGURE 6: Etching of enamel and dentine.



FIGURE 7: Frosted appearance following etching (buccal perspective).



FIGURE 11: Application of bonding agent.



FIGURE 12: Application of flowable composite at the base of the interproximal box.



FIGURE 13: Incremental composite placement.



FIGURE 14: Final increment placed and cured.



FIGURE 15: Proximal contacts from the buccal perspective prior to finishing.



FIGURE 16: Completed composite restorations prior to finishing.

effect of adrenaline (provided there are no medical contraindications).

STEP 6 Etching of the enamel (Figure 5) and dentine (Figure 6) with 37% phosphoric acid for 10-30 seconds. Appraisal of etching - a favourable etching pattern (frosted appearance) is illustrated in Figures 7 and 8.

STEP 7 Careful matrix and wedge placement (Figures 9 and 10). A matrix system designed to restore the proximal contact adequately, as well as maintaining a tight marginal seal will offer a better result over traditional ring type designs. If the cavity extends beyond the proximal box, it may be advisable to build up most of the tooth with a traditional matrix system, then using a specialised matrix system for the proximal box.

STEP 8 Application of adhesive resin (Figure 11).

STEP 9 Placement of flowable bulk fill composite at the base of the box area can enhance adaptation due to the superior "wetting" capacity of this material (Figure 12). The depth of each layer of bulk fill should not be greater than 4mm to ensure adequate penetration of the curing light and therefore complete polymerisation of the material (Figure 13). Although the volumetric shrinkage for bulk fill composites (1.6-2.4%) is less than for packable composites (2-3%), if they are utilised in greater bulk than for traditional composites, the shrinkage overall will be increased proportionally. It is also recommended to further light cure on all surfaces following matrix removal. A capping layer of packable hybrid composite is placed on the occlusal surface (Figure 14).

STEP 10 Finishing and polishing (Figures 15 and 16) should be



FIGURE 17: Completed adjustment.



FIGURE 18: With re-establishment of occlusal embrasures.



FIGURE 19: Occlusal markings.

completed using fine grit diamond burs. The main aim of this step is to ensure the composite is smooth and flush with the adjacent tooth structure as well as recreating ideal dental anatomy as much as possible (Figures 17 and 18).

STEP 11 Rubber dam removal.

STEP 12 Checking and adjustment of the occlusion as required (Figures 19 and 20). Occlusal contacts should be kept on sound tooth structure in preference to the restorative material. Occlusal contacts should be maintained as preoperatively on the adjacent teeth.

STEP 13 Final polishing is completed with grit impregnated discs and silicone points.

Concluding remarks

Patient-driven demand for aesthetic restorations has increased in recent years. As clinicians, we have a responsibility to advise patients regarding the suitability of composite resin on a case-by-case basis. Factors influencing the suitability of the material include:

size of the cavity and ability to achieve adequate moisture control. Achieving a predictable and durable result with composite resin is technique sensitive and challenges include restoring proximal contacts, polymerisation shrinkage, and ensuring adaptation of the material to the cavity. Restoration with composite resin remains more labour-intensive than amalgam. Bulk fill techniques are gaining popularity as clinical time required is reduced without compromising the quality of the result achieved.



FIGURE 20: Occlusal markings.

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1. Mohan et al. J Dent 2008; 36:21-26.



Policy planner

Dr Dympna Kavanagh is both the Chief Dental Officer and the Oral Health Lead for the Health Service Executive. They are the most important posts in dentistry in Ireland. She spoke to PAUL O'GRADY for the *Journal*.

The man in charge of looking after welcoming guests to the Department of Health building, Hawkins House, is a counterpoint to his surroundings. Warm and efficient, he assures us (our photographer, Orla Murray, and I) that Dr Kavanagh will not keep us long – and shortly afterwards we are whisked up through the building to her office. Functional is a kind description. Our public servants may have many benefits of which we might be envious, but the office space of the Department of Health is not one of them. Pleasantries aside and a few photographs taken, we get down to business.

Is it unusual, I wonder, to have two jobs? "I do have two roles, but I am not sure that it is unusual. The HSE and the Department of Health are working very closely together and there is legislation coming in changing the HSE and we are working more as a continuum." Dr Kavanagh tells me: "Looking at the roles, from the Department of Health point of view, it is about policy. It's about putting priorities in place in relation to oral health. Then in relation to the HSE, it's about implementing that policy, no matter what the HSE will be called in the future."

Defining success

What would success look like in these roles? "The [development of an] ...oral health policy is a programme of three years. And it is a programme, not a document coming out, or a statement of intent. The theory behind policy has changed enormously in the last ten years. So it has to be a programme of change over three years to allow much more consultation, much more feedback, much more input; ...[and] also to ensure that we have an opportunity to test what we are putting in place as we go along."

How will that be achieved? Dr Kavanagh has identified three strands of work that are necessary in order to put a new oral health policy in place: needs assessment; skills (workforce) needs; and, consultation. On needs assessment, she comments: "I would be very disappointed if we didn't have clarity on our oral health needs ... in that timeframe (three years). But more than that, we should put a framework in place so that someone else is not looking back down the line in 20 years time and we don't have to start again. So I would consider that success: that we put clear policy scaffolding in place so that policy can develop all the time and is not dependent on one person or one role." The questions over the issue of skills needs are definitely long term: "Do we need more skills? Do we need less skills? Do we need more specialists? Do we need something entirely different? It's not just about now; it's about looking down the line 10 or 15 years ... because

The CDO/Oral Health Lead view on:

Universal health insurance

"There are currently no implications for oral health in that. As you know, UHI is just ... starting off and as we move towards 2016 and UHI in general, all will unfold. But right now the current status quo is that UHI is up for discussion as to what is covered and is not covered."

that's the length of time by which the workforce will really start biting into the needs." Regarding consultation, she cites the need for discussion with the public as well as the profession: "The final work stream then is about consultation and that includes consultation with the profession which is an integral part of the whole policy. We have established the Academic Reference Group and that has come from the profession themselves. The same view would apply to primary dental care: to look at a reference group that would be drawn from the profession themselves. So part of the development of policy is automatically involving the profession, but the public consultation is a really big part. Not just about their views, but how they react if we test and pilot the policy."

Reductions in PDS staff numbers

Given the 20% reduction in the number of dentists and dental nurses in the Public Dental Service, what is the future for that service? "Well again I reflect back into policy and the second work stream in relation to workplace development. While the clarity in the 1994 [policy]... is around child health and child provision, and for special needs care, the new policy is looking ... at new and different ways of providing health [care]. It doesn't mean that we will have less numbers, but we might incorporate different models of care. For example, ... there might be an opportunity for some general dental practitioners to provide some aspects of care; there may be opportunities for the hospitals to be involved; and so not everything may continue the same as it is. We may turn around at the end of the policy and say that actually the way we do our workforce is perfect."

Damage to oral healthcare

There is a fierce sense amongst the profession of Irish oral healthcare having been damaged by the cuts. Does Dr Kavanagh see a chance for repairing that damage? "Well, again, the very first part of the work stream is about looking at needs assessment, and what is really important is that we get evidence ... to see what our concerns are and what our priorities will be. I'm wary of saying that we take a blunderbuss approach because we know from the OECD figures that in the future the elderly are the single biggest group we have to be concerned about. They are now 30-40 year olds. While we have traditionally focused on children, we now realise with the way the population is going, that will not cover us in the future. It's really important that I get my needs assessment priorities right so I know where I can put the system in place."

Fighting for more money

"Overall health figures in Ireland are coming in from OECD at around 11%, which [indicates]... in fact, we are spending very similar to other countries in Europe. We are very much up there. No Chief Dental Officer is going to say we have enough money; and no government is going to say that we don't want more money but it is really important that any new policy that comes out says 'Look we have our resources ...and we are spending it in the right way and as effectively and as efficiently as possible'. We'll never have enough money."

Dealing with the DTSS

Perhaps the most interesting exchange with Dr Kavanagh came over the issues that arise from dentists trying to provide the best and most appropriate treatment for patients under the DTSS. The *Journal* conveyed to her the deep frustration about the operation of the Scheme and cited several cases supplied by dentists. However, Dr Kavanagh countered that the numbers of people that can receive additional treatment under the Scheme was expanded in 2012. This applies to vulnerable people and those with certain pre-existing conditions. The list of conditions under which this fuller treatment is available is sent to dentists every year, she stated, and is on the HSE website. She further stated that if a DTSS patient who cannot avail of treatment under one of the listed conditions, needed treatment above and beyond that which is currently available, their dentist may make the case for additional treatment to their local Principal Dental Surgeon. And, if that case is refused, then the dentist can appeal that decision to the HSE. Dr Kavanagh feels these safeguards ensure that patients are protected and that dentists need to work that system to the fullest extent. She also observed that many dentists are already availing of the opportunity to provide additional care to patients with listed pre-existing conditions. In relation to frustration with payments, while the payments system is not under her remit, she stressed that all detail on the paperwork is very important.

