IDA
irish dental association

JIDA

Journal of the Irish Dental Association
Iris Cumainn Déadach na hÉireann

Volume 68 Number 1
February/March 2022

Parity begins at home

Improving oral hygiene for dependent children and adults

CONTENTS

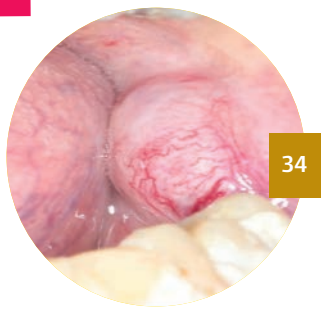
Think Media

Published on behalf of the IDA by
Think Media, 537 NCR, Dublin 1
T: +353 1 856 1166
www.thinkmedia.ie

MANAGING EDITOR **Ann-Marie Hardiman** ann-marie@thinkmedia.ie
EDITORIAL **Colm Quinn** colm@thinkmedia.ie
ADVERTISING **Paul O'Grady** paul@thinkmedia.ie
DESIGN/LAYOUT **Rebecca Bohan, Tony Byrne, Tom Cullen**

abc Audit issue January-December 2019: **3,986** circulation average per issue. Registered dentists in the Republic of Ireland and Northern Ireland.

Irish Dental Association Unit 2 Leopardstown Office Park, Sandyford, Dublin 18.
Tel: +353 1 295 0072 Fax: +353 1 295 0092 www.dentist.ie
Follow us on Facebook (Irish Dental Association) and Twitter (@IrishDentists).



Colgate®

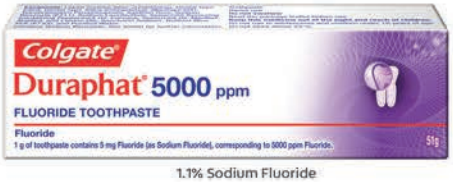
Don't forget to renew your patient's **Duraphat prescription**

Winning the fight against caries

Effective prevention for patients at increased caries risk*

High fluoride toothpastes are clinically proven to be **more effective** than a regular toothpaste in **preventing dental caries**:[1-5]

- 5000 ppm Fluoride Toothpaste **prevents cavities** by **arresting and reversing** primary root and early fissure **caries lesions**[1,3-5]



1.1% Sodium Fluoride

* Colgate® Duraphat® 5000 ppm high fluoride toothpaste for patients ≥ 16 years at increased caries risk.

References: 1. Baysan A et al. Caries Res 2001;35:41-46. **2.** Biesbrock AR et al. Community Dent Oral Epidemiol 2001;29:382-389. **3.** Ekstrand et al. Caries Res 2013;47:391-8. **4.** Schirrmeister JF et al. Am J Dent 2007;20. 212-216. **5.** Ekstrand et al. Gerod 2008; 25:67-75.

Colgate® Duraphat® 5000 ppm Fluoride Toothpaste - Name of the medicinal product: Duraphat® 5000 ppm Fluoride Toothpaste. Active ingredient: Sodium Fluoride 1.1%w/w (5000ppm F-). 1g of toothpaste contains 5mg fluoride (as sodium fluoride), corresponding to 5000ppm fluoride. Indications: For the prevention of dental caries in adolescents and adults 16 years of age and over, particularly amongst patients at risk from multiple caries (coronal and/or root caries). Dosage and administration: Brush carefully on a daily basis applying a 2cm 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 0.05mg/kg per day from all sources, not exceeding 1mg per day, allowance must be made for possible ingestion of toothpaste (each tube of Duraphat 500mg/100g Toothpaste contains 255mg 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: PA 0320/008/002. Marketing authorisation holder: Colgate-Palmolive (U.K.) Ltd. Guildford Business Park, Midleton Road, Guildford, Surrey, GU2 8JZ. Recommended retail price: €9.36 (51g tube). Date of revision of text: April 2015.

www.colgateprofessional.ie *www.colgatetalks.com*

EDITORIAL

Dr Cristiane de Mata
Honorary Editor

Oral health for all

This edition includes articles that highlight the importance of caring for all sections of society.

I am truly honoured to be joining the *JIDA* team and really excited to continue the outstanding work of previous editors. After chairing the Athena SWAN committee in the Cork University Dental School and Hospital working to promote equality, inclusion and diversity in the workplace, there is nothing better than opening my time as editor of the *JIDA* with articles that make us reflect on the concept of social inclusion.

Social inclusion in dentistry means embracing the marginalised, vulnerable groups of our society, for which dental care is often hard to access. The World Health Organisation describes social exclusion as "dynamic, multi-dimensional processes driven by unequal power relationships interacting across four main dimensions – economic, political, social and cultural". It results in a continuum of inclusion/exclusion characterised by unequal access to resources, capabilities and rights, which leads to health inequalities.

Examples of socially excluded groups in Ireland include the homeless, members of the Irish Traveller community, and vulnerable migrants. Older people and people with disabilities are undoubtedly also at risk of social exclusion, and are among those for whom dental services may be hard to access. Not surprisingly, these groups present with poor oral health and high levels of unmet treatment needs.

The Covid-19 pandemic has exacerbated inequalities, and although data on this is just starting to emerge, it seems obvious to assume this is a reality that can be felt by many groups where services were interrupted, jobs were lost and living costs increased. Unfortunately, the marginalised and vulnerable groups are always the first to suffer, and we will now face an even bigger problem. We cannot deny our role as dental practitioners in promoting oral health to all groups of society, and our social responsibility to look after these vulnerable groups. Most importantly, we need to highlight to policymakers the high disease levels among marginalised groups and advocate for affordable and easy-to-access services for these populations.

Knowledge to action

A recent Irish study consulted a group of dental and disability experts, including those who receive the services, to develop a set of goals for oral health services for people with disabilities in Ireland. Among the top priorities identified, they found that:

- oral health services should be oriented towards prevention;
- oral health services should be physically accessible;
- oral health services should deliver person-centred care; and,
- people with disabilities and their carers should be aware of the importance of oral health.[1]

The challenge, as always, is to transfer what is known on paper, to action. How can this be done? I don't have the answers but looking for them constantly and questioning our role and the State's role in making this happen is fundamental.

In this edition, Dr Caoimhin Mac Giolla Phadraig and colleagues share with us a simple tool to promote oral health among people with disabilities. It might be a first step we can take in practice towards improving oral health for these individuals, and developing awareness among patients, caregivers and family members.

Daniel Mulcare describes a fantastic case of rehabilitation of a patient with congenital microtia, using CAD/CAM technologies, and Dr Harriet Byrne and colleagues present an informative article to help dentists recognise head and neck metastases during routine examinations.

Our role as dentists is dynamic, and we must continue to learn and develop, in an ever-changing world. Dr Gerry Cleary, President of the Dental Council of Ireland, has contributed with a detailed feature, where he sheds light on some important elements of the Council's new codes of practice, and the main take-home messages for dentists. He also discusses the Council's submission to Government on the proposed amendment of the Dentists Act 1985, which aims to address gaps in the current Act. I commend it to all of you and I hope this will bring clarity on essential aspects of our professional role, so we can continue to ensure the safety and welfare of our patients.

Reference

1. **Mac Giolla Phadraig, C., Nunn, J., Dougall, A., O'Neill, E., McLoughlin, J., Guerin, S.** What should dental services for people with disabilities be like? Results of an Irish Delphi panel survey. *PloS one* 2014; 9 (11): e113393.

LISTERINE REDUCES PLAQUE TO HELP PREVENT GUM DISEASE

AND CLINICALLY PROVEN FOR 5X MORE PLAQUE FREE SITES

VS MECHANICAL CLEANING ALONE[1]

TRY YOUR FREE SAMPLE
LISTERINEPROFESSIONAL.CO.UK

Johnson & Johnson
THE MAKERS OF
LISTERINE®

1. Araujo M W B et al. Meta-analysis of the effect of an essential-oil containing mouth rinse on gingivitis and plaque. JADA 2015. 146:610-622

UK-LI-2100087

Dr Clodagh McAllister
IDA President

No resolution in medical card crisis

Despite continuing to engage with the Department of Health on the crisis in the DTSS, there has unfortunately been no progress as yet.

The Association held another meeting in December with the Department of Health on the ongoing crisis in the Dental Treatment Services Scheme (DTSS). Unfortunately, we have no progress to report from that meeting. The IDA's request for an independent chair for any negotiations has not been agreed to thus far, but this is an essential requirement as our GP Committee reiterated at its most recent meeting. Further, we regard the offer of an additional €10m in Budget 2022 to provide some additional treatments for medical card patients, but at the same low level of fees to dentists, as not going nearly far enough to address the crisis in the Scheme.

The DTSS needs to be radically reorganised for the benefit of dentists and their patients. At a recent meeting of the Association's GDP Group, Prof. Ciaran O'Neill of Queen's University Belfast, a leading health economist, presented on different proposals for how State care could be funded for adults – for example through a voucher system – in a way that could work for patients and practitioners.

Meanwhile, dentists are still leaving the Scheme in huge numbers. This situation is untenable for patients and dentists alike, and the IDA will continue to advocate for a scheme that is viable for dentists and offers adequate care to patients.

VAT remains an issue

An IDA delegation has agreed to meet again with Revenue in an attempt to resolve the ongoing issue regarding the proposal to impose a VAT liability of 23% on fees paid to dentists by associates. In an effort to provide further information and clarity on this issue, we have surveyed dental professional associations across Europe to see how tax is levied there. We found no evidence that countries which employ the same business model as here in Ireland face a VAT liability as is being suggested by Revenue. This includes dentists in Northern Ireland, which, as the Association has pointed out previously, has huge implications for dentists operating in border counties.

If this tax liability is imposed, it seems inevitable that some of that cost will be passed to consumers, which is contrary to public policy that such measures should not impact negatively on consumers of essential services. We will continue to work hard to resolve this issue and will update members in due course.

We would urge members to review their business model with their accountants and professional business advisers, and evaluate their priorities from an operating perspective as well as having regard to the wider business, legal and tax considerations. To assist IDA members in this regard, we have invited specialist experts from Matheson to address our Practice Management Seminar on March 26, and I would strongly encourage all practice owners, associates and partners to attend this important presentation.

Disappointment for Cork Dental School

We have recently learned that the long-awaited construction of a new dental school at Cork University Dental School and Hospital has been postponed, with no indication as to when or if the project will go ahead.

This is obviously a major blow for the staff and students in Cork, who have long had to work in a facility that is not fit for purpose. It is also a blow for dental education in Ireland as a whole, at a time of huge demand for places in dentistry from both Irish- and foreign-based students.

Ireland is experiencing a significant recruitment crisis across all dental disciplines, and dentists are finding it increasingly difficult to recruit and retain staff. While we are delighted to welcome foreign-trained dentists and dental team members to our practices, we face competition from other EU countries for this cohort.

There are also significant delays in registration of qualifications with the Dental Council. The Council has assured us that applications will take no more than three months and it is taking steps to address these problems, but anecdotally we are aware that the process has taken much longer than that.

We need sufficient Irish-trained dentists to meet the needs of our patients and reduce our reliance on a pool of foreign-trained professionals that is by no means guaranteed. Among other things, this means that we need appropriate facilities to educate the next generation, and we urge all stakeholders to reconsider the decision to delay the Cork project, and to commence the build as soon as possible.

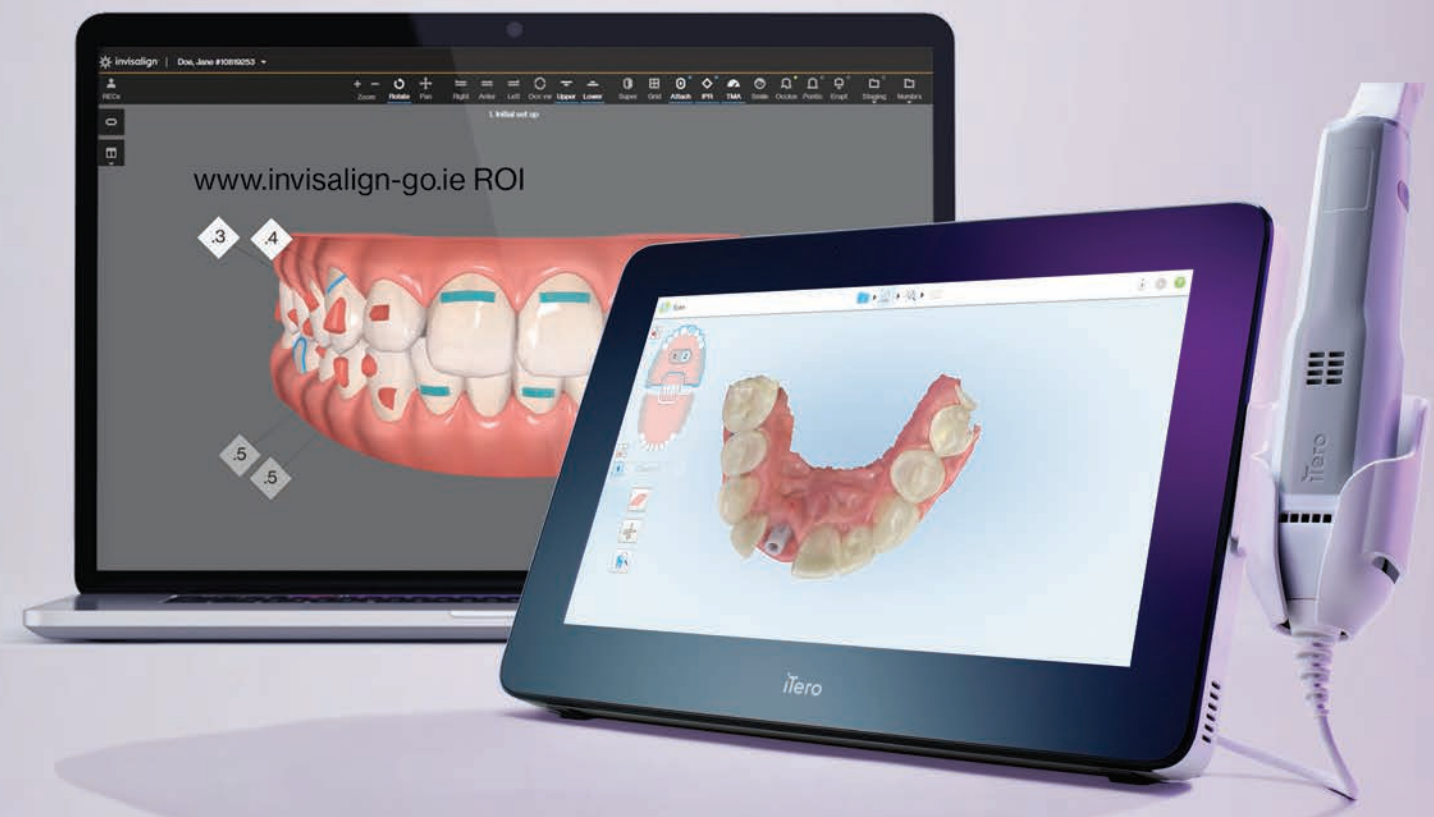
Vocational training

Another issue that is seriously impacting on our ability to retain graduates in Ireland is the lack of a vocational training (VT) scheme for young dental graduates here. We are hearing of final-year students who are interviewing for VT programmes in the UK, which places further pressure on recruitment and retention here.