Overview

Dr Kavanagh was combative on the issues that frustrate dentists so greatly – the cuts to oral healthcare and the operation of the DTSS – but she is clearly very committed to the development of an oral health policy. The last new oral health policy was ready for publication in 2008, and never saw the light of day. It will be a significant achievement if Dr Kavanagh proves a successful mid-wife to the birth of a new policy.

Public Dental Health specialist

Dympna Kavanagh was appointed as Chief Dental Officer in 2013. A graduate of University College Cork Dental School, with a PhD in Preventive Dentistry, Dr Kavanagh has worked in the NHS and in the Irish Health Service. She completed her higher training in Dental Public Health in Guys Hospital, King's College, London. Dr Kavanagh returned to Ireland in 2001 and is currently National Oral Health Lead in the HSE.

An evaluation of washer-disinfectors (WD) and dishwashers (DW) effectiveness in terms of processing dental instruments

Purpose: The aim of this study is to consider the effectiveness of a small sample of dishwashers (DW) compared to washer-disinfectors (WD) for cleaning dental instruments prior to sterilisation.

Processing instruments in the context of this article means cleaning and disinfecting the instruments.

Materials and methods: A number of tests were carried out on three domestic dishwashers and two instrument washer-disinfectors.

These tests included: visual test; soil test; residual protein test; and, the TVC of the final rinse water.

Results: The washer-disinfectors (one bench-top and one under-bench) passed all the tests.

The results indicate that the instruments cleaned in the dishwashers were visibly clean and dishwashers passed the TOSI soil test. There was residual protein on some of the instruments cleaned in the all of the dishwashers and the final rinse water did not comply with standard ISO 15883.¹

Conclusion: Dishwashers are not effective for cleaning instruments and they do not disinfect the instruments either. They cannot be validated and there is no record available outlining the parameters of the process. Dishwashers are not designed by manufactures for processing dental instruments prior to sterilisation.

The authors do not recommend the use of dishwashers in dental clinical practice.

Journal of the Irish Dental Association 2014; 60 (2): 84-89

Introduction

There is a clear preference in the dental literature for the use of washer-disinfectors over ultrasonic cleaners and hand washing (Dental Council 2005, HSE Code of Practice, HTM 01-05).^{2,3} There has also been discussion in the BDJ concerning the effectiveness of washer-disinfectors (Kilcoyne 2009).⁴ It has been suggested that domestic dishwashers can clean instruments as well as washer-disinfectors. The rationale for this

article is to assess the efficiency of dishwashers as compared with washer-disinfectors, as this is a topic of debate in dental circles both in Europe and US.

There are few peer-reviewed articles comparing washer-disinfectors and dishwashers (that the authors can find). This is not surprising, as they are different pieces of equipment, which are manufactured for different purposes. A study, entitled 'Can household dishwashers be used to disinfect

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FIGURE 1: A washer-disinfector.

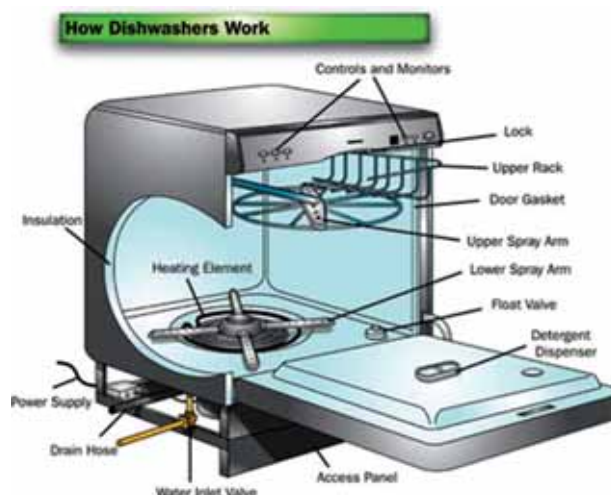


FIGURE 2: A traditional dishwasher.

medical equipment' (Ebner, *et al.*)⁵, claims that dishwasher processing is a suitable means of disinfecting medical equipment. However, in the study, they modified the machine to achieve a higher temperature for disinfection. The article does not state which wash cycle was used. There is much evidence of the general efficiency of washer-disinfectors from independent researchers, and they are recommended by the CDC and Department of Health (UK) for the cleaning of dental instruments.⁶

In this study, we tested: two washer-disinfectors, one bench top and one under counter type; and, three dishwashers. We examined the instruments that had been processed to see if they were 'clean' and we also examined the rinse water to see what the bacterial load was.

Materials and methods

In order to determine the cleaning efficacy of a washer-disinfector (WD) (Figure 1) and a domestic dishwasher (DW) (Figure 2), a number of tests were employed.

Types of test for benchmark comparisons

1. **Soil test:** OSI tests were used in all cycles tested. The test devices are smeared with dried blood or synthetic products that simulate blood, which is more difficult to clean than environmental dirt. (Figure 3) The instruments in the test cycles are also covered in another soil – Browne Test Soil for washer-disinfectors is the standard manufacture use for batch testing of instruments and determination of efficacy ("if not clean cannot be disinfected"). The instruments used were a mirror, probe, tweezers, artery forceps, hand piece, and metal ruler. A soil test is considered a pass if no soil remains visible on the test device. (Figure 4).
2. **Visual test:** The instruments were visually tested for soil using magnification under a microscope.
3. **Protein test:** Residual protein can be left on instruments⁷, which makes sterilising the instruments more difficult, as the protein stops the steam condensing on the instruments.

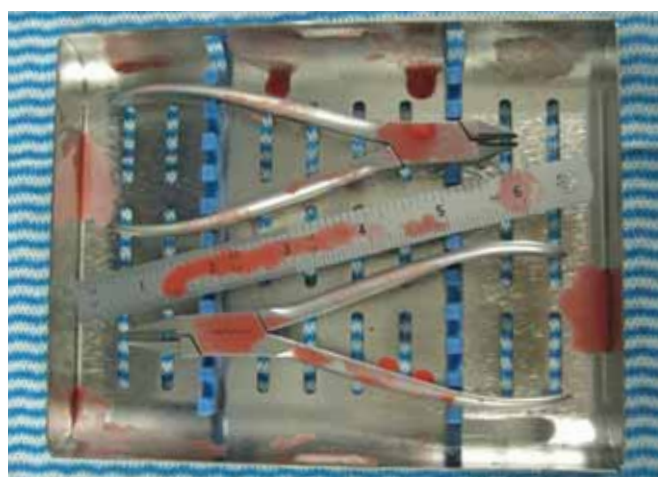


FIGURE 3: Soil on instruments before cleaning.



FIGURE 4: Soil removal on instruments after cleaning.

Table 1: Microbiology pass results for final rinse water from washer-disinfector.

Aerobic colony count in 100ml at 35°C for 72hrs	Interpretation/action	Pass criteria for final rinse water extracted from washer
Less than 1	Satisfactory	<10 TVC/100ml
1-9 on a regular basis	Acceptable - indicates that bacterial numbers are under a reasonable level of control.	<10 TVC/100ml
10-100	Unsatisfactory - investigate potential problems and self-disinfect or super-chlorinate.	<10 TVC/100ml
Over 100	Unacceptable - take AER out of service until water quality improved.	<10 TVC/100ml

Table 2: Summary of test results.

W/D	TOSI test	Visibly clean	Protein test	TVC (final rinse)
Miele W/D	pass	yes	pass	satisfactory
Mocum W/D	pass	yes	pass	satisfactory
DW	Tosi test	Visibly clean	Protein test	TVC (final rinse)
Indesit DW	pass	yes	fail	>300 unacceptable
Bosch DW	pass	yes	fail	>100 unacceptable
Beko DW	pass	yes	fail	>500 unacceptable

The intensive cycle was tested on the Indesit dishwasher. The ECO cycle was tested on the Bosch dishwasher and the standard cycle was tested on the Beko.



FIGURE 5: Dental instrument test in class 11a washer with hand piece connector.

Biotrace Protect and Protein Test Kit (Protest Quick) were used to verify pass of the wash processes. This test measures the level of residual protein left on the instruments after cleaning and there must be no protein detectable for a pass in this test. This system tests for protein residue in accordance with EN ISO 15883. It is effective for testing any surface after cleaning and hard-to-clean surfaces on complex instruments. These surfaces will change colour from green to purple if protein is present on the sample.

4. **The total number of micro-organisms (TVC per ml) in the rinse water was recorded:** The procedure to count the number of viable microorganisms was performed before and after the thermal disinfection in the washer-disinfectors. The level of non-compliance with standard ISO 15883 in the final rinse water during the final rinse cycle was also recorded for the domestic dishwasher.

Water samples testing

Water samples were obtained from draw-off points installed at convenient locations within the system for testing the water rinsing the dental instruments in washer-disinfectors (final rinse water). The dishwasher's water was sampled directly during the final rinse. Standard sampling techniques were used for obtaining the water samples.

Samples for TVC were tested within four hours of collection, having been stored at a temperature of two to five degrees.

As can be seen in Table 2, the washer-disinfectors cleaned the instruments and the water used for the final rinse was of good quality. All the dishwashers left protein on the instruments and the final rinse water did not conform to the standard. The air rotors were disinfected in the WDs, which all had lumen cleaners. We have tested these lumen

Table 3: Validation and evaluation of a small dental washer-disinfector (SDWD) and a domestic dishwasher (DDW).

✓ means compliant with requirement
x means non-compliant with requirement

Test performed	SDWD 1/2	DWD 1	DWD 2	DWD 3
Make of washer disinfector	Miele SDWD G7881/Mocum			
Verification of calibration of test instruments pre-test	✓ (from printer)	x	x	x
Automatic control test/printer	✓	x	x	x
Cycle number recorded	✓	x	x	x
Piping to withstand 150°C	✓ from	x	x	x
Verification of WD instruments	✓	x	x	x
Initial rinse measured < 35°C	✓	x	x	x
Main Wash measure > = 45°C	✓	✓	✓	✓
Final Rinse > 90°C	✓	x	x	x
Independent measurements				
Initial rinse measured	✓	x	x	x
Main rinse measured	✓	x	x	x
Detergent measured	✓	x	x	x
Final rinse measured	✓	✓	✓	✓
Hold time disinfection measured	✓	x	x	x
Drying measured	✓	x	x	x
Operational tests for washer				
MIS Lumen check main wash	✓	x	x	x
MIS Lumen check final wash	✓	x	x	x
Start of Final thermal rinse 90°C	✓			
Performance test for a full load	Evaluate 200ml			
Thermometric test for a full load	✓			
Thermometric test for a small load				
Repeat tests for MIS RIMD				
Efficacy tests for lumen	✓	x	x	x
Efficacy tests for solid load	✓	x	x	x
Residue test (Ninhydrin)	✓	x	x	x
Detergent dosing test	Test 100/200ml/L	x	x	x
Summary of micro results				
Any anomalies of KPIs				
Results of TVC of main wash	✓	x	x	
Results of TVC final rinse	✓ < 10 tvc/100ml	x >300	x >1000	x >500
Results of efficacy of main wash	✓	✓	✓	
Results of efficacy of final wash	✓	✓	✓	
Compliance to best practice	Compliant			

It is necessary to be able to apply the above tests to all equipment that is used to clean/disinfect dental instruments.

Table 4: Process parameters of SDWD.

Cleaning	Disinfection	Drying
Water temperature	Water temperature	Air temperature
Water hardness (conductivity)	Water purity (conductivity)	Air quality
Water pressure	time	Air-flow rate
Water-flow rate		time
Additive(s) delivery time		

cleaners and found them to be effective at removing soil from the lumens. The dishwashers did not have lumen cleaners and, consequently, the lumens were not cleaned and disinfected before sterilisation. This clearly compromises the ability of the autoclave to sterilise the hand pieces.

This research shows that the results (for WDs) are in compliance with ISO and EN standards, but even though the domestic dishwasher did achieve some efficacy requirements (clean dishes), it fell drastically short of TVC pass requirements. The validation steps (Table 3) confirmed the high efficacy level of the medical washer-disinfector, but not the domestic dishwasher. Disinfection means the destruction of most viable microorganisms, except spores.

Discussion

Testing and validation

It is clear from our research that dishwashers do 'clean' debris off the instruments, but that the instruments are not free of microorganisms or protein. Further, air rotors and other lumen devices cannot be sterilised, as the lumens have not been cleaned. The present 'Dental Council Code of Practice Relating to Infection Control in Dentistry' says that hand pieces must be sterilised.

Failure to either clean or disinfect dental instruments can have serious consequences for dental patients and efficient cleaning is an essential part of the decontamination process. The independent monitoring system must record, totally independently of the control system, all parameters which are deemed to be critical to the successful outcome of the process (NHS Estates, Jatzwauk *et al.*).^{9,10} It is suggested that for a process to be parametrically controlled with full product-release capability, the following parameters are critical for an SDWD (small dental washer-disinfector).

Whilst this table (Table 4) might appear lengthy, the list may be reduced. It is difficult to imagine a single sensor for air quality that may give useful information, so this may be omitted. Other parameters are repeated and judicious positioning of sensors may duplicate parameters. The final list may include:

water temperature; air temperature; water pressure;
water-flow rate; detergent delivery; water conductivity;
additive-flow rate(s); air-flow rate; and, time.

Table 5: Process parameters of a DWD

Cleaning	Assisted washing	Drying
Water temperature	Water temperature	Air temperature
Detergent delivery (not measured)		

Testing requirements for proof of cleaning efficiency

1. Cleaning (consists of the manual or mechanical removal of soil deposited on an inert surface) - the cleaning efficacy test is to artificially soil a clean test load and visibly inspect for its removal at cycle end. This test is performed routinely.
2. Disinfection - is the disinfection part of the cycle adequate?
3. Drying - is the washer drying the instruments properly?
4. Non-contamination of environment – is the washer contaminating the environment?

Thus, if any test is omitted, it will reduce the ability of the dental clinic to demonstrate that it is making the instruments safe for patients and not endangering the well being of operators, or anyone in the vicinity of the washer-disinfector.

While there are routine microbiological tests to be performed, there is no current requirement for in-process biological monitoring, so the process is effectively monitored on a parametric basis. Clearly, the function of each re-processor must be first defined. It may clean and disinfect, or merely disinfect. In either case, the critical parameters need to be defined, controlled, and monitored in order for a full product release decision to be made. Such parameters may well include ongoing disinfectant efficacy/concentration and any relevant safety aspects.

Summary on choice between a domestic dishwasher and a medical device compliant washer-disinfector for dental applications

There are implications for all practitioners following the publication of EN15883 and MDD 93/42.¹¹ These documents impact on manufacturers, purchasers, regulators, testers, users, and operators. Perhaps its greatest impact will be on the patient. Their safety and well being is dependent upon the awareness, understanding, and application of everyone involved in the decontamination of re-usable medical devices.

The recommendations of the German Robert Koch Institute (RKI) - *"Hygiene requirements for reprocessing medical devices"* for medical practices, and *"Infection prevention in Dentistry"* - establish the following categories of medical devices based on the Spaulding Classification:¹²

- non-critical medical devices that come into contact with intact skin;
- semi-critical medical devices: that come into contact with mucous membranes or pathologically-altered skin; and,
- critical medical devices: devices for use with blood, blood products, and other sterile drugs and medical devices that

penetrate the skin of mucous membranes, and therefore come into contact with blood and sterile cavities.

What does all this mean?

The resulting differences in requirements with regard to the type and scope of reprocessing means it is necessary to assess the risks of the medical devices and categorise them. The aforementioned bullet points from RKI offer instructions on the correct categorisation. However, the person (dentist) responsible for the hygiene practice is responsible for which piece of medical equipment meets with the classification criteria.

Standard medical devices must be assessed with regard to the risk (dental washer classed as Class 11a medical device; domestic dish washer is CE marked, but not classified as medical device) and categorised before they can be used in a pre-defined washer cycle and re-used with patient treatment.

The dilemma

If a particular medical device cannot be clearly categorised into one of the risk groups (critical or non-critical), it should be assigned to a higher-risk class in the interests of safety and caution. With the domestic dishwasher, this is not an option. Then it is of particular note to apply the categorisation factor to the use of the washer. A process of validation is required - the domestic washer is not type-tested, or marked as a medical device, so it is incompatible with the re-processing of medical devices.

The solution

As well as ensuing compliance by purchasing a compliant medical device marked medical washer-disinfector with the EN ISO 15883-1-2 standards, another factor that should be taken into consideration when acquiring a washer-disinfector is whether the washer can be validated. The design of a domestic washer dishwasher, as opposed to a medical washer-disinfector, does not allow for process validation.

Critical parameters are:

- rinse temperature (< 35°C);
- main wash temperature (>45°C);
- detergent doses (>2ml/litre);
- efficacy of process (clean means free of proteins);
- disinfection (>90°C for one minute/Ao lethality > 600 seconds); and,
- final rinse water tested as sterile (<10 cfu/100ml).

Conclusion

Dishwashers do clean some instruments of soil, but do not clean lumens, and the rinse water is contaminated. They clean but do not disinfect instruments, as the final rinse is not at the correct temperature for this. Dishwashers are not designed as medical devices and cannot be validated. Dishwashers are not manufactured for the purpose of cleaning and disinfecting dental instruments before sterilisation. A washer-disinfector is manufactured for this purpose and

must comply with the relevant EU standard.³

Other disadvantages include:

- cycle time - many dishwashers have an intensive cycle that can last two hours or so, compared to about an hour for WD. We used the intensive cycle in the testing of the Indesit dishwasher, which lasted about two hours;
- warranty – there will be warranty issues if the machine is used for non-household applications;
- poor hygiene - there is no steam condenser, and heat, humidity, and contaminated air escape into the room;
- discoloration and corrosion - commercially available detergents contain chemicals that are not compatible with medical/dental instruments, i.e., bleach; and,
- temperature - dishwashers operate at around 60°C maximum temperature, and do not have a disinfection phase. They also do not have a low temperature pre-rinse, and so protein coagulation may occur. Washer-disinfectors have a pre-wash at a temperature below 35°C, which removes soil and prevents proteins coagulating.

Importantly, washer-disinfectors on the other hand are medical devices, designed to clean medical and dental instruments and to achieve a high level of disinfection.