VT programmes provide valuable training and experience to dentists at the start of their careers, and an Irish programme, as existed in the past, would undoubtedly help us to retain our graduates. We believe that a VT scheme should be reinstated as a matter of urgency.

In the meantime, the IDA is looking at ways to address the issue and offer some support to our dental graduates. We are examining proposals for a shadowing programme, whereby dental graduates working in private practice would have the opportunity to spend one day a month with another practice, to expand their knowledge and gain experience of different approaches and disciplines. We hope to have more information on this scheme soon.

invis is leading the way.



Digitalisation is transforming the way we do dentistry. Combining the Invisalign Go treatment with the power of the iTero scanner provides a **seamless digital workflow** for your practice, enabling diagnostic, restorative, and orthodontic workflows with just one scan.

Find out more at:
www.invisalign-go.co.uk
www.invisalign-go.ie

invisalign go

Faculty of Dentistry team for the Fellowship Examinations held at RCSI, November 24-26, 2021. From left: Prof. Gerry Kearns; Dr Kate Farrell; Dr Kumara Ekanayake; Prof. John Walsh; Dr Jamal Al-Abdulla; Dr Richeal Ni Riordain; Mr Sean Sheridan; Prof. Chris Lynch; Prof. Albert Leung; Dr John Ed O'Connell; Dr Amanda Willis; Dr PJ Byrne; Dr Conor Bowe; Dr John Marley; Dr Eiad Qudairat; and, Dr Mary Collins.

Return to face-to-face Fellowship examinations at RCSI

The Faculty of Dentistry at the Royal College of Surgeons in Ireland (RCSI) successfully completed a face-to-face diet of the Fellowship of the Faculty of Dentistry (FFD) examinations from November 24-26, 2021.

On this occasion, the FFD examination included a combination of both online and face-to-face components. The online component of the examination was conducted remotely in late October 2021.

This is the second successfully completed face-to-face diet of the FFD examinations to take place at the RCSI during 2021, with an entirely face-to-face diet previously held in September.

The Fellowship Examination represents the pinnacle of success and achievement for dentists, and marks the culmination of specialist and advanced training in selected fields of dentistry.

Practice Management Seminar 2022

The Annual Practice Management Seminar will take place this year at the Hilton Hotel, Charlemont, Dublin 2, on Saturday, March 26. A great line-up of speakers and presentations has been put together, making it a not-to-be-missed event this year.

The day will commence with a presentation by a team from legal firm Matheson on 'Different dental business models: which will work for me?'

Dr Gerry Cleary, President of the Dental Council, will give an update on new Dental Council guidelines.

Ingrid Miley, formerly of RTÉ, will mediate a panel discussion on 'The future of dentistry in Ireland', and will be joined by four dentists for what is sure to be a lively and interesting session.

Other topics on the day will include: buying and selling a practice; an update from Dental Protection (1 risk credit); and, looking after your mental health.

Make sure to book your place at this event at www.dentist.ie. Strictly IDA members only. Thanks to our sponsor Dental Care Ireland.

Letter to the Editor

Dear Editor,

The Dental Health Foundation would like to bring to your readers' attention some of the efforts we have made to respond to the increasing threats to oral health in Ireland, which were exacerbated by the presence of Covid-19 in our society.

The pandemic continued to pose challenges for oral health during 2021 when it had a significant impact on what people were eating, including increased amounts of treats. The Dental Health Foundation responded to this through community health promotion to encourage people back to healthier habits. We connected with them via a range of settings including groups such as Diabetes Ireland, HSE Addiction Services, the Irish Senior Citizens Parliament, and the Irish Men's Sheds Association.

Another priority was to ensure that pregnant women maintain optimal oral health and that it is integrated as part of their overall health. We did this with the co-operation of the Directors of Midwifery in reaching out to antenatal booking clinics and outpatient areas.

To improve interprofessional communications with pharmacists, we made them aware of the importance of oral health and provided them with preventive care information.

Through online workshops and social media, we motivated people to improve their oral health. We provided resources to communicate the importance of fluoride, sugar reduction, quitting smoking, reducing alcohol, and getting regular dental check-ups. In keeping with the vision and goals of the World Health Organisation, we also highlighted the relationship between oral health and other non-communicable diseases such as diabetes and cardiovascular diseases.

We will continue to provide consistent information, communication, and resources as a foundation for best personal oral health.

Yours faithfully,

Etain Kett

Public Affairs and Communications Manager, Dental Health Foundation

Markus Blatz.

Minesh Patel.

Wally Renne.

StJohn Crean.

Slaine McGrath.

Jim Grisdale.

Annual Conference 2022

We are back! And where better to return to than our usual haunt of the Galmont Hotel, Galway, from May 12-14 next. The Conference Committee has been working extremely hard in the background to bring you a fantastic line-up of world-class speakers/presenters over the three days. A full trade show also will be present on Friday and Saturday.

International experts such as Markus Blatz, Minesh Patel, Wally Renne, StJohn Crean, Slaine McGrath, Jim Grisdale, plus many many others will present on various clinical topics at the event. Be sure to bring your entire dental team – there is something for everyone at Re-Connect 2022. See you in Galway! For full programme and hotel details, see www.dentist.ie.

CPD programme – hands-on courses

The IDA is delighted to see the resumption of our in-person CPD meetings and events:

February 5:
Prep design in fixed prosthodontics
Dr Seamus Sharkey – Killarney
SOLD OUT

February 11:
Prep design in fixed prosthodontics
Dr Maurice Fitzgerald – Dublin
SOLD OUT

March 25:
The Bioclear method: an introduction
Dr Claire Burgess – Dublin
SOLD OUT

The IDA is also continuing to run the popular BLS (basic life support) courses nationwide, and spaces are available. Make sure you and your dental team are up to date with BLS certification: book today. This year, the IDA has added a specific course for those practices that offer sedation (ILS):

BLS WITH SEDATION:
Friday, February 18, Dublin

BASIC LIFE SUPPORT:
Saturday, February 19, Dublin

BASIC LIFE SUPPORT:
Saturday, February 26, Athlone

BASIC LIFE SUPPORT WITH SEDATION:
Friday, March 11, Cork

BASIC LIFE SUPPORT:
Saturday, March 12, Cork

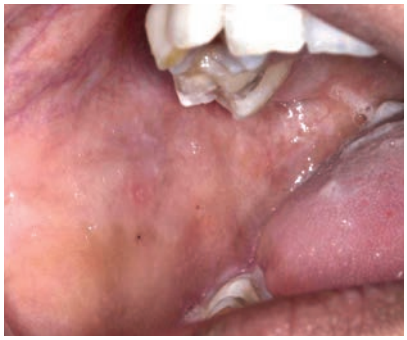


FIGURE 1: Buccal mucosa RHS showing absent parotid gland duct and appearance of 'ropey' saliva on the dorsum of the tongue.

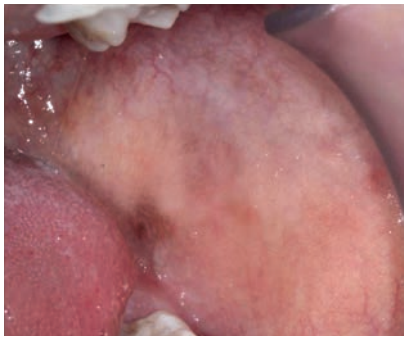


FIGURE 2: Buccal mucosa LHS also showing absent salivary gland duct.

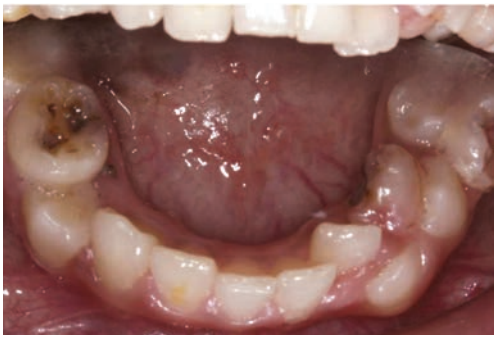


FIGURE 3: Mandibular arch, showing carious 85.

Quiz

Submitted by Dr Robyn Crowley and Dr Siobhán Lucey.

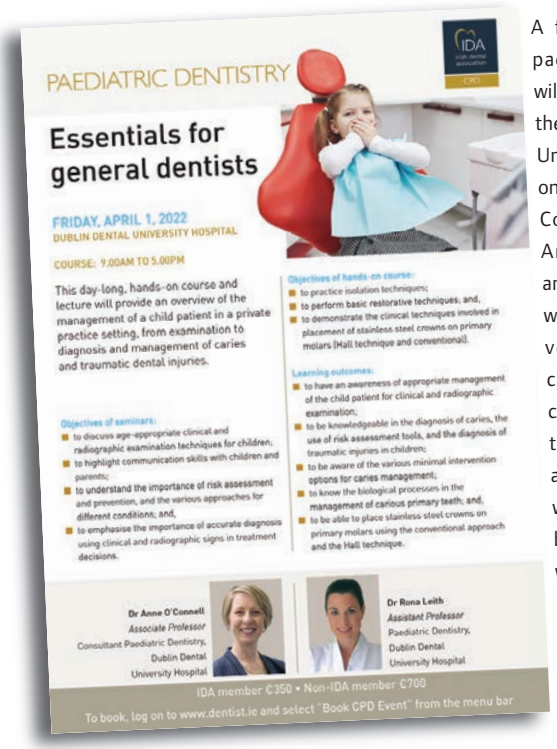
A 13-year-old healthy female of south Asian ethnicity was referred for assessment of dry mouth and seemingly absent parotid and submandibular gland duct openings. Findings on history and examination included absent parotid and submandibular gland duct openings, ropey saliva, which appeared diminished in quantity, cavitated carious lesions in teeth 55 and 85, and hypomineralisation of teeth 26, 36, 85 and 46 (**Figures 1**, **2** and **3**).

Questions

1. What further questions would assist in a differential diagnosis regarding salivary issues?
2. What non-invasive imaging method could be considered to assess the presence of the major salivary glands?
3. What dental preventive measures should be instigated in a child with reduced salivary quantity?
4. What syndromic condition is associated with absent salivary glands?

Answers on page 45

Paediatric dentistry – Essentials for GDPs



A full-day practical paediatric course will take place in the Dublin Dental University Hospital on Friday, April 1. Consultants Dr Anne O'Connell and Dr Rona Leith will present this very popular course in conjunction with the IDA. Places are limited and we advise you to book early at www.dentist.ie.

Webinars – spring 2022

The IDA's popular webinar series will continue in 2022; however, webinars will be less frequent and will take place on the last Tuesday of each month at 8.00pm via Zoom.

A three-part webinar series on the topic of endodontics – 'Endodontic webinar series 2022: Access and instrumentation: what do you actually need to know?' – will be given by Dr Bob Philpott, endodontist, commencing on February 24. The series will cover:

February 24: **Access and instrumentation**
March 24: **Obturation and restoration**
April 28: **Retreatment**

All webinars will take place at 8.00pm via Zoom, with a live Q&A on the night with Dr Philpott. If you are interested in providing a webinar, please contact elaine@irishdentalassoc.ie.

CanalPro™ Jeni

Digital assistance system for canal preparation

With pre-set programmes for HyFlex and MicroMega rotary files, including the new One RECI file system.

Autonomous 'navigation' using revolutionary software

The new CanalPro Jeni endomotor has a patent-pending digital assistance system for canal preparation, which uses complex algorithms to control the file movement at millisecond intervals. The rotary motion and speed are continuously controlled based on current intensity and torque.

Different routes, obstacles and situations

CanalPro Jeni is named after its developer Prof. Dr. Eugenio Pedullà and guides you safely through the traffic like a navigation system. As such, the Jeni system automatically adapts to the individual root canal anatomy, working in unison with the mechanical and chemical preparation every step of the way.

"The CanalPro Jeni is the best all-in-one endo motor and apex locator on the market.

As a dentist with practice limited to endodontics, I need reliable instruments, and the CanalPro Jeni is exactly that. This high quality machine has it all- accurate, crisp apex locator that responds to the file movements and gets very little interference from metal restorations, the motor responds immediately to wireless foot pedal, it has multiple file systems already installed and options to add more file systems, including reciprocation, if you wish. The motor adjusts itself according to the canal morphology, which helps reducing file separation. I highly recommend this all-in-one endomotor for beginners and experienced alike."

Dr Sagi Shavit
DMD, MSc(Endodontology), MFGDP(UK), Dip.Dent.Imp

Jeni - ready - go!

CanalPro Jeni, complete set REF 60023659

includes: 1 × Control unit, 1 × Motor with apex measuring contact, 1 × Fully insulated angled handpiece 1:1, 1 × Bluetooth foot switch, 1 × Power supply, 1 × Apex cable set, 1 × Holding bracket for apex cable

LEARN MORE

Contact Nick O'Keeffe on **+353 8641 35766** or **nicholas.okeeffe@coltene.com** for a demonstration.

BDIA CSIDI COUNTERFEIT AND SUBSTANDARD INSTRUMENTS AND DEVICES INITIATIVE

WWW.COLTENE.COM

COLTENE

DUAL ACTION
PAIN RELIEF

IN ONE TABLET

A new analgesic brand that is clinically proven to provide
30% more effective pain relief[1*]

30% MORE EFFECTIVE FOR YOUR PATIENTS

References: 1. Merry A. et al. AFT-MX-1, a prospective parallel group, double-blind comparison of the analgesic effect of a combination of paracetamol and ibuprofen, paracetamol alone, or ibuprofen alone in patients with post-operative pain. Department of Anaesthesiology, University of Auckland, New Zealand 2008. *compared with the same daily dose of standard paracetamol or ibuprofen alone.