Our small study clearly demonstrates that dishwashers do not 'clean' instruments. The definition of clean is: "The removal of contamination from an item to the extent necessary for its further processing and intended use" (EN 15883). This means that some instruments cannot be sterilised, as they are not clean as defined in the standard.

We only tested a small number of dishwashers and washer-disinfectors in this study. We would recommend further research in this area.

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Case report: Sublingual epidermoid cyst in an elderly patient

The occurrence of epidermoid cysts in the floor of the mouth is uncommon, particularly in elderly patients. We present the case of a 77-year-old female, who presented with minimal symptoms, despite a large floor-of-mouth swelling, which obscured her tongue from vision. The mass was removed via an intraoral approach under local anaesthesia (LA) and intravenous (IV) sedation, keeping complications and recovery time to a minimum. The mass was revealed to be an epidermoid cyst and the patient made a swift recovery. The features and classification of these cysts are discussed.

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Case report

A 77-year-old female was referred by her general dental practitioner (GDP) to the accident and emergency (A and E) department of Dublin Dental University Hospital (DDUH). The patient's dentist had noted an incidental finding of a swelling 'the size of an apple' in the patient's floor of mouth. The patient reported that the swelling had been present and unchanged for around three years. The patient presented with no dyspnoea, dysphagia, or pain, and seemed unconcerned by the swelling. The patient's family did report a slight change in speech over recent years – she had developed a slight lisp. There was no history of previous trauma or surgery to the region. Medically, the patient had hypertension and osteoarthritis, affecting the knees in particular. She took: indapamide; a thiazide-like diuretic; and, etoricoxib, a selective COX-2 inhibitor. She had no known drug allergies, never used tobacco, and drank around five units of alcohol per week. This placed her into class II of the American Society of Anesthesiologists physical status classification system. Examination revealed no cervical lymphadenopathy. The submandibular glands were unremarkable, with normal saliva drainage. The skin of the face and neck

appeared normal. The cranial nerves were intact. The intraoral swelling was displacing the floor of mouth tissues inferiorly, causing a double chin appearance. Intraoral examination revealed a large solitary midline swelling in the floor of the mouth occupying both sublingual spaces. Dimensions of 50mm by 50mm by 20mm were noted. The swelling had normal overlying mucosa and was slightly fluctuant, with a 'doughy' consistency. On initial inspection, the tongue was barely visible, being displaced posterosuperiorly by the swelling. The swelling moved minimally on swallowing or protrusion of the tongue. There were no signs of inflammation.

Imaging was not deemed necessary, as there was no sign that the swelling had herniated through the muscles of the floor of the mouth. If features of herniation had been present, magnetic resonance imaging (MRI) would have provided good visualisation of the swelling's relation to the surrounding structures.

Given the clinical appearance of the swelling, the two most likely diagnoses were felt to be a floor-of-mouth cyst, or a ranula. The swelling lacked the bluish hue typically seen with a ranula, and the consistency was more indicative of a floor-of-mouth cyst. A full list of differentials can be seen in **Table 1**.

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FIGURE 1: Swelling pre-operatively – patient sedated.



FIGURE 2: Mucosal incision.



FIGURE 3: Cyst enucleation.



FIGURE 4: Wound bed with surgical.

Options for anaesthesia included LA, LA with conscious sedation, or general anaesthesia (GA). Following discussion with the patient, the decision to operate under LA with conscious sedation was made (Figure 1).

Following administration of intravenous midazolam and dexamethasone, bilateral inferior alveolar nerve blocks were administered. This was supplemented with infiltrations around the periphery of the swelling. Aspiration of the swelling with a 21-gauge



FIGURE 5: Incision closure.

needle ruled out a vascular lesion. A midline mucosal incision was made over the swelling (Figure 2). Blunt dissection through the pericapsular tissue was performed, taking care in the regions of the submandibular ducts and lingual nerves bilaterally. Sharp and blunt dissection were used to expose the entirety of the cyst, and traction and counter-traction used to free and remove the cyst (Figure 3). No herniation through the mylohyoid was noted. The mass was delivered intact. The wound was closed in layers using resorbable suture materials (Figure 4 and 5). The specimen was sent for histopathological examination.

Table 1: Differentials

- Ranula
- Obstructive sialadenitis
- Infective sialadenitis
- Thyroglossal duct cyst
- Lymphatic malformation
- Arteriovenous malformation
- Cystic hygroma
- Branchial cleft cyst
- Sublingual/submandibular cellulitis/abscess
- Benign/malignant tumours of mucosa or salivary glands
- Lymphadenopathy/lymphadenitis



FIGURE 6: Specimen.

The specimen measured 80mm by 20mm by 25mm (Figure 6). The maximum thickness of the wall of the cyst was 2mm. The cyst contained a yellow, gritty, paste-like material. Histology revealed an epidermoid cyst with prominent multinucleated giant cell reaction to keratin.

At review two months later, the area had healed well (Figure 7). The lip had resolved. There was no residual-altered sensation and the submandibular glands continued to function normally. The patient had complete perioperative amnesia. She was very pleased with her overall experience.

Discussion

The term 'dermoid cyst' causes some confusion, as it has historically been used differently by different specialties. Some authors use the term dermoid *in lieu* of teratoma. Others define a dermoid as a subcutaneous, congenital cyst. Meyer (1955) classified congenital cysts of the floor of the mouth as either epidermoid, dermoid, or teratoid¹, according to their histological features:

EPIDERMoids - inclusion cysts of ectodermal origin, consisting of a thin connective tissue wall, lined by stratified squamous epithelium. Desquamated keratin may fill the cyst cavity. No dermal appendages are found within the underlying connective tissue.

DERMOID CYSTS - inclusion cysts of ectodermal origin, lined by stratified squamous epithelium. They may contain all the more complex tissues derived from ectoderm (Table 2).

TERATOMOID CYSTS - true neoplasms arising from misplaced embryologic cells. They are also lined with stratified squamous epithelium. They contain tissues that are histologically diverse and represent more than one of the embryonic germ layers, and sometimes all three.

However, usage of the terms epidermoid, dermoid and teratoid cysts today implies the following:

EPIDERMOID CYST - a common cutaneous cyst, frequently found in adults. They are derived from the ectoderm and are lined with squamous epithelium. They may be congenital or acquired. The



FIGURE 7: Two-month review.

acquired form is thought to result from traumatic or iatrogenic implantation of cells from the epidermis into the dermis. They tend to form slowly-expanding, unilocular masses, and are frequently identified during the third and fourth decades.

DERMOID CYST - an embryologically derived squamous epithelium-lined cyst. They are a congenital lesion of ectodermal origin, containing ectoderm derivatives including dermal appendages. They also tend to form slowly expanding, unilocular masses. Dermoid cysts tend to manifest earlier, usually in the second or third decade. However, cases have been described in a child of seven months² and in a 77-year-old female.¹³

TERATOMOID CYST - a germ cell tumour with a cystic component. They contain tissues that are foreign to the primary site of origin, or are histologically diverse and represent more than one of the embryonic germ layers.⁴ They may present during infancy or during the second to third decade,⁵ and tend to form multiloculated masses.

All three types of cyst contain a greasy, cheeselike, white/gray/tan material. Dermoid and teratoid cysts may also contain fragments of hair, nails, or dental enamel in their lumen.⁶

Epidermoid and dermoid cysts are encountered throughout the body. About 80% are found in the sacral region and ovaries. While only about 6.94% are in the head and neck, and only 1.6% in the floor of mouth. The most common oral site is the floor of the mouth, although they may rarely be encountered in other soft tissue locations, and rarely in the mandible or maxilla.^{7,8,9}

Congenital floor of mouth cysts are thought to arise from entrapment of ectodermal tissue in the midline during fusion of the first and second brachial arches, during the third and fourth embryonic weeks¹⁰. Acquired forms are likely to be a result of either iatrogenic or traumatic implantation of epidermal fragments into the underlying tissues. Other hypothesis include the possibility that floor of mouth cysts may represent a variation of the thyroglossal duct cyst.¹¹

Floor of mouth cysts generally present as slow growing, painless, doughy/fluctuant swellings. They are asymptomatic until large

enough to cause dysphonia, dysphagia or dyspnoea. The tongue will be displaced poster-superiorly, and the patient may present with a double chin, particularly if the mass sits superficial to the mylohyoid. Treatment is by surgical enucleation. Surgical approach is determined by the cyst's relationship to the muscles of the floor of the mouth, particularly the mylohyoid. The mylohyoid muscle separates the sublingual space from the submental and submandibular spaces. If the mass is in the sublingual spaces deep to mylohyoid, an intraoral incision is preferred. Care must be taken to preserve the lingual nerve and the submandibular ducts. The mass may herniate through the muscle, causing a 'plunging dermoid'¹² occupying both the sublingual and submental/submandibular spaces. If the mass lies superficial to mylohyoid, a submental/submandibular extraoral incision is required. The incision is made in a natural skin crease, but some degree of scarring is inevitable. There is a risk of damage to the marginal mandibular branch of the facial nerve. Care is taken to avoid rupture of the cyst, as the contents may be irritant, causing post-operative inflammation. Once removed, recurrence is unlikely. There are sporadic case reports of malignant transformation arising in the lining of dermoid, epidermoid and teratoid cysts.¹³ One case of a squamous cell carcinoma in the lining of an epidermoid cyst in the sublingual gland has been reported.¹⁴

Conclusion

There are a number of case reports of floor of mouth cysts presenting in the fifth, sixth, and seventh decades of life. This is, however, an uncommon presentation, as the majority of floor of mouth cysts are congenital. The aetiology in this case is unclear, with no history of trauma to the face or intraoral operative procedures.

During clinical examination, the posterior extent of the lesion was palpable, and the submandibular spaces appeared unaffected. Imaging was therefore deemed unnecessary. Despite the large size of this lesion (70mm by 20mm by 25mm), an intraoral approach was adopted to avoid the risks of scarring and facial nerve damage.

Conscious sedation offers several advantages over general anaesthesia. General anaesthesia carries the risk of pulmonary embolus and deep vein thrombosis, which often necessitates anticoagulation with a low molecular weight heparin. There is a fairly high risk of post-operative nausea, vomiting, and sore throat. Conscious sedation generally uses one drug to cause a central nervous system depression, whilst the patient remains conscious, is able to understand and respond to verbal commands, and the protective pharyngeal and laryngeal reflexes are preserved. Lower extremity muscle tone is at an adequate level to greatly reduce the risk of deep vein thrombosis and pulmonary embolism. Orotracheal/nasotracheal intubation is not required, lowering the risk of sore throat. Lower overall doses of narcotics are used and inhalation anaesthetics are avoided, resulting in less post-operative nausea and vomiting. All these factors allow a faster recovery and earlier discharge.¹⁵

The combination of conscious sedation and an intraoral approach resulted in a fast recovery time, earlier discharge and a high-perceived level of patient satisfaction.

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Does enamel matrix derivative application provide additional clinical benefits in residual periodontal pockets associated with suprabony defects? A systematic review and meta-analysis of randomised clinical trials

Graziani, F., Gennai, S., Cei, S., Ducci, F., Discepoli, N., Carmignani, A., Tonetti, M.

Objective: To review the effectiveness of enamel matrix derivative (EMD) in the treatment of periodontal pockets of suprabony defects.

Methods: Randomised clinical trials comparing open flap debridement (OFD) versus EMD in periodontal suprabony defects were identified through electronic and manual search. Screening, data extraction and quality assessment were conducted. The primary outcome measures were tooth survival (TS) and clinical attachment level (CAL) gain. Pocket probing depth (PPD) reduction and recession (REC) increase were secondary outcome measures. Information concerning clinical and radiological bone gain was also collected.

Results: The search identified 1170 studies, three articles reporting on (99 subjects/358 teeth) met the inclusion criteria and were included. No tooth was lost during follow-up (8–12 months). The adjunctive mean benefit of EMD was: 1.2 mm for CAL gain [confidence interval (CI): (0.9, 1.4), $p < 0.00001$, $I^2 = 66\%$], 1.2 mm for the PPD reduction (CI: [0.8, 1.5], $p < 0.0001$, $I^2 = 0\%$), –0.5 mm for the REC increase (CI: [–0.8, –0.2], $p = 0.003$, $I^2 = 0\%$). Potential risk of bias was identified.

Conclusions: No differences were noted in TS but EMD application resulted in clinical and radiographic additional benefits compared to OFD alone. Nevertheless, the paucity of data, the risk of methodological and potential publication bias suggests caution in interpreting these results while supporting multicenter studies for this specific application.

Journal of Clinical Periodontology. 2014; 41 (4): 377–386.

The effect of one-step vs two-step impression techniques on long-term accuracy and dimensional stability when the finish line is within the gingival sulcular area

Levartovsky, S., Zalis, M., Pilo, R., Harel, N., Ganor, Y., Brosh, T.

Purpose: To evaluate the effect of two putty-wash impression techniques on the long-term accuracy and dimensional stability of poly(vinyl siloxane) (PVS) in the gingival sulcus area.

Materials and methods: Impressions were taken from a master cast to simulate molar crown preparation. A space around the abutment served as the gingival sulcus. Fifteen impressions using the one- and two-step impression techniques were taken using Express Regular, Express Fast, and President impression materials with custom trays. Using a Toolmaker's microscope, the long (LD) and short distances (SD) of the abutment and the planar distance between two parallel lines (PL) at the circumference of the cast were taken at 0.5, 2, 24, 48,

72, 96, 120, and 144 hours after mixing. ANOVA was performed, with the discrepancy between the distances of the impressions and the master cast as the dependent variable.

Results: The differences when different materials and impression techniques were used were significant ($p < 0.001$) for LD, SD, and PL, as was the interaction between the material, time, and technique ($p < 0.001$). SD discrepancies were higher than those of LD for all materials and times. The two-step impression technique was more accurate, with smaller discrepancies than the one-step impression technique. For all materials, the PL discrepancy was deemed acceptable (less than 0.5%) for all tested times. President had higher discrepancies than the other materials.

Conclusions: When using the two-step putty-wash impression technique, pouring of the impressions may be postponed up to 30 hours; however, when using the one-step impression technique, pouring should be performed within two hours.

Journal of Prosthodontics. 2014; 23 (2): 124–133.

Comparison of the anaesthetic efficacy of epinephrine concentrations (1:80,000 and 1:200,000) in 2% lidocaine for inferior alveolar nerve block in patients with symptomatic irreversible pulpitis: a randomized, double-blind clinical trial

Aggarwal, V., Singla, M., Miglani, S., Kohli, S.

Aim: The aim of this randomized controlled, double-blind trial was to comparatively evaluate the anaesthetic efficacy and injection pain of 1.8 mL of 2% lidocaine with different concentrations of epinephrine (1:80,000 and 1:200,000) in patients with symptomatic irreversible pulpitis.

Methodology: Sixty two adult volunteers, actively experiencing pain, were randomly allocated into two groups and received 1.8 mL of 2% lidocaine with either 1:80,000 or 1:200,000 epinephrine concentration. Endodontic access preparation was initiated 15 min after the initial IANB. Pain during treatment was recorded using the Heft-Parker visual analogue scale (HP VAS). The primary outcome measure, and the definition of 'success', was the ability to undertake pulp access and canal instrumentation with no or mild pain (HP VAS score < 55 mm). Secondary outcome measure was the pain experienced during LA solution deposition. Statistical analysis was performed using Mann-Whitney U-test and chi-square test.

Results: The anaesthetic success rates of 2% lidocaine solutions containing 1:80,000 and 1:200,000 epinephrine concentrations were 20% and 28%, respectively. The difference was not statistically significant. There was also no significant difference in the pain experienced during deposition of the solutions.

Conclusions: Two percent lidocaine solution used for IANB achieved similar success rates when used with 1:80,000 or 1:200,000 epinephrine concentration.

International Endodontic Journal. 2014; 47 (4): 373–379.



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Name of the medicinal product: Duraphat® 5000 ppm Fluoride Toothpaste. **Active ingredient:** Sodium Fluoride 11 %w/w (5000ppm F). **Indications:** For the prevention of dental caries in adolescents and adults, particularly amongst patients at risk from multiple caries (coronal and/or root caries). **Dosage and administration:** Brush carefully on a daily basis applying a 2 cm ribbon onto the toothbrush for each brushing, 3 times daily, after each meal. **Contraindications:** This medicinal product must not be used in cases of hypersensitivity to the active substance or to any of the excipients. **Special warnings and precautions for use:** An increased number of potential fluoride sources may lead to fluorosis. Before using fluoride medicines such as Duraphat, an assessment of overall

fluoride intake (i.e. drinking water, fluoridated salt, other fluoride medicines - tablets, drops, gum or toothpaste) should be done. Fluoride tablets, drops, chewing gum, gels or varnishes and fluoridated water or salt should be avoided during use of Duraphat Toothpaste. When carrying out overall calculations of the recommended fluoride ion intake, which is 0.05 mg/kg per day from all sources, not exceeding 1 mg per day, allowance must be made for possible ingestion of toothpaste (each tube of Duraphat 500 mg/100 g Toothpaste contains 255 mg of fluoride ions). This product contains Sodium Benzoate. Sodium Benzoate is a mild irritant to the skin, eyes and mucous membrane. **Undesirable effects:** Gastrointestinal disorders: Frequency not known (cannot be estimated from the

available data); burning oral sensation. Immune system disorders: Rare (1/10,000 to <1/1,000). Hypersensitivity reactions. **Legal classification:** POM. **Marketing authorisation number:** PL00049/0050. **Marketing authorisation holder:** Colgate-Palmolive (U.K.) Ltd, Guildford Business Park, Mickleton Road, Guildford, Surrey, GU2 8JZ. **Recommended retail price:** £7.99 (50g tube). **Date of revision of text:** January 2012.

Reference: 1. Bayraktar A, Lynch E, Ellwood R et al. Caries Res 2001;35:41-46.