Easolief Duo 500 mg/150 mg film-coated tablets Each tablet contains paracetamol 500 mg and ibuprofen 150 mg. **Presentation:** A White, capsule shaped tablet with breakline on one side and plain on the other side. **Indications:** Short-term symptomatic treatment of mild to moderate pain. **Dosage: Adults/elderly:** The usual dosage is one to two tablets taken every six hours up to a maximum of six tablets in 24 hours. **Children:** Easolief Duo is contraindicated in children under 18 years. **Contraindications:** Severe heart failure, known hypersensitivity to paracetamol, ibuprofen, other NSAIDs or to any of the excipients, active alcoholism, asthma, urticaria, or allergic-type reactions after taking acetylsalicylic acid or other NSAIDs, history of gastrointestinal bleeding or perforation related to previous NSAID therapy, active or history of recurrent peptic ulceration/haemorrhage, severe hepatic failure or severe renal failure, cerebrovascular or other active bleeding, blood-formation disturbances, during the third trimester of pregnancy. **Warnings and precautions:** This medicine is for short term use and is not recommended for use beyond 3 days. Clinical studies suggest that use of ibuprofen, particularly at a high dose may be associated with a small increased risk of arterial thrombotic events. Patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease and/or cerebrovascular disease should only be treated with ibuprofen after careful consideration and high doses should be avoided. Careful consideration should be exercised before initiating long-term treatment of patients with risk factors for cardiovascular events. The use of paracetamol at higher than recommended doses can lead to hepatotoxicity, hepatic failure and death. Patients with impaired liver function or a history of liver disease or who are on long term ibuprofen or paracetamol therapy should have hepatic function monitored at regular intervals. Severe hepatic reactions, including jaundice and cases of fatal hepatitis, though rare, have been reported with ibuprofen. Paracetamol can be used in patients with chronic renal disease without dosage adjustment. There is minimal risk of paracetamol toxicity in patients with moderate to severe renal failure. Caution should be used when initiating treatment with ibuprofen in patients with dehydration. The use of an ACE inhibiting drug, an anti-inflammatory drug and thiazide diuretic at the same time increases the risk of renal impairment. Blood dyscrasias have been rarely reported. Patients on long-term therapy with ibuprofen should have regular haematological monitoring. Like other NSAIDs, ibuprofen can inhibit platelet aggregation. GI bleeding, ulceration or perforation, which can be fatal, has been reported with all NSAIDs at anytime during treatment. Combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors) should be considered. Use with concomitant NSAIDs including cyclooxygenase-2 selective inhibitors should be avoided. NSAIDs may lead to onset of new hypertension or worsening of pre-existing hypertension and patients taking antihypertensive medicines with NSAIDs may have an impaired anti-hypertensive response. Fluid retention and oedema have been observed in some patients taking NSAIDs. NSAIDs may very rarely cause serious cutaneous adverse events such as exfoliative dermatitis, toxic epidermal necrolysis and Stevens-Johnson syndrome. Products containing ibuprofen should not be administered to patients with acetylsalicylic acid sensitive asthma and should be used with caution in patients with pre-existing asthma. Adverse ophthalmological effects have been observed with NSAIDs. For products containing ibuprofen aseptic meningitis has been reported only rarely. NSAIDs may mask symptoms of infection and fever. **Interactions:** Warfarin, medicines to treat epilepsy, chloramphenicol, probenecid, zidovudine, medicines used to treat tuberculosis such as isoniazid, acetylsalicylic acid, other NSAIDs, medicines to treat high blood pressure or other heart conditions, diuretics, lithium, methotrexate, corticosteroids. Refer to summary of product characteristics for other interactions. **Fertility, pregnancy and lactation:** Easolief Duo is contraindicated during the third trimester of pregnancy. **Driving and operation of machinery:** Dizziness, drowsiness, fatigue and visual disturbances are possible after taking NSAIDs. If affected patients should not drive or operate machinery. **Undesirable effects:** Dizziness, headache, nervousness, tinnitus, oedema, fluid retention, abdominal pain, diarrhoea, dyspepsia, nausea, stomach discomfort, vomiting, flatulence, constipation, slight gastrointestinal blood loss, rash, pruritus, alanine aminotransferase increased, gamma-glutamyltransferase increased, abnormal liver function tests, blood creatinine increased and blood urea increased. Refer to Summary of Product Characteristics for other adverse effects. **Pack size:** 24 tablets. **Marketing authorisation holder**: Clonmel Healthcare Ltd., Clonmel, Co. Tipperary. Marketing authorisation number: PA0126/294/1. Medicinal product not subject to medical prescription. For retail sale through pharmacy only. A copy of the summary of product characteristics is available upon request. **Date prepared:** October 2019. 2019/ADV/EAS/117H.

CLONMEL HEALTHCARE

Selling your dental practice?

Although lockdowns are now over, dentists are still subject to a significantly higher level of regulation than ever before – from the requirements for more stringent hygiene protocols to restrictions on the number of patients that can be seen on a daily basis. Such regulations are likely to continue for the foreseeable future. The company MediEstates outlines some reasons why selling your practice now may be a good idea for some dentists.

One of the main reasons why now could be a good time to sell your dental practice is because goodwill values are at an all-time high, according to MediEstates. This increased demand for private, mixed and NHS (Northern Ireland) practices is due to demand exceeding supply.

Another reason, according to MediEstates, is that market multiples being paid for dental practices have never been higher. The company believes that at the moment, it is a seller's market and the longer you wait, market conditions could change and reduce your potential selling price.

MediEstates states that over the past year, more buyers have registered to acquire dental practices than ever. According to the company, demand is significantly higher than supply in most areas, and sellers looking to exit their practice for more flexibility or retirement can take advantage of this heightened interest and maximise their selling price.

According to the company, if you are having a good year in revenue terms, it will translate into a good valuation. MediEstates states that sellers who can demonstrate a pattern of growth and increasing revenues are typically rewarded with a higher valuation. If your revenue is not at its peak, but is growing steadily and in line with what other similar dental practices are achieving, the company states there should be no worry about any impact on value or saleability.

Dentsply Sirona endodontic solution

Dentsply Sirona has introduced ProTaper Ultimate, which the company states is a solution combining the latest generation of ProTaper files, enhanced disinfection and dedicated obturation. According to the company, this system is specifically designed for clinicians who frequently perform endodontic procedures and wish to expand the range of anatomical treatment they provide to their patients. Dentsply Sirona states that the ProTaper Ultimate solution comes with files, absorbent points, conform fit gutta-percha master cones, and is jointly launched with a sealer, the AH Plus Bioceramic Sealer. According to the company, it features a slider-shaper-finisher sequence to cover a full range of anatomical situations, and has 25% better cleaning efficacy and obturation with ideal fit.

With ProTaper Ultimate, Dentsply Sirona states it is now introducing a technologically driven fourth-generation system. The treatment concept is based on three pillars: shaping; 3D cleaning; and, filling root canal systems. The standard sequence of the shaping pillar includes three file types, namely, slider, shaper and finisher. Novel auxiliary files are available for larger and straighter canals, and all files are available to prepare canals mechanically and/or manually.

COLTENE'S RANGE

Coltene states that when dentists use hard-working, multi-tasking products, they can keep stock costs low, and pass these savings on to their patients. According to the company, SoloCem is its multi-use self-adhesive cement, which, when boosted with the One Coat 7 Universal bonding agent, delivers a reliable bond strength on enamel and dentine.

For shade matching, the company recommends its Brilliant EverGlow, which Coltene states uses a sophisticated shade system that offers three translucency levels and enhanced duo shades. Coltene states that this allows for flexible use when it comes to single-shade and multi-shade layered restorations.

According to Coltene, for dentists who want a quality material for broad daily use on all conventional indications, its Brilliant Crios reinforced composite bloc will deliver beautiful results. The company states that the product is ideal for single-tooth restorations, with its shock-absorbing effect.

For infection control, Coltene recommends its STATIM B, which is a six-litre vacuum autoclave. According to the company, some of the benefits include flexible loading options and shorter cycle times.

And for impressions, Coltene states that its Affinis materials offer different washes, colours, working and setting times, and consistencies. According to the company, they are easy to handle too.

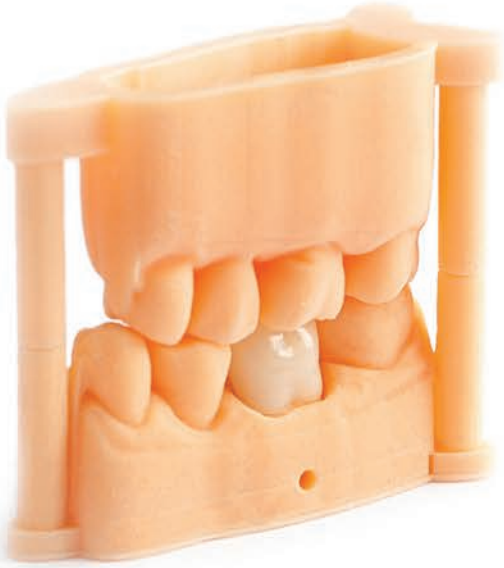
SAVE MONEY WITH THE IDA

Did you know that being a member of the IDA actually saves you money? On average, a GDP will save over €2,000 by availing of the many financial discounts to IDA members. An average €800 discount is available for your professional indemnity insurance with Dental Protection, as well as up to €2,000 on merchant card fees with AIB Merchant Card Services. Don't forget, when renewing your motor, home or dental practice insurance, to contact our preferred provider, Doyle Mahon, for a quote.

CONNECT YOUR SCANNER

MediMatch DENTAL

YOUR DIGITAL FUTURE STARTS HERE



e.max® from scan 135 €
Zirconia with build-up from scan 135 €

MediMatch DENTAL

016 991 588 | **MediMatch**
www.medimatch.ie | **LABORATORY & SUPPLIES**

MEDIT

CALL US TO ARRANGE A DEMO

www.medimatch.co.uk/shop

supplies@medimatch.ie

016 991 588

iTero®

exocad

ChairsideCAD

ULTIMATE BUNDLE 6000 €

MediMatch DIGITAL SUPPLIES

SELL

INSTALL

TRAIN

SUPPORT

CONNECT

LAB

YOUR DIGITAL WORKFLOW PARTNER

Fit for purpose

The Dental Council of Ireland is engaged in a process of updating its codes of practice. Council has also made a submission to Government on the proposed amendments to the Dentists Act 1985.

Why were new codes needed?

Our previous Council formed an opinion that all of the Dental Council's guidance publications should be reviewed. The replaced code on professional behaviour and ethical conduct was issued in 2012 and it was timely to review it.

Dr Gerry Cleary

President,
Dental Council of Ireland

The Dental Council has an obligation to ensure that our materials are fit for purpose, contemporary and, importantly, reflect current practice. The Council felt that new codes were required to try and ensure clarity and enhance patient safety. The most significant changes affecting the entire profession are the professional behaviour and ethics code and the medical emergency guidance, particularly the emergency drugs a practice should have available. The emergency drugs guidance is perhaps the code that will require the most attention from each of us, given specific requirements concerning patient safety. The code around public relations and advertising was particularly dated and needed significant attention. Indeed, we are revoking it entirely. New codes for registrants providing sedation were considered important and the code for non-surgical cosmetic procedures has also been changed. Changes in other pieces of legislation also needed to be reflected in our codes, for example legislative changes concerning adverse events with a requirement to disclose an adverse outcome to a patient, and changes concerning the protection of children, assisted decision-making and data protection.

A detailed process

This has been a considerable body of work, which has taken about three years to complete and has carried over from the previous Council, who completed most of the project. The initial work was completed by a subcommittee of Council, working with the Dental Council secretariat, who reviewed the codes on ethics, non-surgical cosmetic procedures and public relations. A separate group, initially under the direction of Prof. Leo Stassen and later Paul Brady, prepared the sedation guidelines, and a group chaired by Dr Brett Duane prepared the emergency drugs guidance, with the help of specially formed and

broadly representative expert subcommittees. The IDA participated in these expert sub-committees. The recommendations of both groups were reviewed by the Dental Council and some amendments made.

Evolution of the ethical code

There followed a wide stakeholder consultation process with professional organisations, education institutions, the IDA, representative organisations and indemnity providers. Indeed, most of the responses received concerned a proposal, not acted on, to ensure that practitioners held a non-discretionary form of indemnity insurance to ensure that any patient was fully protected in an adverse outcome. After reviewing the feedback from the stakeholders, a final version of each code was agreed by the Dental Council.

The finalised codes were submitted to the National Adult Literacy Agency to ensure clarity and that the information contained is accessible to and understandable by patients. This involved considerable work and was a more protracted process than previously. As a result of this process, the codes may read and appear somewhat differently to previous editions.

Changes to specific codes

Ethics

The code of ethics has a number of very important amendments to reflect changes in the nature of the practice of dentistry since the last code was published, changes identified in our fitness to practise processes, information received from patients, and other information identified from other third parties in the course of our work. The code is intended to serve a dual purpose: to guide the profession on ethical decision-making and practice; and, to inform the public on what to expect from the dental team when they attend for an appointment.

Non-surgical cosmetic procedures

The Council was of the view that stating that non-surgical cosmetic procedures were not the practice of dentistry did not adequately protect the public, as it undermined the Council's ability to hold dentists to account who fall seriously below the standards of acceptable care. It also failed to recognise that there are a significant number of dentists providing these treatments. The view of the Dental Council is that each registrant is expected to be competent, and able to demonstrate competency, in any area in which they choose to practise, but particularly those not covered during the undergraduate curriculum.

Advertising and public relations

The Dental Council is withdrawing its Code of Conduct pertaining to Public Relations and Communications and the associated guidance. This code was largely ineffectual and failed to reflect the rapidly changing communications landscape. The guidance on advertising is now contained in the code of ethics and places the focus on the content of communications rather than on the method of communications.

While advertising can be a contentious issue with members of the profession, registrants can also refer matters to the Dental Council for review. The Dental Council allows you to promote your practice as a dentist, but advises that any information you publish must be truthful, decent, factual and accurate, and must not be misleading, create unreasonable expectations or bring the profession into disrepute.

Remote consultations and treatment

The recent pandemic resulted in many dentists opting to provide remote consultations for their patients. Even before the pandemic, this was becoming a feature in dentistry and for these reasons the Dental Council felt that it is opportune to provide ethical guidance to dentists who, in certain circumstances, may have to provide remote consultations.

Increased obligations with regard to record keeping

The revised code includes enhanced obligations on dentists with regard to their record keeping and reaffirms the obligation that all dentists must comply with the European Union's General Data Protection Regulation (GDPR).

Referrals

The roles of general dental practitioners and specialists in referrals are defined to ensure that the continuing dental care of the patient is maintained.

Medicines

Clarification on prescribing, controlling and storage of drugs is provided.

Conflict of interest and mentorship

New sections on conflicts of interest, and on supporting colleagues, teaching

and research are included. These sections will become increasingly important as the concept of mentorship develops.

Council submission on the Dentists Act, 1985

The Dental Council was invited to prepare a submission on aspects of the Dentists Act 1985, and we considered this a unique and unprecedented opportunity to put forward the advantages, disadvantages and limitations of the current Act. We accepted willingly the challenge to prepare a wide-ranging and considered document, which we hope will be seen as useful and meaningful. It is a synthesis and the considered opinions of the last three Councils, reflecting the Dental Council's views on the current status of the dental profession in Ireland.

The bulk of the project was conducted by the Registrar in conjunction with the finance and general purposes committee of the Council. We consulted widely with previous office holders and members of Council, and a draft document was considered in great detail during a full Dental Council workshop. The work involved a tight timeline over the summer of 2021, and a body of work was completed, which the Dental Council believes to be meaningful and significant. The final submission was sent to the Minister for Health, Stephen Donnelly TD, in mid-October 2021.

Five broad themes were identified to address omissions and weaknesses in the 1985 Act:

1. Education, training and continuing competence.
2. Dental practice regulation and other public safety measures.
3. Independent practice for allied dental healthcare professionals.
4. Consistent registration systems.
5. Enhanced fitness to practice provisions.

Each policy proposal related to the themes is defined and explained. This is followed by a detailed explanation and, more importantly, a proposed solution, which already exists in other current regulatory legislation. Where applicable, each proposal in referenced to the action points and proposals in the National Oral Health Policy.

How does the current Act impact on the work of the Dental Council?

On the first page of the current Act, the Dental Council is tasked with the following directions:

- it is obliged "to provide for the registration and control of persons engaged in the practice of dentistry"; and,
- its "general concern is to promote high standards of professional education and professional conduct among dentists".

We are concerned that gaps in the 1985 Act put patients at risk, and these gaps hinder our ability to satisfy our requirement to control persons engaged in the practice of dentistry, and that we cannot attest to high standards of professional education or professional conduct.

The main impediment is that the Dental Council has no means of knowing the competence of the profession or any individual practitioner without a member of the public, or another registrant, who feels sufficiently aggrieved, undertaking the very difficult process of making a formal complaint. Then, only if the Dental Council believes there is a prima facie case to answer, where there might be a serious falling short of the expected standards or significant breaches of our codes, can we start to inquire into the competence of the dentist.