Members save a fortune

Association members save more than the cost of membership on insurance, legal fees, CPD activities, and much more. ELAINE HUGHES explains the business case for membership.

There has always been a higher argument than business for membership of the Association. The ability to have a voice in your profession, the case for professional solidarity, the right to lobby on behalf of the interests of oral health of the population, and the occasion to interact with fellow professionals, remain compelling reasons in their own right to be a member of the Irish Dental Association.

However, there is also a commercial imperative to join the Association, which arises from three major issues: the need for legal and business advice for the many dentists who are also practice principals, or indeed associates; the enormous savings to be made in availing of group schemes negotiated for members by the Association; and, the requirement to participate in continuing professional development (CPD) activities. In all cases, the savings made by members exceed the cost of membership very significantly.

Legal advice

There is no doubt that our dental schools continue to provide the profession with a steady stream of talented and committed clinicians. What our dental schools do not prepare dentists for is the fact that so many of them become, within a relatively short period of time, owners of a small or medium-sized business enterprise (SME). What many dentists (indeed most SMEs in any sector) do not realise is that the responsibilities of a business owner are mammoth. Employment law in Ireland is comprehensive and can be overwhelming. Holiday leave, maternity leave, contracts for employees, and record keeping all place an enormous onus on the practice principal.

The Association employs a full-time Employment and Communications Officer, Sarah Gill, who is qualified as a solicitor. Sarah provides advice to members on all employment-related matters. More than that, the Association provides members with *pro forma* contracts for all types of employment. Members, as a consequence, do not need to go to a local solicitor to take

employment advice, as it is provided in-house for them and included in their membership fee. The annual subscription is significantly less than the fees likely to be charged by a solicitor for the same advice. In the case of dealing with employment contracts, the Association has them already prepared and Sarah can help adjust them to the precise requirements of the member.

Bear in mind the quality of this advice too. While all solicitors are experts in the law, how many are experts in the area of dentistry and the precise requirements of the issues around employment in dentistry? This was particularly highlighted by the recent Revenue Commission investigations into contracts with associates. The actions of the Association, and the negotiations and discussions with the Revenue Commissioners, ensured that any dentist that followed advice given by the Association was unlikely to face any difficulty.

Financial savings of membership

The Association has, over many years, negotiated a wide range of group schemes that provide members with huge savings on items that are necessary expenditures in any practice.

The annual saving made by members on their professional indemnity insurance with dental protection, by virtue of the fact that they are members, is estimated at an average of €1,005. That figure is greater, by a wide margin, than the highest rate of subscription paid by any member. Even the most cynical or sceptical dentist can save themselves the cost of their subscription by joining, even if they never needed employment advice or to avail of the many other group schemes in place. And there are many of those.

Insurance schemes are not limited to professional indemnity. Practice, home and car insurance group schemes are all provided by Glennons, while the income protection scheme (particularly essential for the self-employed) is provided on a day one basis through Omega Financial Management.



Tax audit service



CPD



Specialist IDA personnel



Special discounts

Sarah Gill, Employment and Communications Officer with the Association, is a qualified solicitor. She provides legal advice to members, including the provision of employment forms and contracts, which saves members thousands of euros in legal fees.

Elaine Hughes is Assistant Chief Executive of the Irish Dental Association and, in that role, negotiates group schemes for members.

€4,000 coverage

When faced with a tax audit by the Revenue Commissioners, members can claim €4,000 against the cost of having their accounts prepared for the audit under the Association's group insurance policy through DAS. And that's just the financial benefit: the Association also provides essential advice on what to expect in an audit and how to prepare properly for that audit.

A new credit card commission deal has also recently been negotiated with AIB Card Services. As this is now the most common form of payment by patients, the reduction in commission rates charged by the card companies can result in a healthy annual saving for members. There are several other superb deals from other suppliers, which are only available to members. Savings of up to €800 against the cost of loupes can be made with Swordfish Medical. Ballygowan have signed up to a deal on water coolers for members, while magazines for waiting rooms can be obtained at very attractive rates through DLT Magazines.

Websites for members can be obtained from Think Media at a discounted rate. These websites can range from basic up to the most sophisticated, mobile-enabled formats, depending on the need and budget of members.

CPD provision

All dentists know that continuing professional development (CPD) is compulsory, and when the new Dental Bill is enacted, 20 hours of annual CPD activity will be a legal requirement. The Association is the leading national provider of CPD and already provides sufficient events, courses, seminars, and material to enable members to meet all their CPD requirements with ease. This CPD activity is either free or is provided at a 50% discount for members. Association CPD activities include: seminars; branch meetings; workshops; hands-on courses; the CPD Roadshow; the Annual Conference; and, the annual Practice Management Seminar, which provides practical business advice and is solely for members.

Mutual support

In addition to all of the above, the Association is the home of dentistry

in Ireland. Our meetings and events allow dentists to talk about issues of mutual concern. The value of networking and mutual support, and the value of learning from each other is enormous. The price is an annual subscription. We think it's the best value a dentist will find anywhere.

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Classified advert procedure

Please read these instructions prior to sending an advertisement. Below are the charges for placing an advertisement for both members and non-members. Advertisements will only be accepted in writing via fax (01- 295 0092), letter or email (fionnuala@irishdentalassoc.ie). Non-members must pre-pay for advertisements, which must arrive no later than May 7, 2014, 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 for 12 weeks.

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

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

Only if the advert is in excess of 40 words, then please contact:
Think Media

The Malthouse, 537 North Circular Road, Dublin 1.

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

Please note that all classified adverts MUST come under one of the following headings:

- ▶ Positions Wanted
- ▶ Positions Vacant
- ▶ Practices for Sale/To Let
- ▶ Practices Wanted
- ▶ Unwanted/Second Hand Equipment for Sale

Classified adverts must not be of a commercial nature. All commercial adverts must be display advertisements, and these can be arranged by contacting Paul O'Grady at Think Media, Tel: 01 856 1166.

POSITIONS WANTED

Enthusiastic, friendly, experienced female dentist seeks associate/locum position in Limerick, Clare, or north Tipperary. Available: Thursday and Friday. Email: dentistassoc04@gmail.com.

POSITIONS VACANT

Associate position available. Part time, hours flexible. Saturdays available.

Busy practice 40 mins south of Dublin. In Gorey, Co. Wexford. Equipment under five years old. Digital inta, OPG, hygienist, visiting oral surgeon, qualified support staff. Email: info@thebridgedentalsurgery.ie.

Part-time, experienced associate required for one and a half days a week in busy family practice in Celbridge, Co. Kildare (30 minutes from Dublin city centre). Email CV and contact details to: brian.corcoran26@gmail.com.

Part-time associate position in north east. Initially two days per week in busy, expanding, modern practice. Fully computerised, digital x-rays and OPG. Apply by sending CV and references to: northeastdentist@yahoo.com.

Full-time associate required to replace departing colleague. Busy multiple surgery practice located in Co. Galway. Progressive practice with excellent support staff. Replies to: Box no. 715.

Wadebridge, Cornwall, England - Opportunity for associate to join friendly dental team. Well-established FD training practice, five dentists, two hygienists, maintained and established list. Computerised, digital x-ray. Excellent UDA rate/private potential. Hours/days/contract value to suit. Excellent post in beautiful coastal region. Email: wadebridgedentalcare@hotmail.com

Full or part-time dental associate required for large, modern Dublin practice. High earning potential in a friendly, busy environment. Email CV to: janeglynnlouise@yahoo.co.uk.

Summer on the Shannon? Part-time associate (three days) sought to cover maternity leave. Start April. Very busy, modern three-surgery practice. Computerised. Hygienist. OPG. Fantastic, hardworking, friendly team. Extra days possible to cover holidays. Experience preferred. Email: summerhilldental@gmail.com.

Part-time dental associate required for modern, long-established, group practice in Dublin. Must be enthusiastic and have good experience. Replacing an existing colleague and potential to be long-term and full-time. Email: dentalassociatedublin@gmail.com.

Associate dentist required in Cavan. Modern facilities, excellent opportunity for enthusiastic young dentist interested in implants, sedation and facial aesthetics. Tel: 087 864 1990. Email: churchstreetdental@eircom.net.

Part-time associate required for modern busy west Cork practice. Please contact: keoh1981@gmail.com.

Galway city - Part-time associate position available immediately in busy city centre practice. Modern, friendly, computerised fully-private practice with OPG and intraoral camera. Lovely patients and excellent staff. Please email CV to: jobsdental14@gmail.com.

Associate dentist position for Belfast practice. Experienced implant dentist sought for established multi-surgery practice. This is a modern private practice with a progressive ethos. Part-time position. Would suit someone skilled in occlusion and complex cases. Excellent remuneration, support staff. Contact Adam on: adam@gdconline.co.uk.

Full-time dental associate required for a group practice in the Lucan area. High earning potential in a friendly, busy environment. Email CV to: jobs@primacare.ie.

Associate required in county Cavan in a well-established practice. Minimum of three years experience required. Email CV to: rmccorry1@hotmail.com.

General dental associate required for modern, long-established practice in Dublin city centre, off Dawson street. Must have interest and good experience in orthodontic treatment. Replacing an existing colleague and potential to be full time. Email: dave@molesworthclinic.ie.

Kerry – Quality-conscious associate with at least three years experience wanted for state-of-the-art practice in Tralee. Excellent conditions, equipment and staff. Must demonstrate ongoing commitment to professional development. Applications in writing to: dentalapplicationkerry@outlook.com.

Dublin - Enthusiastic, reasonably experienced associate required immediately for very busy, progressive practice. Three surgeries, excellent equipment. Part-time with clear speedy potential to increase hours/remuneration. Nil medical card. Applicant must be flexible. Email: niall@innovatedental.com.

Part-time associate required (minimum three years experience). Initially three days per week in busy, growing, modern practice, one hour south of Dublin. Fully computerised, digital x-rays, and OPG. Apply by sending CV and references to: info@gracefielddental.ie.

Midlands - Associate wanted for busy, progressive practice in the Midlands. 90 min journey from Dublin. Three surgeries, modern equipment, OPG, hygienist. Part-time with potential to increase hours/remuneration. Low medical card numbers. Contact: niall@innovatedental.com or Ph: 086 807 5273.

Experienced associate required for long-established, busy, north side Dublin practice. Computerised, OPG, hygienist. Three to four days per week. Call: 087 9348007. Email: eimear21@yahoo.com.

Experienced dental associate required for long-established dental surgery in north east. Initial two to three days per week. Reply with CV and references to: castledental@yahoo.ie.

Cork - Skilled associates required for a practice in a sought after location. The principal offering to mentor the incoming associates if required to maximise professional expertise. CV to: magwaclinic@gmail.com.

Dentist wanted in Cork city part-time with a view to full-time, ideally with a special interest in some specific area of dentistry. Old established practice. Emails to: enquiries@vodafone.ie.

Experienced dentist sought for modern practice in Kingcourt. Initially part-time, with potential for full-time. This practice has a progressive ethos and candidates who demonstrate ongoing learning and professional development will be preferred. Send CV to: kingscourtdentalpractice@gmail.com.

Experienced dentist wanted for full time position in Waterford, busy two-surgery practice. Full book with well-trained and motivated team. Immediate start. Please Email: susie@smiles.ie.

Dentist sought for modern practice in Bray, Co. Wicklow. Three day per week position. Candidates should exhibit interest in ongoing learning and professional development. Email: Info@avondaledentalclinic.com.

Dentist wanted for established book, two days per week, including Saturday. 30 minutes from M50. Fully-equipped, modcon, and superb staff with in-house endodontist and periodontist. Minimum three years PQE required. Please reply with CV to: abbeydentists@hotmail.com.

Part-time dentist required for a busy and expanding practice located in Co. Galway. Excellent support staff. Replies to Box no. 716.

Experienced associate required for busy, modern, computerised practice in Dundrum, Dublin 14. Great potential for a candidate who enjoys working with an enthusiastic and pro-active team in a great working environment. Please send CV to: jen@glenvilledental.ie.

Principal dentist wanted in modern Cork City private practice. Must be experienced and registered with Dental Council. Three surgeries, digital OPG, hygienist, visiting oral surgeon, excellent staff. View to purchase. Current principal relocates. Email: egjudit@gmail.com.

Dentist required for part-time position (departing colleague) in busy, fully-computerised practice in Navan, Co. Meath. Experienced staff, digital OPT, Kavo chair/fibreoptics. 50% remuneration - postgraduate experience preferred (sedation). Contact: don@navandental.com.

Full/part-time dentist required for friendly and busy Dublin practice. Locus until September initially, with view to a permanent position after that. Brand-new equipment and high-earning potential. Email: jheeney@mail.com.

Dentist required part-time for state-of-the-art clinic in Dublin 2. Must have five years experience and be registered with the Irish Dental Council. Email: carol.moroney@redmondmolloy.ie.

Newly-qualified/experienced dentist/doctor with medical aesthetic courses completed required for D4 medical aesthetic practice. Afternoon sessions for experienced injector of botulinum toxin and dermal fillers. €400-€1,000 per afternoon session. Please email only. Email CV to: secretary@dermaface.ie.

Dentist required for busy west Dublin practice. To take over existing book of three days a week. Reply with CV to: dentistrequired0@gmail.com.

Dentist wanted for established Saturday book in a busy, entirely private practice in Co. Meath. On-site periodontist and endodontist, superb level of equipment and excellent staff. Please reply with CV to: abbeydentists@hotmail.com.

Full-time, experienced dentist required for busy Dublin 1 practice. Great support team, fully digital. Please contact: susie@smiles.ie.

Part-time dentist required for modern practice Kilkenny city. Initially two days per week, fully computerised, experience essential. Email CV to: info@springhillclinic.ie.

Dentist wanted for immediate start in Monaghan town in modern, fully-computerised and digital clinic. New graduates welcome. Email: eldibany113@hotmail.com.

Locum dentist required to provide maternity cover in a general dental practice, east Belfast. Start asap. Position might be offered on permanent basis. Tel: 00 44 289 045 9018. Email: rcrutchley1956@hotmail.com.

Galway - Highly experienced practice manager required for busy specialist practice. Candidate must be able to work chair-side with dentist and have excellent computer skills and knowledge of marketing. Excellent package for the right candidate. Contact: 086 807 5273. Email: surgeriesavailable@yahoo.ie.

Motivated hygienist required for busy, fully-computerised practice in Navan, Co. Meath (nurse provided). Experienced staff, Kavo scaler, chair/fibreoptics. Contact: Irishdentists@gmail.com.

Qualified dental nurse required for a busy Kilkenny city dental practice. Please email CV to: paul@deanstreetdental.ie.

Qualified and experienced dental nurse for one to two sessions per week in south county Dublin. Computer literacy and good people skills required. Orthodontic experience would be an advantage. Contact Email: qualitydentistry@gmail.com.

Full-time hygienist required for large, friendly north Dublin practice. Good guaranteed salary and bonuses. Email: jheeney@mail.com.

Part-time orthodontist required for busy practice in Carlow town. Current orthodontist completing existing cases. Please contact Dick Gillman at 059 914 1245 or mobile 086 338 8120 (evenings) or Email: rsgillman1@hotmail.com.

Hygienist required in Kilkenny to cover maternity leave until July, 1/2 days, Tuesday and Fridays. Email: Jmcdental.mcdermott@gmail.com.

Hygienist required for a busy dental practice. This is a part-time position with a view to becoming full time. Please apply by Email to: edelcallandental@gmail.com.

Fully-qualified dental nurse required to work full/part-time in a busy practice in Stillorgan. Must be hard working, motivated, and personable. Post to commence from start March. Please send full CV with references to: stillorgandentalcare@gmail.com.

Part-time dental nurse required for busy, modern dental practice in Navan, Co. Meath. We are looking for someone to join our young, professional, highly motivated team. Contact: don@navandental.com.

Part-time, highly motivated, professional dental nurse required for practice in Kingscourt. Email CV to: laura_mcatarsney@yahoo.com.

Experienced, friendly, enthusiastic dental nurse required for busy south Dublin general practice. Full-time job. Please email CV to: jobs@ballybrackdental.ie.

Busy dental practice in Enniscorthy, Co. Wexford requires an experienced, friendly, enthusiastic dental nurse for maternity cover starting in May. Please contact 053 923 7404 for details or Email CVs to: courtstreetdental@hotmail.com.

Dental nurse required for a full-time or part-time position in the Dalkey Clinic. Experience an advantage. Email CV to: info@dalkeyclinic.com.

Join our team at Northern Cross Dental. We are a specialist practice looking for an enthusiastic, motivated, friendly dental nurse with experience. Please email your CV to: mags@ncdental.ie.

Receptionist/dental nurse, needed in busy modern Dublin city centre practice. Min two years experience required, with excellent attention to detail. Computer literate with good friendly telephone manner, must be a team worker. Forward CV to: positionsavailable@yahoo.ie.

Receptionist/dental nurse needed in busy modern South Dublin practice. Minimum two years experience required with excellent attention to detail. Computer literate, with good friendly telephone manner, must be a team worker. Forward CV to: dentalpositionsavailable@yahoo.ie.

Busy specialist dental clinic requires mature, friendly, motivated and hard working receptionist. Must be computer literate and have a good telephone manner. Email: mags@ncdental.ie.

Receptionist needed in specialist orthodontic practice. Experience desirable. Desirable qualities: excellent attention to detail, caring, sensitive personality, customer service focussed, good computer skills and telephone manner, good with children, team worker. Forward CV to: info@clontarfbraces.ie or call 087 906 9303.

PRACTICES FOR SALE/TO LET

Premises to rent – prime first floor in two Kerry towns. Excellent locations. Tel: 087 233 9471. Email: theresatangneybyrne1@hotmail.com.

Are you an experienced associate looking to buy into a busy, renovated, south Dublin, surgery? Ready for the 2020's, our main street, ground floor, practice needs someone friendly and confident to continue providing professional dental care. Email: southdublindentists@gmail.com.

Brand new practice to let in Cork city. Very high standard. Reasonable rent. Email: anna.szandke@wp.pl.