Council would like to implement procedures to ensure that our profession is up to date, and assure the general public that we regulate a modern and current profession at all levels. Council is aware that many practitioners invest considerable time and effort in professional improvement and in ensuring that their practices are current in all aspects of best practice. However, as much as we might be aware of this, we have no way of knowing if the previous statement is true for any registrant. In my own dental career, which I started just before the current act became law, there have been five major advancements, which have completely changed the practice of dentistry. At no stage have I ever had to demonstrate competence in any of these areas to retain my registration. It is unacceptable in this day and age that the Dental Council cannot overtly provide assurance to the public, when admitting me to the Register each year, that I as an individual registrant, or any other registrant, or the profession, is fit for purpose.

The submission addresses this in considerable detail and our reasons are clearly laid out. To allow us to assure the public that we are a modern and competent profession, you will see that we believe a mandatory continuing professional development (CPD) scheme, practice inspections, and some changes to fitness to practice processes, are urgently required. The Dental Council also believes these should be enacted through new primary legislation. Certain sections of the current Act have proven themselves over time and we would like to retain those parts, while amending the Act with primary legislation to correct the gaps and omissions outlined in our submission. Significant amendments were made by primary legislation to the Medical Practitioners Act 2007 in 2013 to ensure that it remained fit for purpose.

We are the only profession in Ireland where CPD is not compulsory, and indeed we are not aware of any other EU or first world country where CPD is not compulsory for dentistry. This is an untenable situation in 2022 and puts patients at unnecessary risk. What might have been fit for purpose 37 years ago is not appropriate for a modern profession striving to be the best it can be. We need mandatory CPD now and the other proposed changes to follow swiftly. I encourage you to read the submission and to engage with the process. It can be found on dentalcouncil.ie under the publication tab.

Registration issues

Registration of dentists not trained in Ireland has become increasingly complex and time consuming. We are obliged to ensure the integrity of our Register, and the qualifications and good standing of people who request admission to it. The Dental Council is also required to resolve an application process within three months. We would like to assure the profession that all completed applications are dealt with within that time frame. Any omissions or gaps on an application form have to be completed and it is only at that stage that it can be considered. Under the GDPR, the Dental Council can only communicate with the applicant and all queries are dealt with in a timely fashion with most queries addressed within a week of receiving them. Any potential registrant will be aware of any omissions on the application form. For the most timely response, a complete application is the best way to proceed.

Treatment co-ordinators – some risk management considerations

Treatment co-ordinators can be an asset to a dental practice, as long as their role is clearly defined and explained to patients.

Although dentistry is at its core focused on oral health, clinical techniques and approaches have developed, and the range of treatments that dentists are able to offer their patients has expanded. The obvious benefit is an increase in both patient choice and the ways in which dentists can assist their patients.

There is certainly a great deal more interest in, and demand for, cosmetic dentistry. The online world has exposed people to ever-greater levels of expectation and pressure to look good. Attractive teeth have always been valued and have now become even more of an aspirational commodity. This is reflected in the ways that patients seek information on and engage with dental treatment. Against this backdrop, the role of 'treatment co-ordinator' has become an established concept in some areas of practice.

The whole idea of treatment co-ordinators is not entirely new. They have been around in one form or another for a while now, but it's fair to say that it is a role that has become more of a feature in recent years.

Benefits of appointing a treatment co-ordinator

There are clearly benefits to both clinician and patient in ensuring that patients are as well informed as they can be about treatment options. In some cases, a treatment co-ordinator can be the liaison between patient and dentist, and act as a personal guide to assist patients with their dental journey by being able to offer explanations in patient-friendly language.

Dr Martin Foster
BDS MPH DipHSM

Martin is Dentolegal Consultant at Dental Protection

Suggested explanation for patients of the treatment co-ordinator role:

"An appointment with a treatment co-ordinator is a preliminary consultation to discuss treatments available at the practice. It is not a substitute for a clinical examination. All patients will require a full assessment examination before any decision about treatment can be made."

"Potential options and costs given by the treatment co-ordinator are intended simply as a general guide. A full clinical assessment with the dentist will be required to obtain an accurate view of the possible treatment options and costs."

They are often a first contact point with prospective patients who may be interested in exploring possibilities before organising an appointment with the dentist.

Treatment co-ordinators may also be involved in more traditional 'front-of-house' tasks, such as booking appointments, and it is not unknown for the treatment co-ordinator role to be carried out by a member of the dental nurse team who works chairside as well.

There are a number of benefits to the practice in having such a role. It can allow team members to expand their skills and make the most of their experience in communicating with patients. In terms of potential benefits for patients, having a treatment co-ordinator can allow a patient the opportunity to express their priorities and concerns, as well as obtaining a general idea of treatment possibilities and potential costs, without having to see a dentist. This can be helpful if, for example, a patient is embarrassed by their teeth and doesn't know where to start. After speaking with the patient to establish their views and priorities, the treatment co-ordinator can book an appointment with the appropriate dentist.

Further to being seen by the dentist, the treatment co-ordinator can help with explaining the various stages of the planned treatment and clarify any outstanding questions on how long it will take, what is involved, how much it will cost, and payment options. Patients can sometimes find it easier to speak to a non-dentist, and may be less embarrassed to ask questions or seek further explanations.

The potential benefit to the dentist is that delegating some tasks can allow them to concentrate on dentistry and allow other team members to play to their strengths. Discussing payment plan options may not be a good use of clinician time. From a commercial perspective, it can reduce appointment slots being used on patients who may simply be fact finding: a treatment co-ordinator may help to sift out patients who are only 'window shopping', or those with unrealistic expectations in relation to timeframes or costs.

Potential risks

While there are many benefits, it is important to take note of potential risks.

With respect to a treatment co-ordinator and the information presented, there is a need to ensure that patient expectations are accurate. The patient needs to know that a treatment co-ordinator is not a dentist, and although they are able to address general questions, they will be unable to give specific details. What may be achievable, after a full clinical assessment, might be very different to theoretical options, and the patient needs to understand this. Only after the dentist has carried out an assessment will there be definitive information to indicate which options are appropriate and feasible. Unless information is delivered carefully, a meeting with a treatment co-ordinator may unintentionally reinforce – or generate – unrealistic expectations.

It is worth having some form of explanatory material for patients to help manage expectations (see panel). The treatment co-ordinator may be able to identify what the patient wants but it is only the dentist who can figure out what can actually be achieved and there is a line between outlining the types of treatment that might be possible and giving advice on actual treatment options.

Dentistry is strictly regulated, and it is important to ensure that a non-registrant does not stray into the area of what may be considered the practice of dentistry, or that a registrant does not exceed their own scope of practice.

Ethics and communication

Careful consideration must be given to ensuring an ethical approach to promoting treatments. There is a risk of enthusiasm and positive promotion spilling into the territory of hard sell or focusing on certain treatment options while overlooking other, perhaps less profitable, options that the patient really should be offered too.

When considering options, particularly for elective, aesthetic-based treatments, patients will need cooling-off time to reflect before committing to anything. They do sometimes change their minds. It is always better that this happens before treatment rather than during.

Good team communication is essential. If the transfer of information between the treatment co-ordinator, the dentist and the rest of the team is not clear and consistent, there is plenty of scope for misunderstandings and patient dissatisfaction.

Consent

Obtaining patient consent is an area ripe for misunderstandings. Consent is a process that involves information sharing, checking, understanding and obtaining agreement. A treatment co-ordinator can be a source of information about types of treatment, but they are not in a position to obtain valid consent for a particular type of treatment. They cannot provide the patient with the information specific to that patient's particular clinical presentation and individual treatment need. Only a dentist can assess the full clinical picture, and go over the specific risks and benefits of the various treatment options for that patient.

Although there are benefits to a practice from the use of treatment co-ordinators, it is important to understand the boundaries within which they should operate.

It is the responsibility of the treating clinician to ensure that the patient understands the information, the risks and benefits of treatment, the alternative options, and has chosen freely to proceed with the treatment. It is vital that the dentist does not abdicate responsibility for this through the view that consent is 'taken care of' by a treatment co-ordinator. Only then can the role of a treatment co-ordinator become a mainstay of the modern dental practice.

Welcome to
Dubco Credit Union Limited

now amalgamated with **Irish Dental Credit Union Limited**

No wait period or minimum savings required for members who wish to borrow!

THE NEW CREDIT UNION FOR DENTISTS, THEIR COLLEAGUES & EXTENDED FAMILY

DUBCO LOAN RATES

COVID-19 BUSINESS SUPPORT LOAN	6.97% (7.20% APR*)		
BUSINESS IMPROVEMENT LOAN	**5 year term** 5.97% (6.14% APR*)	**7 year term** 6.47% (6.67% APR*)	**10 year term** 6.97% (7.20% APR*)
INCOME TAX LOAN	6.47% (6.67% APR*)		
PERSONAL LOAN	7.97% (8.27% APR*)		
CAR LOAN	**Standard Car 5 to 7 year term** 5.97% (6.14% APR*)	**Electric Car 5 to 10 year term** 4.97% (5.08% APR*)	
HOME IMPROVEMENT LOAN	**5 year term** 5.97% (6.14% APR*)	**7 year term** 6.47% (6.67% APR*)	**10 year term** 6.97% (7.20% APR*)
EDUCATION LOAN	4.97% (5.08% APR*)		
COVERED LOAN (SAVINGS HIGHER THAN LOAN)	4.97% (5.08% APR*)		
HOME LOAN	**LTV < 50%** 3.40% (3.45% APRC**)	**LTV < 80%** 3.60% (3.66% APRC**)	

*The APR (Annual Percentage Rate) included is an example only; all APR examples are based on a €10,000 loan over a period of 60 monthly repayments.
**The APRC (Annual Percentage Rate of Charge) included is an example only; all APRC examples are based on €200,000 over a period of 300 months.
1st legal charge will be required.

To join:

Visit www.dubco.ie/join and sign up online

Call us on 01 887 0400

Download a Membership Pack from www.dubco.ie/membership

Dubco Credit Union Limited is regulated by the Central Bank of Ireland

DUBCO

Together We're Better

Little Green Street, Dublin 7

Malahide Road, Coolock, Dublin 5 (for Mondelez employees only)

Tel: 01 887 0400 **Email:** info@dubco.ie **Website:** www.dubco.ie

Quick chairside interventions to improve oral hygiene for dependent adults

Dependent adults, such as older adults with dementia and people with disabilities, make up about 10% of the Irish population. There are over 28,000 people registered with intellectual disabilities in Ireland alone. For people with disabilities, oral health can be difficult to achieve and the consequences may impact on them to a greater extent than on others. Oral diseases are often more prevalent and have poorer outcomes. Dental caries, for example, happens at similar rates to the general population, but tends to be treated by extraction among those with disabilities. Globally, periodontal disease can be up to nine times more prevalent among middle-aged adults with a disability, compared to the general population.[1-3] Combined, the increased prevalence and unfavourable management of these diseases leads to greater levels of tooth loss and ultimately to oral disability.[4] Dental pain can also go undiagnosed and present as challenging, even self-injurious, behaviours, among people with communication impairments. Reparative treatment by the dental team can often necessitate restrictive supports such as anaesthesia, sedation or clinical holding, which do make the treatment of oral disease possible, but also add moral challenges, waiting times and increased complexity of treatment.[5] Poor oral health may also have an impact on an individual's general health.

Barriers to oral health

There are multiple strands to preventing these poor outcomes for adults with disabilities, including removing plaque and maintaining a healthful diet. Given the central role of plaque in periodontal disease and caries, oral hygiene is the key to oral health for people with disabilities. The key to successful prevention and treatment of periodontal diseases is minimising periodontal inflammation levels lifelong. This can be achieved through effective personal oral hygiene and professional preventive care. However, in practice, this seemingly simple objective is proving elusive. There are many possible barriers to achieving this relating to carers in the home setting, where tooth brushing occurs, and in the dental setting, where risk-based oral hygiene interventions are delivered (**Figure 1**).

People with disabilities often live dependent lives where their choices and agency are diminished in ways that are unimaginable to most of us, unless, perhaps, we too have cared for vulnerable loved ones. For people who were born with disabilities or developed them young, the receipt of care can come to pave their journey through life, whereas for people who acquire impairments later (like dementia or frailty), a sense of incremental or even sudden dependency can derail hopes and expectations. Regardless of when one becomes vulnerable, dependency changes how day-to-day activities are planned and days are passed.

FIGURE 1: Possible barriers to effective oral hygiene in the home and dental settings for people with disabilities.

Oral hygiene might not seem a central focus in the long-term or immediate tasks of dependency and disablement. Surely there are more salient and immediate issues to attend to and resources are, as ever, scarce. There is the daily juggle of waking, cleaning, eating, dressing, toileting and just living, to focus carer energies. These basic human needs must compete with each other for each and every person the carer cares for, and with those of the carer themselves. In the grand juggling act of care, something will inevitably give and, unfortunately, oral hygiene is comparatively optional when prioritising other basic life necessities.

The behaviours of oral hygiene are subject to a dilemma, which leads to people placing short-term personal interests over long-term shared goals, despite the outcome ultimately being worse. So, despite carers wanting to maintain oral health in the long term, brushing is hard to get right and, if done effectively from a periodontic perspective at least, has to be repeated once every two or three days for life.[6] This deviation from the usual 'brush your teeth twice a day' mantra may seem odd at first, so it is worth a brief comment. Often, standards of care are measured by process rather than outcomes. The focus tends to be on how often carers clean teeth rather than how effectively. We do so adopting standards set for people without disabilities; that is, to brush twice a day and floss regularly. In the context of dependent care, this can be impossible, ineffective and demotivating. This may promote a dilution of resources, which contributes to regular ineffective tooth brushing. In essence, the expectation to meet the mouth care norms set for independent others creates a context where to do otherwise is a deviation from an acceptable standard. If we hold unrealistic expectations for carers, we colour deviations from this standard

Caoimhin Mac Giolla Phadraig
Lecturer, Trinity College Dublin

Ceara Cleary, Dental hygienist, HSE

Catherine Waldron, Postdoctoral researcher, Trinity College Dublin

negatively rather than celebrate carers' creative solutions. If we fail to convey that we understand a carers' reality, we have no hope of supporting behaviour change to promote oral health. Often this requires collective action across carers over long periods. It is also bloody, smelly, invasive and, for many, disgusting. It can also elicit behavioural reactions and evoke a sense that the carer is causing pain. While we in the dental profession understand the nirvana that is chemo-mechanical disruption of plaque, for carers the task may seem thankless. There are many natural incentives to diminish the frequency and effectiveness of tooth brushing for dependent adults.

The collective action and short-term versus long-term dilemmas that dependent mouth care brings, and the subtle disincentives that abound, make the poor delivery of oral homecare almost unchangeable. Yet we as a profession must create a future where it is inconceivable that you would not brush teeth. A future where colleagues in care provision expect this of each other. A future where not brushing teeth is seen as neglectful and where limitless biscuit bowls on a table in the middle of the care home is seen as unimaginable.

Oral health professionals are also culpable in this grand failure. We do not incentivise our own professions to see people with disabilities, nor do we properly push prevention. Sure, we pay lip service, but we all know that prevention-led, equitable dental services are little more than pipe dreams gathering dust. No smiles. Gan sláinte.

Innovate for change

We do not need to hark back to the Ottawa Charter to tell us that there are lots of ways to bring change and enable our dependent patients and communities to enhance control over their oral hygiene, diet and oral health. Despite Trojan efforts, there is little hope to be gained from research in this field,[7] so we must innovate.

One approach that is recommended by the National Institute of Health and Care Excellence (NICE)[8] is mouthcare plans. Mouthcare plans are documented and agreed plans made with the person to meet their oral health goals. They aid planning and communication, which is especially important when there are multiple persons caring for an individual and where there are communication issues. In this article, we offer two examples of how the principles of mouthcare plans can be adopted by dental professionals, through quick chairside interventions that take either one or ten minutes. This is to fit in with the realities of busy practice and hopes to remove some barriers from dental teams in making efforts to improve homecare.

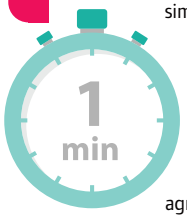
Both of these interventions apply the evidence-based resources that are available on www.brushmyteeth.ie in a structured way. Brushmyteeth.ie is a resource for patients and dental teams that shows people with impairments and their carers how to brush teeth and make mouthcare plans. These resources are designed to change behaviour by applying a number of behaviour change techniques (BCTs).[9] Generally speaking, these techniques are activated by modifying a carer's motivation, capability or opportunity[10] to provide or mediate mouthcare, and were designed after scouring the literature to find out what works, for whom, in what circumstances, and why.[11]

Panels 1 and **2** offer simple instructions in how to apply the techniques, and **Panel 3** shows a quick comparison of the two techniques.

PANEL 1

One-minute theory-based intervention:

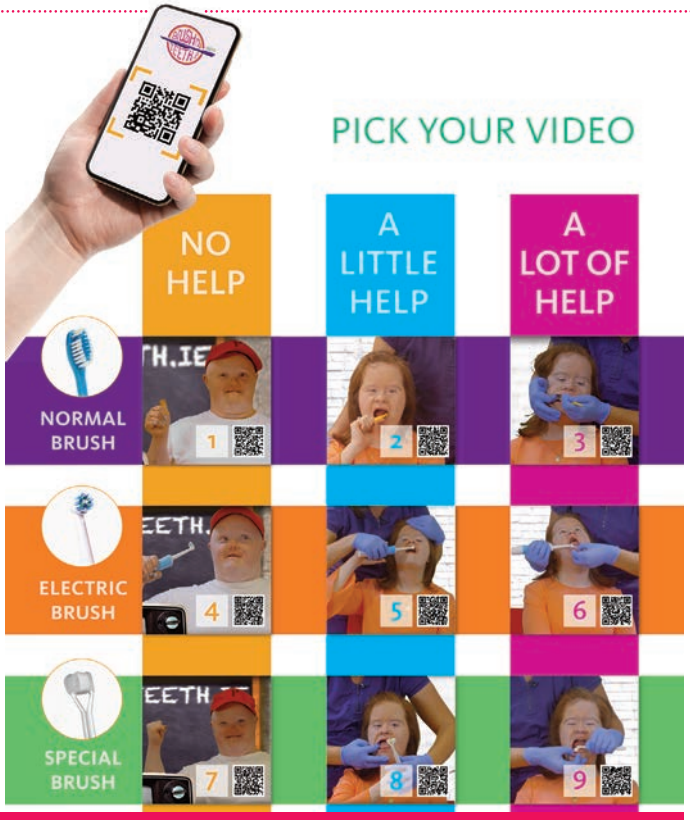
THE BRUSH PAD



Designed to be a quick and simple intervention to deliver advice to the whole care team and the patient at home, the brush pad is a pad of behavioural prescriptions that can be ripped off and given to the patient or their carer. It is similar to a prescription pad in form and function, with each behavioural prescription tailored for individual brushing. The page contains a link to nine videos, which can be accessed on www.brushmyteeth.ie. The dental team member simply circles the recommended video and gives the page to the patient to take home and watch with their care team within an agreed timeframe. The reason this works to change behaviour is that it motivates proper tooth brushing through prompting.

Procedure

1. Assess the patient's homecare needs.
2. Agree the best toothbrush from a choice of regular, electric or Barman's Special.
3. Agree the best level of support from a choice of low, medium and high support need.
4. Circle the corresponding video on the brush pad, tear the prescription and give to the patient/carer.
5. Prompt them to watch by a certain date.



TIP: You can order your brush pads free by filling out a feedback form on www.brushmyteeth.ie with your address, or by emailing macgiolla@dental.tcd.ie. If you run out, you can always write the video number on a sticky note instead.

PANEL 2

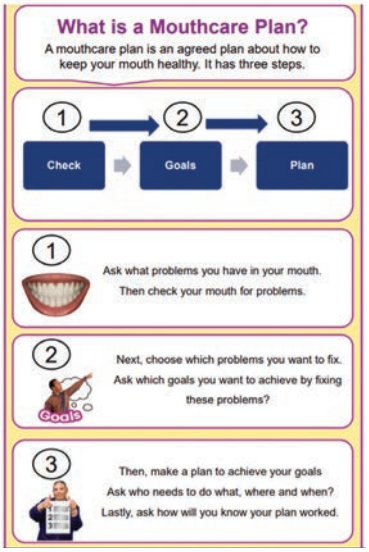
A ten-minute theory-based intervention

MOUTHCARE PLAN

Mouthcare plans are plans to keep a patient's mouth healthy and are made between the patient, carers and dental teams, although they can also be done without dental input. Mouthcare plans involve three main steps: assessment; goal setting; and, action planning. In this way they create a logical flow from problem to solution that promotes success. They allow for these steps to be communicated across care teams, promote accountability, and can be checked to see if they are successful or not. In this way, they are considered far more likely to change home care than shorter interventions, a reason why they have been recommended by the National Institute for Health and Care Excellence (NICE) in the UK, and others. The active ingredients of mouthcare plans from a behaviour change perspective are: goal setting; action planning; and, review behaviour goals.

Procedure

1. Print mouthcare plan.
2. Assess the patient's expressed and observed needs through history and examination.
3. Set goals based on the problems observed, such as "be free of tooth decay" or "have healthy gums".
4. Complete an action plan to meet the agreed goal, which may include brushing advice or dietary advice.
5. Give the completed mouthcare plan to the patient and set a review date.



TIP: We often allow the carer to fill in most of the care plan while assessing the patient, and fill in the blanks together to promote carer involvement and speed up the process.

PANEL 3

COMPARISON OF FEATURES OF BOTH INTERVENTIONS

(adopting a template for intervention, description and replication [TiDier] criteria).

	BRUSH PAD	MOUTHCARE PLAN
Materials	Brush-pad +/- toothbrush	Mouthcare plan +/- toothbrush
Provider	Dental care professional	Dental care professional with carer
Delivery	Face to face to patient or carer	Face to face to patient and carer
Location	In the dental surgery	In the dental surgery/at home
Time	One minute	Ten minutes
Barriers	Simple intervention triggered solely by a prompt	Complex intervention triggered through goal setting, action planning and reviewing behaviour goals
Evidence	Can ask patient by agreed time: did you watch the video?	Date set for review; evidence of outcomes documented in plan
Fidelity	Difficult to measure	Evidence of process outcomes
Next steps	Fill out a feedback form on www.brushmyteeth.ie with your address and request brush pads	Go to www.brushmyteeth.ie to download a mouthcare plan and practice

References

1. **Crowley, E., Whelton, H., Murphy, A., *et al.*** Oral health of adults with an intellectual disability in residential care in Ireland 2003. Department of Health and Children, ed 2005. Accessed February 12, 2022. Available from: https://www.lenus.ie/bitstream/handle/10147/46342/1283.pdf?sequence=1.
2. **Scott, A., March, L., Stokes, M.L.** A survey of oral health in a population of adults with developmental disabilities: comparison with a national oral health survey of the general population. *Aust Dent J* 1998; 43 (4): 257-261.
3. **Gabre, P., Martinsson, T., Gahnberg, L.** Incidence of, and reasons for, tooth mortality among mentally retarded adults during a 10-year period. *Acta Odontol Scand* 1999; 57 (1): 55-61.
4. **Mac Giolla Phadraig, C., McCallion, P., Cleary, E., *et al.*** Total tooth loss and complete denture use in older adults with intellectual disabilities in Ireland. *J Public Health Dent* 2015; 75 (2): 101-108.
5. **Mac Giolla Phadraig, C., Griffiths, C., McCallion, P., McCarron, M., Donnelly-Swift, E., Nunn, J.** Pharmacological behaviour support for adults with intellectual disabilities: frequency and predictors in a national cross-sectional survey. *Community Dent Oral Epidemiol* 2018; 46 (3): 231-237.
6. **Löe, H., Theilade, E., Jensen, S.B.** Experimental gingivitis in man. *J Periodontol* 1965; 36: 177-187.
7. **Waldron, C., Nunn, J., MacGiolla Phadraig, C., *et al.*** Oral hygiene interventions for people with intellectual disabilities. *Cochrane Database Syst Rev* 2019; 5 (5): CD012628.
8. **National Institute for Health and Care Excellence.** Oral health in care homes. 2017. Accessed February 12, 2022. Available from: https://www.nice.org.uk/guidance/qs151/resources/oral-health-in-care-homes-pdf-75545534936005.
9. **Michie, S., Richardson, M., Johnston, M., *et al.*** The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Ann Behav Med* 2013; 46 (1): 81-95.
10. **Michie, S., Atkins, L., West, R.** The Behaviour Change Wheel. *A Guide to Designing Interventions (1st ed.).* Great Britain: Silverback Publishing, 2014: 1003-1010.
11. **Waldron, C., MacGiolla Phadraig C, Nunn J.** What is it about carer led oral hygiene interventions for people with intellectual disabilities that work and why? A realist review. *Community Dent Oral Epidemiol* 2020.

Southern Cross Dental

A Modern Dental Europe Company

New MEDIT *i*700

€17,900

FREE 1-1 ONLINE DEMONSTRATIONS

To find our more contact us on :
ireland@scdlab.ie

Head and neck metastases: case series

Précis: This case series highlights a range of head and neck metastases.

Abstract: Metastasis is the spread of primary cancer cells to another region in the body and the subsequent development of a metastatic malignant cancer. The most common oral metastases are primary breast, lung, bone and kidney cancers. Head and neck metastases have a very high mortality rate. This case series highlights some variable presentations of head and neck metastases. Each of the cases initially presented in a general dental setting. Both early diagnosis and correct management can improve outcomes for these patients, so it is important that dentists promptly recognise such clinical presentations.

Journal of the Irish Dental Association February/March 2022; 68 (1): 34-38

Introduction

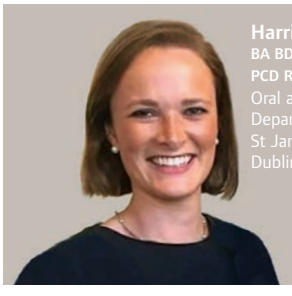
Metastasis is the spread of primary cancer cells and the development of a cancer in a secondary, distant site within the body. The lymphatic or circulatory system facilitates this movement and an abundance of factors promote a successful secondary cancer colonisation.[1,2]

Head and neck metastases are rare.[3] They represent 1-3% of all oral malignant neoplasms, and peak prevalence is noted in the fourth to seventh decades.[3] These patients have a high mortality rate with a poor life expectancy.[2] The most common primary cancers to metastasise to the head and neck include primary breast, lung, bone and kidney cancers. Breast cancer metastases are more common in women and lung metastases in males.[2,4-6] Pancreatic and hepatocellular cancers rarely metastasise to the head and neck.[6] A metastatic tumour can sometimes lead to the diagnosis of the primary occult malignancy. This occurs in 20-35% of cases with oral metastases.[7-9] The majority of metastatic tumours in the oral cavity are of epithelial-derived tissue.[2,4,5,10] The predominant predilection for carcinomas has been well documented in comparison to sarcomas and other connective tissue tumours.[4,]

Organ tropism is a term used to describe the site-specific predominance a primary cancer has for a secondary metastatic site. For example, this can be seen with breast, lung and prostate cancers, which have a tendency to metastasise to the mandible.[2,11] Some 70% of metastases in the oral cavity are located in the mandible, followed by the soft tissue, the attached gingivae and the tongue, respectively.[12] Oral metastases are twice as common in the mandible compared to the soft tissues.[2,8,13] Metastases to the salivary glands are very rare; however, the parotid gland is the most common salivary gland to be infiltrated.[12]

The metastatic process

The mechanism for metastatic movement and seeding of cancerous cells has been well documented in the literature. Hirshberg *et al.* (2014) documented that the development of a metastatic cancer is a regulated, controlled mechanism where it retains the cellular markers of the primary tumour in a distant site.[2] The 'invasion-metastasis cascade' describes the lifecycle of the circulating tumour cell (CTC) from the primary tumour, through a circulatory system in the body, and seeding in the secondary, distant site. This results in a metastatic colonisation and establishment of the neoplasm. 'Tumour dormancy' is a concept that describes the timeframe between the onset of the primary cancer and the subsequent development of the secondary metastatic cancer.[2] The metastatic process is both a host- and tumour-related process. There are two fundamental principles exhibited by a successful metastatic cancer: the ability to form its independent blood supply (angiogenesis); and, the destruction of host cells (apoptosis). Paget *et al*. were the first to describe the "seeds and soil" hypothesis, which remains the principal descriptor of distant tumour spread and invasion (**Figure 1**).[1]



Harriet Byrne BA BDentSc (Hons) MFDS Dip PCD RCSI PgCert (ClinEd)
Oral and Maxillofacial Department, St James's Hospital, Dublin

Jonathan Hulbert MBChB BDS (Hons) FRCS (OMFS)
Maxillofacial surgeon, Prince Charles Hospital, Merthyr Tydfil, Wales

Kaumal Baig BDS (NUI) MFD (RCSI) DipPCD (RCSI) PgCert (Anatomy) PgCert (ClinEd)
Oral Surgery Department, Cork University Dental School and Hospital, Wilton, Cork

Paul Brady BDS PhD MFDS FFDRCSI MScConSed PGCert-TLHE
Oral surgeon, Oral Surgery Department, Cork University Dental School and Hospital, Wilton, Cork

Catherine Gallagher MB FDSRCS FFDRCSI (OS) PCME PCSPM
Oral surgeon, Oral Surgery Department, Cork University Dental School and Hospital, Wilton, Cork

Corresponding author: Harriet Byrne, Oral and Maxillofacial Department, St James's Hospital, Dublin Hbyrne@stjames.ie

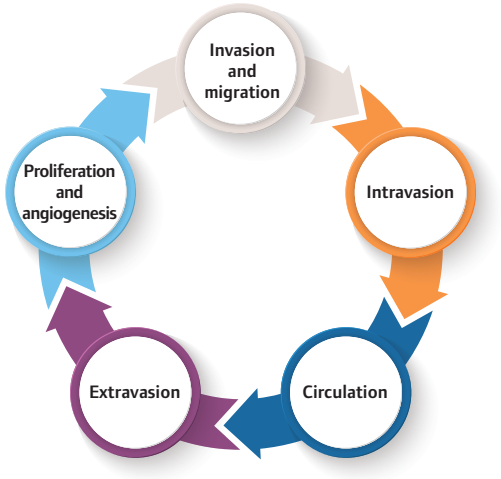


FIGURE 1: The invasion-metastasis cascade depicts the five basic principles in the metastatic process.[1,2]