For sale – Co. Meath. Very busy practice, with three fully-equipped surgeries. OPG, hygienist.

Easy patient access, good parking, fully computerised. Excellent new patient numbers. Low medical card. Low rent/freehold available. Huge potential. Realistically priced. Email: niall@innovatedental.com or Ph: 086 807 5273.

Single-handed practice for sale in Galway city. Busy practice, 5000 patients on books. Private, medical card mixed, on-site prosthetic and crown bridge lab. Email: fissureseal@yahoo.ie.

For sale – Co. Donegal. Fully private, busy practice. Excellently equipped, digitalised. Computerised, OPG present. High profile position with good footfall. Principal retiring from general practice. Ample room to expand, services and hours. Priced for speedy sale. Contact: 086 807 5273. Email: niall@innovatedental.com.

For Sale - South east Ireland. Very busy, single-handed surgery with easy commute to Dublin - one hour. Ample room for expansion/well-equipped. Excellent staff. Freehold available. Low overheads/high profits. Realistically-priced. Area wide open for growth. Contact: 086 807 5273. Email: niall@innovatedental.com.

Kinsale – Prominent town centre location. Purpose build, self-contained medical building for sale/to Let. Full medical planning exists. Ideal for medical/dental, retail, or office use. The building extends 110 sq m (1,184 Sq Ft). Contact: 021 427 5454 or cork@dtz.ie.

PRACTICES WANTED

Galway city - Premises required. Modern bright facility. Easily accessible. Planning permission - medical/dental. Parking close by/busy area. Minimum 1500 sq.ft. Shopping centre unit considered; Suburbs/downtown. Flexible lease options. Everything confidential. Contact: (M) 086 8075273. Email: niall@innovatedental.com.

EQUIPMENT WANTED

Second hand dental chair unit wanted for use in second surgery. All makes/models considered. Email: c.dentist@live.com.

EQUIPMENT FOR SALE

For sale - Gendex denoptix digital scanner. Convert your OPG and Intra oral to digital. Uses soft plates like film. Includes new plates (value €1200), manual and software. Works on PC and Mac. €3000 including delivery and installation. Email: joe@gums.ie.

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³ Source SDM data, YTD Q3 2012

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To arrange a demonstration contact
Gerry Lavery on: +44 (0)7836 255274

APRIL

CPD Roadshow

April 5 Radisson Dublin Airport Hotel, 10.00am to 1.00pm.

Irish Society of Dentistry for Children (ISDC) Meeting

April 10 Louis Fitzgerald Hotel, Newlands Cross, Dublin

Title: 'Essentials of dental radiology and local anaesthesia'

CPD Roadshow

April 12 Lyrath House Hotel, Kilkenny, 10.00am to 1.00pm.

Munster Branch Meeting

April 16 Maryborough Hotel, Douglas, Co. Cork

Speaker is Dr Dermot Canavan.

Title: 'Acute Dental Pain – current concepts and treatment options'

North Munster Branch AGM and Meeting

April 22 The Strand Hotel, Limerick, 8.00pm.

AGM followed by Dr. Eoin Mullane BDS, MS, Cert. Endo

Title: Endodontics: Use and Abuse of Antibiotics.

MAY

Second Scientific Conference of Faculty of Dentistry

May 7-8 Jordan University of Science and Technology

For further information abstract submission and registration, please visit the conference website at www.just.edu.jo/jidc or contact Dr Ziad AL-Dwairi at ziadd@just.edu.jo

IDA Annual Conference 2014

May 15-18 Lyrath House Hotel, Kilkenny

SEPTEMBER

Third World Congress of Clinical Safety (3WCCS)

September 10-12 University of Cantabria, Spain

Main theme: Clinical Risk Management. For further information see <http://www.iarmm.org/3WCCS/>.

OCTOBER

Faculty of Dentistry RCSI Annual Scientific Meeting

October 30-31 RCSI Dublin

For further information, Email: facdentistry@rcsi.ie

Quiz answers

(questions on page 62)

How can you locate the unerupted permanent tooth clinically and radiographically?

(a) palpate; (b) examine other tooth inclination; (c) radiographic parallax.

In this case, the permanent canine is palpable buccal to the UR2. The UR2 crown is mesio angular and the root is distal. The crown of the UR3 is mesial to it. Two peripical radiographs can be used to determine the UR3 position by horizontal parallax.

What do the radiographs show?

The rule with parallax is SLOB (same lingual, opposite buccal). As the beam shifts towards the midline in the second peripical, the impacted tooth moves in the opposite direction in relation to the lateral, confirming that the canine is buccal. The peripical also shows that the root of the primary canine is intact and that the UR2 root may have been resorbed by the canine.

How can you describe the canine tooth position? How common is this?

The canine is buccally impacted. It is also pseudo transposed with the upper lateral incisor, i.e., the crown of UR3 is mesial to UR2, but the root is distal. Impacted canines affect 1-2% of the population, with buccally impacted teeth being less common. Transposed teeth are much less common; studies suggest an incidence <0.5%.



Figure 6

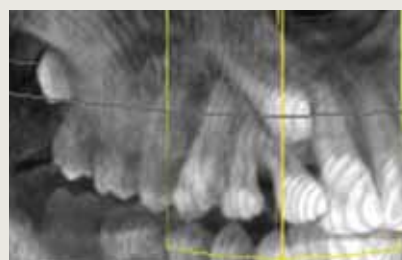


Figure 7



Figure 8

What technique may offer more information in determining the prognosis of the UR2, UR3, and planning treatment?

In this case, it was felt that a cone beam CT would offer further information to determine the prognosis of the UR2 and position UR3. The cone beam images give a clearer 3D image of the crown and roots of the teeth. The beam can be collimated to give a small field of view and reduce the exposure. The root UR2 appears dilacerated (curved) distally and palatally, but is of much better prognosis than the periapicals suggest. The UR3 crown is transposed and positioned mesial to UR2. (Figures 6, 7, and 8).

The patient has several treatment options

1. **Accept the occlusion and remove UR3 in due course.** He has an acceptable dental appearance. The root of UR2 may upright when UR3 is removed. However, the root UR2 is distal and dilacerated, so when URc exfoliates, he may require pre-restorative orthodontics to upright the root UR2. If the root is dilacerated, it may be difficult to upright it fully to create an ideal implant site.
2. **Surgical exposure UR3 and orthodontic alignment.** This carries a risk of resorption of UR2 root, so would require full discussion of the risks at the consent stage and careful mechanics.



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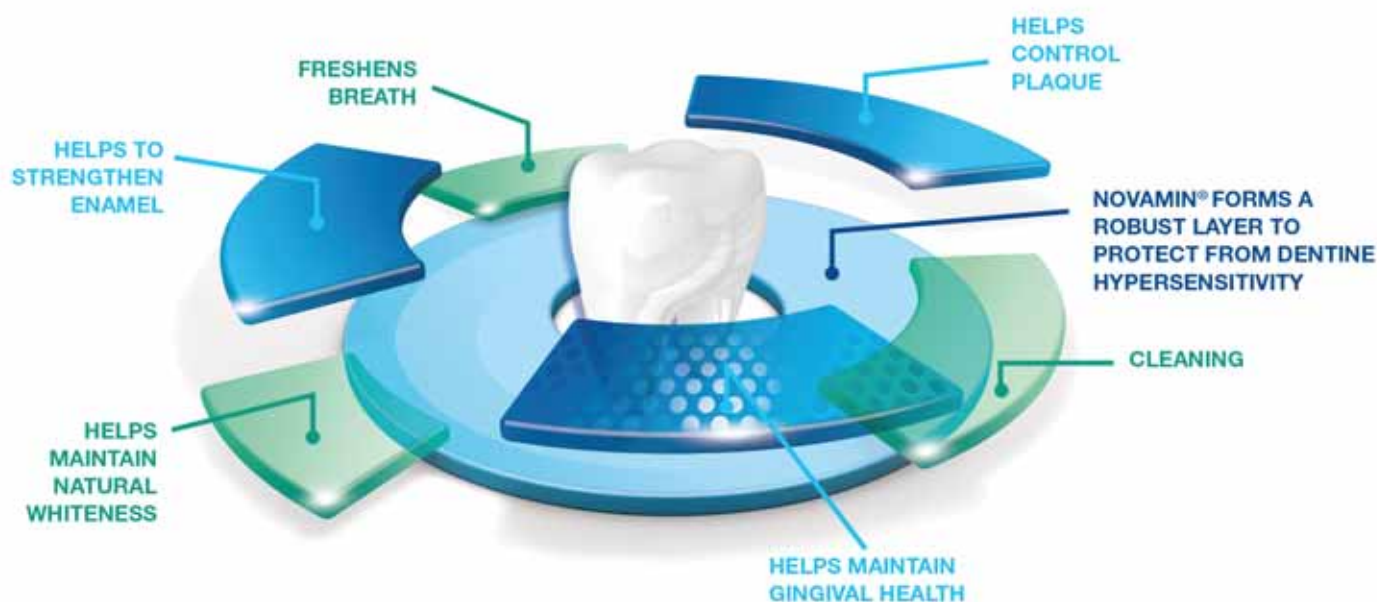
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