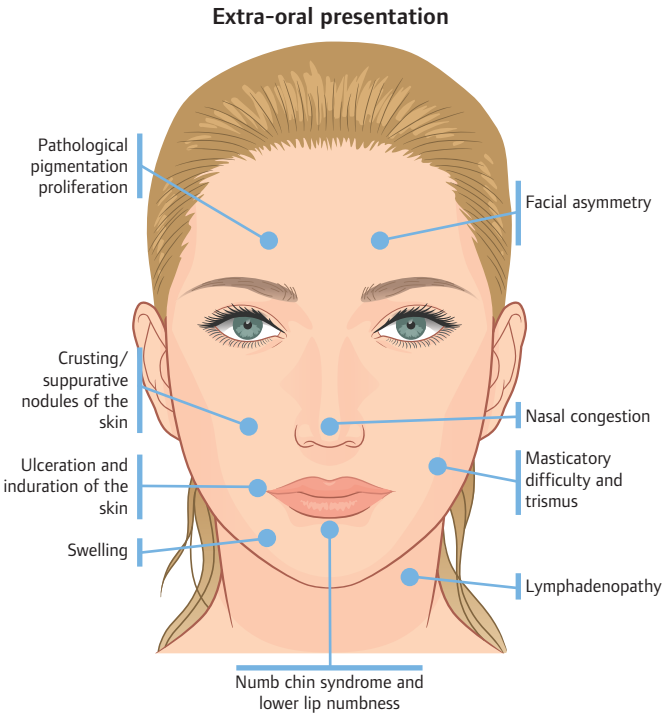


FIGURE 2: Extra-oral presentations that may represent a metastasis in the head and neck region.[2-4,7,8,10,14,15] *Epiphora (excessive watering from the eye) may also be an indicator of a malignant pathology occupying the maxillary sinus.*

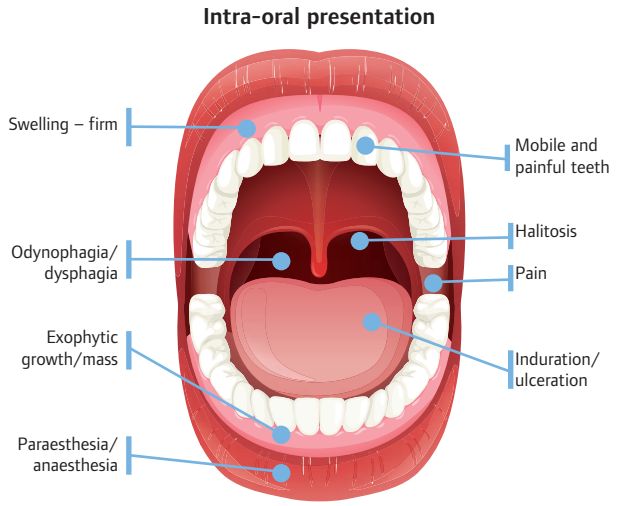


FIGURE 3: Clinical intra-oral findings that may represent a metastatic deposit in the oral cavity.[2,3,8,10,11,15,16]

Clinical presentation of metastases in the head and neck

The presentation of an intra- or extra-oral metastasis can include intra- and extra-oral signs, symptoms and clinical findings, and predominantly has a sinister clinical appearance (**Figures 2** and **3**).[3]

Pain, swelling, paraesthesia and an exophytic mass are common soft tissue presentations of head and neck metastases.[4] Pain was noted in 49% of cases in a study by D'Silva *et al*. (2006). Some 39% of patients did not have any symptoms on presentation.[4]

Radiographic signs of head and neck metastases

The orthopantomogram or intra-oral plain radiographic images are the first point of radiographic imaging. Further investigations, such as computed tomography (CT) and cone-beam computed tomography (CBCT), alongside a positron emission tomography (PET) scan, magnetic resonance imaging (MRI) and ultrasound for soft tissue enhancement,[17] should be prescribed and interpreted in a hospital setting, and will often be discussed in a multidisciplinary team setting in conjunction with a precise history, clinical examination, special tests and photography. Sinister radiological findings include ill-defined or moth bony margins, atrophy of the lamina dura, and osteolytic and osteogenic defects, alongside relative anatomical size discrepancies.[11,18]

CASE REPORT 1: soft tissue presentation

A 69-year-old female presented to the Cork University Dental School and Hospital following urgent referral by her general dental practitioner (GDP) with regard to non-healing extraction sockets in the upper left quadrant. Her medical history included hypertension. She reported she was a non-smoker with low alcohol consumption. On initial presentation, clinicians noted an exophytic mass in the anterior maxillary alveolus, two months following the extraction of her upper left incisors and canine. There was no pain or paraesthesia on presentation. The mass was firm, fixed, pedunculated, and bled on probing. There was no fluctuance noted (**Figure 4**).

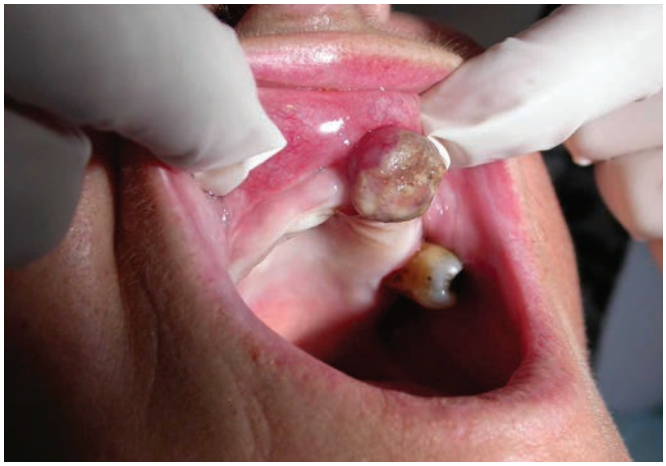


FIGURE 4: Initial presentation – an exophytic mass in the anterior maxillary alveolus, two months following the extraction of her upper left incisors and canine.

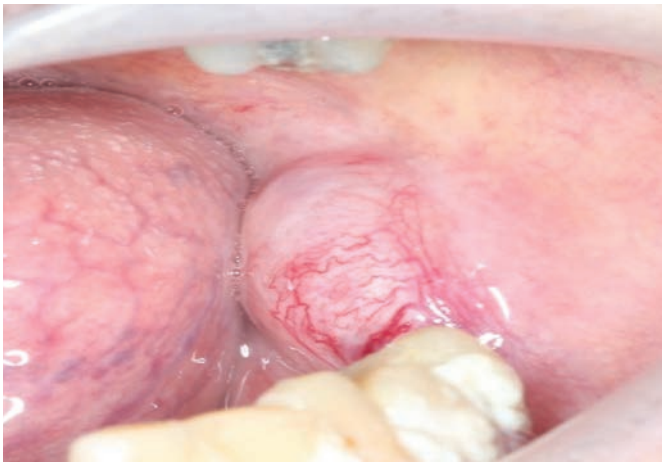


FIGURE 5: Intraoral view – soft tissue mass in the left retro-molar region measuring 15mm × 10mm – smooth, firm, dome-shaped swelling.

Routine blood tests, an urgent biopsy of the exophytic mass and histopathological examination were performed. The patient was also being investigated for lung cancer by her medical team; she was experiencing pain in her right shoulder radiating to her right arm. All haematological parameters were within normal limits.

Histopathology results revealed a poorly differentiated non-small-cell carcinoma with morphological features of a metastatic adenocarcinoma of the lung.

The patient was placed on a palliative chemotherapy treatment regimen (carboplatin and VP16) for the primary adenocarcinoma of the lung and the oral metastatic non-small-cell carcinoma.

Case 1 summary

Primary cancer	Non-small-cell lung cancer (adenocarcinoma)
Primary site	Lung
Metastatic site	Maxillary alveolus
Medical	Concurrent work-up for lung cancer
Clinical signs	Exophytic mass
Radiographic imaging	Anterior occlusal radiograph
Histopathology	Incisional biopsy proven
Treatment	Palliative chemotherapy

CASE REPORT 2: hard tissue presentation

A 58-year-old male was referred by his dentist with a left-sided solid mass in the mandible. The patient stated that he had been experiencing submandibular swelling for one month. Two days before the appointment he heard a 'snap' in his left jaw. He was previously diagnosed with stage IV moderately differentiated rectal adenocarcinoma. Treatment included both chemotherapy and radiation therapy for his rectal cancer. He was an ex-smoker and consumed 10 units of alcohol per week. On examination, a soft tissue mass was detected in the left retro-molar region measuring 15mm × 10mm. There was a smooth, firm, dome-shaped swelling. (**Figure 5**). OPG showed a pathological, left-sided mandibular body fracture. An associated radiolucency is seen in the body of the mandible (**Figure 6**).

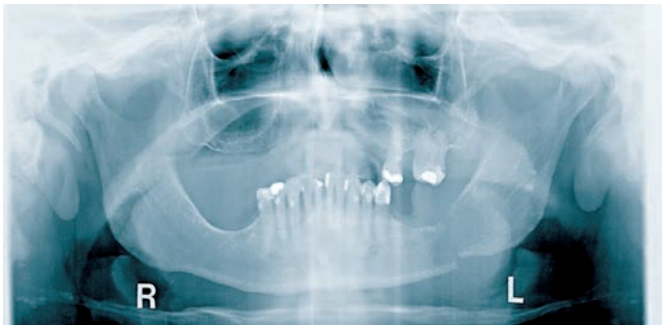


FIGURE 6: OPG showing a pathological, left-sided mandibular body fracture. An associated radiolucency is seen in the body of the mandible.

An incisional biopsy of the intra-oral swelling was performed under local anaesthetic. Histopathology reported a metastatic, moderately differentiated adenocarcinoma, involving bone and sub-epithelial corium, consistent with metastasis from a large bowel primary cancer. The mandibular fracture was treated conservatively, which included a soft diet, analgesics and antibiotics. He was referred for radiotherapy by his oncology team. We removed the remaining two upper left premolar and molar teeth prior to commencing radiotherapy for the oral metastasis. The cancer was terminal and he subsequently passed away.

Case 2 summary

Primary cancer	Adenocarcinoma
Primary site	Large bowel
Metastatic site	Mandible
Medical	Previous chemo-radiation therapy for stage IV rectal cancer
Clinical signs	Intra-oral and extra-oral swelling
Radiographic imaging	Pathological mandibular fracture and associated radiolucency
Histopathology	Metastatic adenocarcinoma
Treatment	Conservative management of mandibular fracture/teeth extractions Palliative radiation therapy

CASE REPORT 3: extra-oral presentation

A 72-year-old male presented to Prince Charles Hospital, Merthyr Tydfil, Wales, with a left-sided parotid swelling and associated ipsilateral cervical lymphadenopathy. The previous medical history included four cerebrovascular accidents (CVAs) since 2015, right-sided arm and leg weakness, ischaemic heart disease, pericarditis, and a previous pulmonary embolism. He did not declare any smoking habits or alcohol intake. Clinical examination revealed an enlarged left parotid gland, in particular fullness under the left earlobe (**Figure 7**). The was also a 7mm brown patch on the left helical, which was examined using a dermatoscope (**Figure 8**). The findings were indicative of a malignant melanoma. There was no family history of melanomas and the patient did not declare any other dermatological involvement.

Radiographic analysis included CT head, thorax, and pelvis, which detected a 3cm mass in the left parotid. An ultrasound-guided core biopsy was performed of the left parotid gland and an excisional biopsy was performed of the brown patch on the left ear. The histopathological findings confirmed a malignant melanoma on the left ear. This confirmed a pT2a superficial spreading malignant melanoma with Breslow thickness of 1.9mm.

A metastatic malignant melanoma was confirmed in the left parotid gland. The histological picture was described as an infiltration of pleomorphic plasmacytoid cells with occasional 'cherry red' nucleoli. The level four lymph nodes were reactive in nature and showed no evidence of atypia or malignancy material. Due to medical comorbidities, the patient is under palliative chemotherapy treatment for his metastatic melanoma of the left parotid.

Case 3 summary

Primary cancer	Malignant melanoma
Primary site	Ear
Metastatic site	Parotid
Medical	Multiple CVAs
Clinical signs	Left parotid swelling
	Brown patch on left ear
Radiographic imaging	CT head, thorax and pelvis
Histopathology	Metastatic malignant melanoma
Treatment	Excision of left ear malignant melanoma
	Palliative chemotherapy

Discussion

Metastases of the head and neck are rare. Currently, lung cancer remains the most prevalent primary tumour to metastasise to the head and neck.[7,13] Murillo *et al*. (2013) documented the frequency of lung (25%), kidney (15%), bone (10%), breast (9%) and liver (8%) cancers that metastasise to the oral cavity.[13] Hepatocellular cancer metastasises in 50% of cases; however, only 1% of cases were reported in the oral cavity.[19] A metastatic deposit is a prognostic factor for the overall survival of a cancer patient. Metastases are indicative of high mortality rates.[20]

D'Silva *et al.* noted that 83.5% of metastases were present in the mandible compared the maxilla[4] (significant to a P value less than 0.0002). The majority of patients were in their sixth and seventh decades. Other authors have noted an earlier prevalence, in the fifth and sixth decades.[13] Some 23% of cases examined by Hirshberg *et al*. (2014) did not have a previous primary cancer diagnosis.[2,19] This figure coincides with the majority of the literature, which reports undiagnosed primary malignant cancers in 23-35% of cases.[7-9]

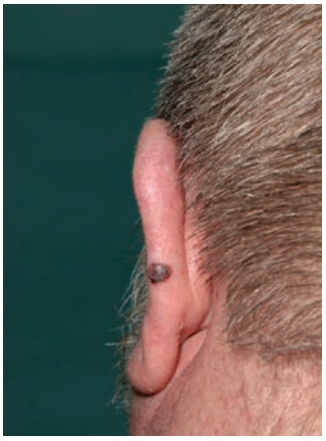


FIGURE 7: Clinical examination revealed an enlarged left parotid gland, in particular fullness under the left earlobe.

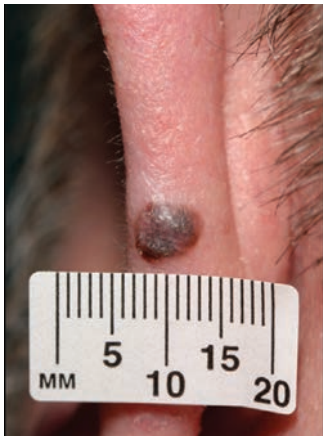


FIGURE 8: 7mm brown patch on the left helical.

Prognosis and mortality

There is an overall poor prognosis for these patients, irrespective of the primary origin.[8] Palliative care has been the principal treatment modality for patients with oral metastases.[2,7,8,13] Another aspect of metastatic cancer is the timing between the diagnosis of a primary tumour and the metastasis. One study of 673 metastatic tumours to the oral cavity reported that the average time between the diagnosis of the primary tumour and the secondary tumour diagnosis was 40 months.[21] After the diagnosis of the metastatic tumour, the average survival rate was seven months. This can limit a treatment plan to a palliative approach.[8]

Advice for the GDP

As part of a dental examination, dentists must be vigilant and screen for oral cancer (**Table 1**). The most common intra-oral presentations of squamous cell carcinoma are usually swelling and ulceration with raised rolled edges. The intra-oral swelling in case report 2 did not have these features. The features were more consistent with an adenocarcinoma. Dentists should be aware that oral cancer can have varying presentations. Cancer patients are living longer with their malignancy. It is imperative to obtain the correct information about a patient's cancer history. Dental check-ups should include examination of the cervical lymph nodes, as cancer survivors are at a higher risk of developing a metastasis.[14,22,23]

Table 1: Recommendations for the general dental practitioner – preventive and procedural advice for appropriate referral.

- ☐ Biannual dental check-ups
- ☐ Patient awareness/self-check assessments
- ☐ Cessation advice for carcinogenic social habits
- ☐ Liaison with the general medical practitioner
- ☐ Prompt urgent suspect cancer referral to the appropriate specialist
- ☐ Do not biopsy suspicious oral pathologies
- ☐ Follow-up care with the patient after the diagnosis of a primary or metastatic tumour

Guidance for the referral of an urgent suspected cancer

'Suspected cancer: recognition and referral' is guidance published by the National Institute for Health and Care Excellence (NICE) in the UK in 2015.[24] It helps practitioners to decide the most suitable management for a patient with a suspect oral cancer. Urgent referrals are warranted for ulcers of unknown aetiology persisting longer than three weeks, and swellings in the head or neck. Lumps on the lip or in the mouth, and erythematous patches present for greater than three weeks, which have been assessed by a dentist, must also be sent to a specialist centre with a two-week wait protocol.

Conclusion

The presentation of head and neck metastases is rare. No one sign or symptom is indicative of a metastatic deposit; however, the clinical indicators in this case series should help dentists during routine examination. The high mortality and morbidity rates associated with metastatic cases demands a high level of vigilant and clinical awareness in order to appropriately manage the case.

References

1. **Baldawa, P., Shirol, P., Alur, J., Kulkarni, V.V.** Metastasis: to and fro. *J Oral Maxillofac Pathol* 2017; 21 (3): 463-464.
2. **Hirshberg, A., Berger, R., Allon, I., Kaplan, I.** Metastatic tumors to the jaws and mouth. *Head Neck Pathol* 2014; 8 (4): 463-474.
3. **Kumar, G., Manjunatha, B.** Metastatic tumors to the jaws and oral cavity. *J Oral Maxillofac Pathol* 2013; 17 (1): 71-75.
4. **D'Silva, N.J., Summerlin, D.J., Cordell, K.G., Abdelsayed, R.A., Tomich, C.E., Hanks, C.T., *et al*.** Metastatic tumors in the jaws: a retrospective study of 114 cases. *J Am Dent Assoc* 2006; 137 (12): 1667-1672.
5. **Bonder, C.S., Clark, S.R., Norman, M.U., Johnson, P., Kubes, P.** Use of CD44 by CD4+ Th1 and Th2 lymphocytes to roll and adhere. *Blood* 2006; 107 (12): 4798-4806.
6. **Jemal, A., Clegg, L.X., Ward, E., Ries, L.A.G., Wu, X., Jamison, P.M.** Annual report to the nation on the status of cancer, 1975-2001, with a special feature regarding survival. *Cancer* 2004; 101 (1): 3-27.
7. **Van der Waal, R.I.F., Buter, J., Van der Waal, I.** Oral metastases: report of 24 cases. *Br J Oral Maxillofac Surg* 2003; 41 (1): 3-6.
8. **Hirshberg, A., Shnaiderman-Shapiro, A., Kaplan, I., Berger, R.** Metastatic tumours to the oral cavity – pathogenesis and analysis of 673 cases. *Oral Oncol* 2008; (44) 8: 743-752.
9. **Pesis, M., Taicher, S., Greenberg, G., Hirshberg, A.** Metastasis to the jaws as a first manifestation of hepatocellular carcinoma: report of a case and analysis of 41 cases. *J Craniomaxillofac Surg* 2014; 42 (8): 1997-2001.
10. **Keller, E.E., Gunderson, L.L.** Bone disease metastatic to the jaws. *J Am Dent Assoc* 1987; 115 (5): 697-701.
11. **Owosho, A.A., Xu, B., Kadempour, A., Yom, S.K., Randazzo, J., Ghossein, R.A., *et al*.** Metastatic solid tumors to the jaw and oral soft tissue: a retrospective clinical analysis of 44 patients from a single institution. *J Craniomaxillofac Surg* 2016; 44 (8): 1047-1053.
12. **Irani, S.** Metastasis to head and neck area: a 16-year retrospective study. *Am J Otolaryngol* 2011; 32 (1): 24-27.
13. **Murillo, J., Bagan, J.V., Hens, E., Diaz, J.M., Leopoldo, M.** Tumors metastasizing to the oral cavity: a study of 16 cases. *J Oral Maxillofac Surg* 2013; 71 (9): 1545-1551.
14. **Liu, Y., Vargo, R.J., Bilodeau, E.A.** Analytic survey of 57 cases of oral metastases. *J Oral Pathol Med* 2018; 47 (3): 275-280.
15. **Hirshberg, A., Buchner, A.** Metastatic tumours to the oral region. An overview. *Eur J Cancer B Oral Oncol* 1995; 31B (6): 355-360.
16. **Aksoy, S., Orhan, K., Kursun, S., Kolsuz, M.E., Celikten, B.** Metastasis of prostate carcinoma in the mandible manifesting as numb chin syndrome. *World J Surg Oncol* 2014; 12: 401.
17. **Avril, L., Lombardi, T., Ailianou, A., Burkhardt, K., Varoquaux, A., Scolozzi P., *et al*.** Radiolucent lesions of the mandible: a pattern-based approach to diagnosis. *Insights Imaging* 2014; 5 (1): 85-101.
18. **Kushrai, T., Chatra, L., Shenai, P., Rao, P.K.** Bone invasion in oral cancer patients: a comparison between an orthopantamograph, conventional computed tomography, and single positron emission computed tomography. *J Cancer Res Ther* 2011; 7 (4): 438-441.
19. **Wang, A.R., Paletta, F., Banki, M.** A unique presentation of oral metastases from hepatocellular carcinoma. *J Oral Maxillofac Surg* 2013; 71 (7): 1298-1302.
20. **Thiele, O.C., Freier, K., Bacon, C., Flechtenmacher, C., Scherfler, S., Seeberger, R.** Craniofacial metastases: a 20-year survey. *J Craniomaxillofac Surg* 2011; 39 (2): 135-137.
21. **Hirshberg, A., Yarom, N., Amariglio, N., Yahalom, R., Adam, I., Stanchescu, R., *et al*.** Detection of non-diploid cells in premalignant and malignant oral lesions using combined morphological and FISH analysis – a new method for early detection of suspicious oral lesions. *Cancer Lett* 2007; 253 (2): 282-290.
22. **Pitiphat, W., Diehl, S.R., Laskaris, G., Cartsos, V., Douglass, C.W., Zavras, A.I.** Factors associated with delay in the diagnosis of oral cancer. *J Dent Res* 2002; 81 (3): 192-197.
23. **Rise, M.T.** Instrumentation for neuromodulation. *Arch Med Res* 2000; 31 (3): 237-247.
24. **National Institute for Health and Care Excellence.** Suspected cancer: recognition and referral. NICE guideline: Published June 23, 2015. Last updated September 11, 2020. Available from: https://www.nice.org.uk/guidance/ng12/resources/suspected-cancer-recognition-and-referral-pdf-1837268071621.

CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:

IDA irish dental association CPD

1. The most common primary cancer to metastasise to the oral cavity in females is:

- ○ A: Breast
- ○ B: Kidney
- ○ C: Skin
- ○ D: Lung

2. The most common site for the development of an oral metastasis is:

- ○ A: Tongue
- ○ B: Mandible
- ○ C: Gingivae
- ○ D: Floor of mouth

3. The NICE 2015 guidance for the management of a patient with a suspect oral cancer advises an urgent referral to a specialist centre for:

- ○ A: Ulcer with a known aetiology present for three weeks
- ○ B: Lump in the mouth prior to an assessment with a dentist
- ○ C: Erythematous patch present for three weeks after an assessment by a dentist
- ○ D: None of the above

Prosthetic rehabilitation of unilateral congenital microtia with an implant-retained auricular prosthesis – a case report

Précis: This case report describes the application of CAD/CAM technology in the prosthetic rehabilitation of unilateral congenital microtia with an implant-retained auricular prosthesis.

Abstract

Microtia is a term applied to congenital anomalies of the auricle, ranging from mild structural abnormalities to complete absence of the external ear and auditory canal. Microtia may occur as an isolated condition or in association with other malformations such as facial clefts, cardiac defects, renal abnormalities, anophthalmia, and limb reduction defects. Surgical reconstruction of the absent auricle is difficult, and the results are often unsatisfactory. Prosthetic rehabilitation is indicated where surgical procedures may not provide predictable aesthetic results. In recent years, significant developments in digital dentistry have seen the widespread application of CAD/CAM fabrication techniques in the production of intraoral implant restorations. The use of digital technologies, however, has not permeated the field of maxillofacial prosthetics to the same extent. This report documents the use of existing dental CAD/CAM technology in the fabrication of an extraoral prosthesis and demonstrates the benefits of employing digital technology in the field of maxillofacial prosthetics.

Journal of the Irish Dental Association February/March 2022; 67 (1): 39-43

Introduction

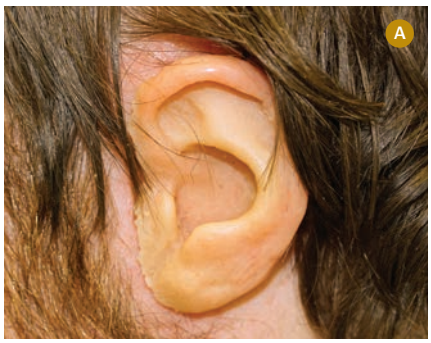
Maxillofacial prosthetics is a branch of dentistry that deals with the prosthetic rehabilitation of congenital and acquired defects of the head and neck. Modern prosthetic materials and colour systems allow the practitioner to fabricate extremely lifelike facial restorations.[1] In the past, the success of large facial prostheses was limited, due to a lack of adequate retention obtained from skin adhesives or by mechanical means.[2] The use of osseointegrated implants to retain facial prostheses has become the standard of care in many situations, significantly enhancing patient acceptance due to the superior retention and stability it offers over conventional retention methods.[3] Recent advances in digital dentistry have seen the widespread application of CAD/CAM fabrication techniques in the production of intraoral implant restorations.[4] The use of digital technologies, however, has not permeated the field of maxillofacial prosthetics to the same extent.[5] This case report provides an example of the application of CAD/CAM fabrication techniques in the rehabilitation of a maxillofacial defect.

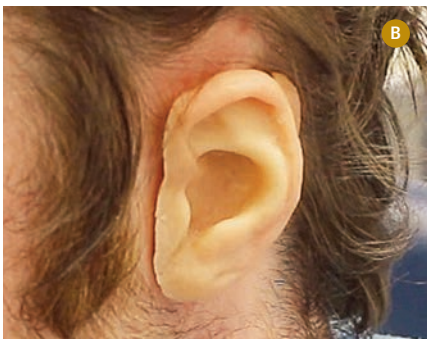
Case report

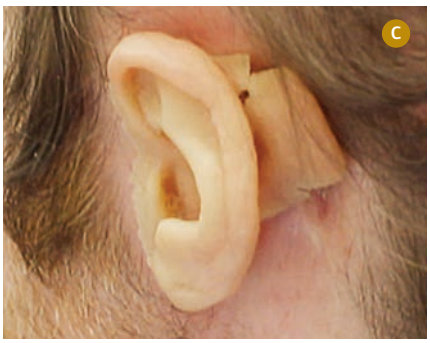
A 24-year-old male with unilateral microtia of the left ear presented to the Dublin Dental University Hospital with an existing implant-retained auricular prosthesis. The patient was unhappy with this prosthesis, as it had become poorly retentive, noticeably discoloured, and displayed poor adaptation to the underlying tissues (**Figures 1a-1c**). The patient had undergone surgery 14 years previously for removal of auricular remnants at the defect site and placement of two craniofacial implants in the temporal bone. His current auricular prosthesis

Daniel Mulcare
BDentTech PGDip CDT MSc MFPR

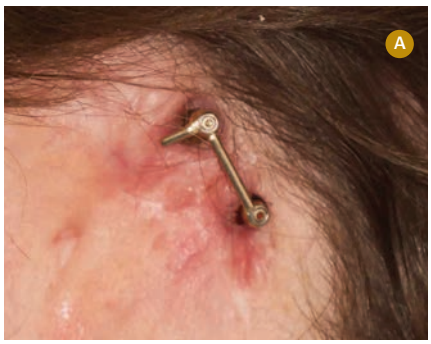
Corresponding author: Daniel Mulcare danmulcare@icloud.com

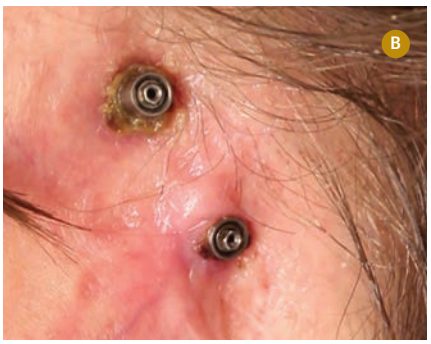






FIGURES 1a-1c: The patient's existing auricular prosthesis, which was poorly retentive, noticeably discoloured, and displayed poor adaptation to the underlying tissues.





FIGURES 2a and 2b: The prosthesis was retained via rider clips that attached to a cast gold dolder bar: (a) screwed to two standard abutments; and, (b) splitting the implant fixtures.

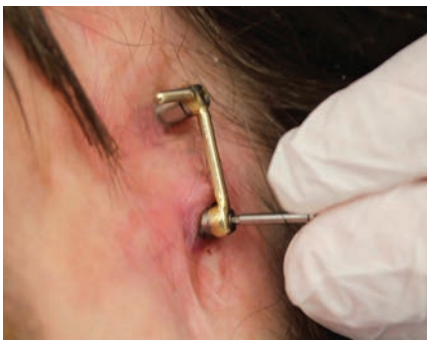


FIGURE 3: The single screw test revealed that the cast gold bar was not seating passively on the implant abutments.

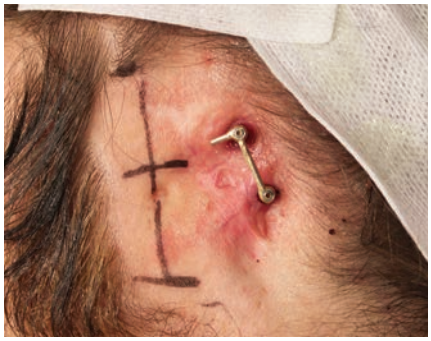
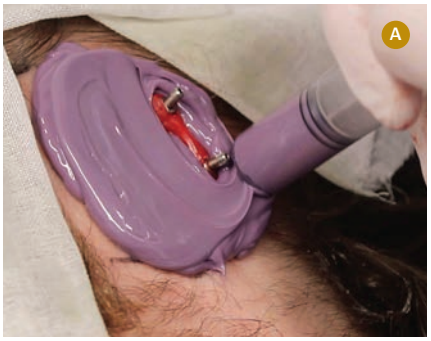


FIGURE 4: Four landmarks – the superior margin of the tragus; the junction of the lobe with the side of the face; the junction of the anterior aspect of the helix with the side of the face; and a line indicating the vertical angulation of the ear – were transferred from the unaffected ear to the corresponding location on the defect side.



FIGURES 5a and 5b: The impression was made in a polyether impression material with an impression plaster backing.

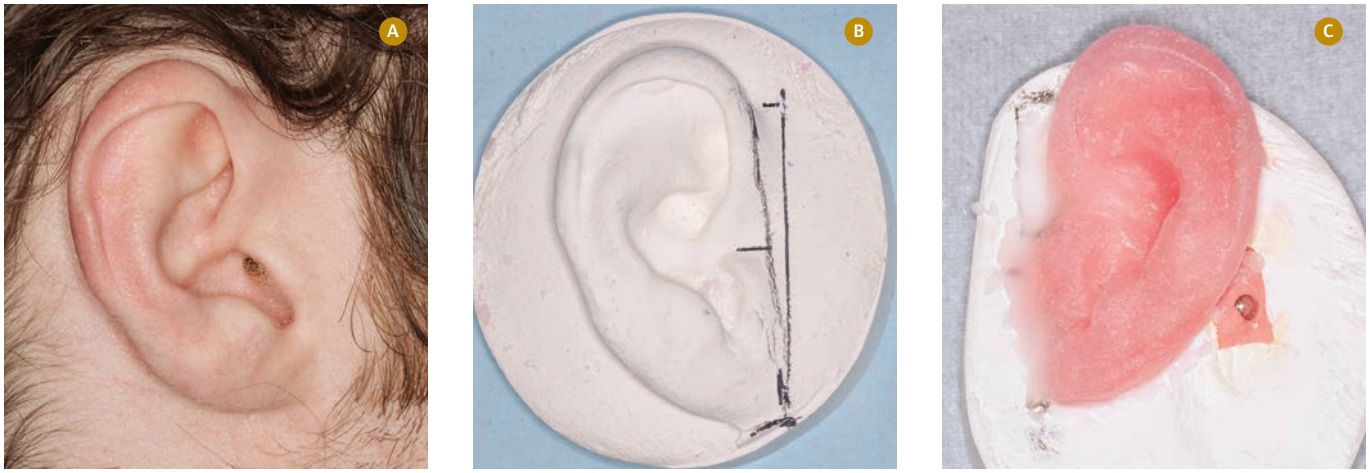
was fabricated in the immediate aftermath of this surgical procedure.

Removal of the prosthesis revealed a cast gold dolder bar screwed to two standard abutments splinting the implant fixtures (**Figure 2a**). Two gold rider clips were set in an acrylic sleeve embedded in the silicone prosthesis as the interface between the prosthesis and the implant bar. On removal of the gold bar, granular tissue and erythema of the peri-implant soft tissues was evident, particularly surrounding the superior implant abutment (**Figure 2b**). The superior abutment displayed some mobility and, on removal, it was noted that the abutment was not fully seated on the implant fixture. The stability of both implant fixtures was assessed, and no movement was evident. Both abutments were reattached, ensuring that they were fully seated on their respective implants. When reattaching the implant bar, the single screw test was employed to assess its passivity of fit on the implant abutments[6] and revealed a misfit of the superstructure (**Figure 3**). The mobility displayed by the superior implant abutment was attributed to torque generated by the ill-fitting bar.

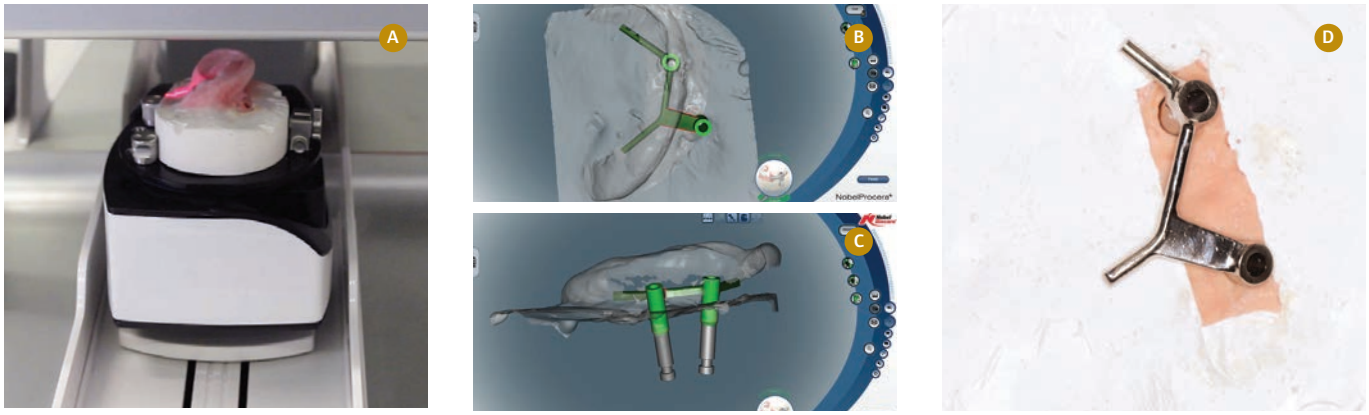
Clinical and laboratory procedures

With the patient sitting in an upright position and looking directly ahead, a modified ear-bow, with a miniature spirit level mounted across its front edge, was used to transfer the following landmarks from the unaffected ear to the corresponding location on the defect side (**Figure 4**):

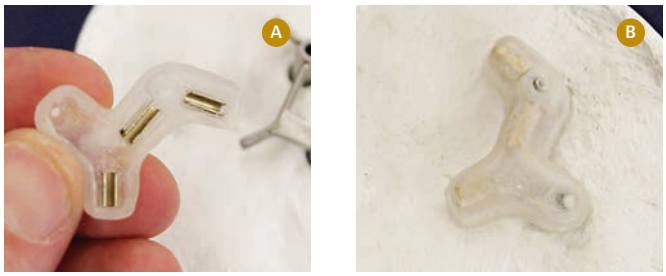
- the superior margin of the tragus;
- the junction of the lobe with the side of the face;
- the junction of the anterior aspect of the helix with the side of the face; and,
- a line indicating the vertical angulation of the ear.



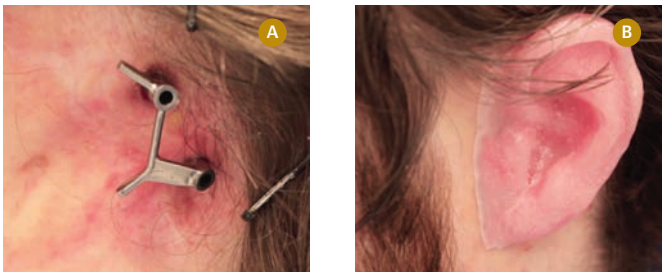
FIGURES 6a-6c: An impression of the contralateral ear was made and poured in dental stone for use as a reference when carving the prosthetic pattern in wax.



FIGURES 7a-7d: 3D scans of the implant model and wax pattern were obtained and CAD/CAM technology was used to produce a milled titanium superstructure.



FIGURES 8a and 8b: An acrylic housing to hold the retentive clips was processed in self-cure acrylic resin and incorporated into the wax pattern.

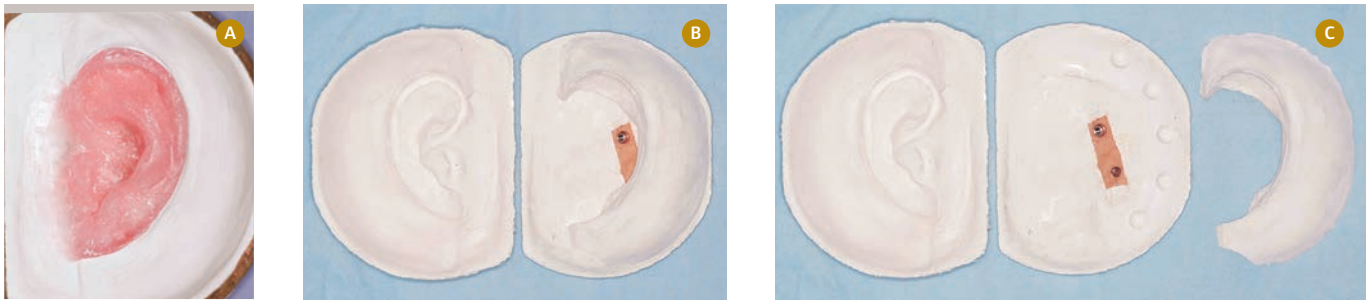


FIGURES 9a and 9b: The implant bar and wax pattern were tried on the patient.

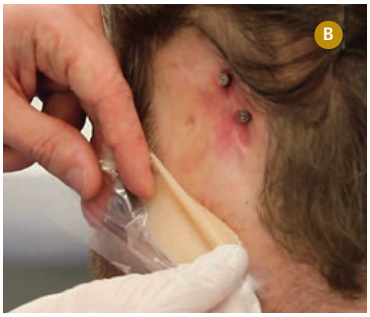
Two open tray impression copings were splinted with resin to stabilise them within the impression before a polyether impression material was applied over the defect site (**Figure 5a**). A layer of thick gauze was then adapted over the polyether material before it set to provide retention for an impression plaster backing, added to support the impression and minimise distortion (**Figure 5b**). An alginate impression of the contralateral ear was also made for reference when carving the prosthetic pattern in wax.

With the aid of the orientation marks and the stone cast of the contralateral ear (**Figures 6a-6b**), a model of the left ear was shaped in modelling wax (**Figure 6c**). 3D scans of the implant model and wax pattern were made (**Figure 7a**), and CAD software was used to design a fixture-level implant bar to fit within the confines of the wax pattern, with 3mm clearance from the skin surface (**Figures 7b-7c**). CAD/CAM technology made it possible to cantilever the bar from the inferior implant so that the retentive clips could be ideally positioned beneath the antihelix of the prosthesis, providing maximum stability and resistance to dislodgement.[7] The finalised digital design was manufactured in titanium using computer numerical control (CNC) milling technology (**Figure 7d**). The milled titanium bar was assessed for fit on the master cast before three gold rider clips were fixed to the bar and a clear acrylic housing to retain the clips was processed in self-cure acrylic resin (**Figures 8a-8b**). The wax pattern was then modified to incorporate the acrylic clip assembly.

The new titanium bar and wax pattern were tried on the patient and assessed for shape, orientation and fit (**Figures 9a-9b**). Required adjustments to the wax pattern were made chair side before it was invested in a three-part mould



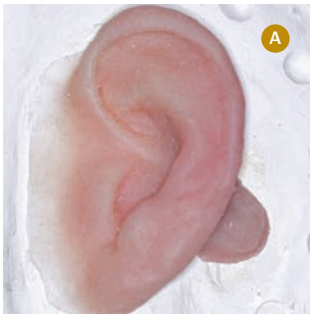
FIGURES 10a-10c: The wax pattern was invested in type III dental stone to create a three-part mould.

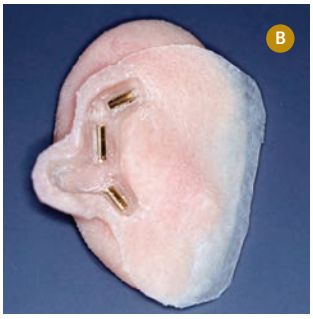


FIGURES 11a and 11b: A two-part vinyl addition silicone was mixed on a glass pallet with intrinsic pigments and coloured flocking to produce multiple coloured swatches, replicating the skin tones of the surrounding tissues and the patient's unaffected ear.

with type III dental stone (**Figures 10a-10c**). At the next clinical appointment, a two-part vinyl addition silicone was mixed on a glass pallet with intrinsic pigments and coloured flocking to produce multiple coloured swatches, replicating the skin tones of the surrounding tissues and the patient's unaffected ear (**Figures 11a-11b**). A thin coat of primer was applied to the outer surface of the acrylic clip assembly before the various silicone swatches were packed into their respective positions within the mould and cured in an oven to the manufacturer's specifications.

The prosthesis was tried on the patient to assess the fit before excess silicone was trimmed from the edges as appropriate. Extrinsic stains were applied and sealed with a silicone sealant (**Figures 13a-13c**). Written instructions on care and maintenance of the prosthesis and surrounding tissues were given to the patient and explained in detail, placing particular emphasis on the importance of maintaining healthy tissues at the implant sites.





FIGURES 12a and 12b: The cured silicone prosthesis was processed to incorporate the acrylic clip assembly.

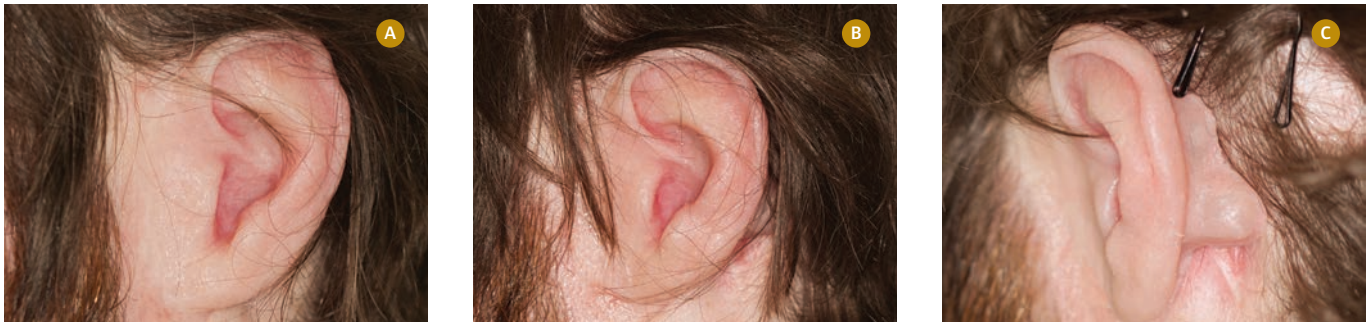
Discussion

During the treatment planning process, a number of options were considered for the rehabilitation of this case. Fabrication of a new auricular prosthesis to attach to the existing implant bar was ruled out once it was determined that the cast gold bar did not seat passively on the implant abutments.

Dispensing of the bar and clip interface in favour of magnetic connections was also considered. Magnetic coupling between the implant fixtures and the prosthesis facilitates ease of access for hygiene procedures around the implant abutments, and magnetic forces aid in prosthesis placement, both features being of particular advantage to patients with poor manual dexterity or visual impairment.[2,7] It is reported, however, that bar-clip attachment provides better retention than magnetic systems for auricular prostheses.[8] In addition, placement of three implants in a non-linear alignment is recommended to achieve optimum retention for magnetically retained auricular prostheses,[2] whereas two implants are considered sufficient for bar-clip retention systems.[9] Considering the patient's age, active lifestyle and the presence of only two craniofacial implants, it was decided that the most appropriate available treatment option was the fabrication of a new, passively fitting implant bar to retain, support and stabilise a new silicone auricular prosthesis.

CAD/CAM fabrication technologies were employed in the design and manufacture of the new implant bar as they are less labour intensive and allow for more versatility in relation to the bar design when compared with traditional casting techniques.[10] Moreover, CNC milled titanium frameworks have shown statistically better precision of fabrication and fit compared to conventional cast frameworks.[11] Shrinkage and porosity associated with casting procedures can result in a misfit between the cast framework and the mating implant fixtures, with distortion tending to increase in proportion to the length of the cast bar.[11,12] If the superstructure does not fit passively on the supporting implants, stresses are generated at the implant interface, which can lead to complications such as screw loosening, bone loss and implant failure.[13] A passive fit can be restored by sectioning the cast framework and reconnecting the segments with solder; however, soldered joints are inherently weaker and more susceptible to fracture than solid castings.[12]

In this case the implant bar was designed using NobelProcera CAD software (Nobel Biocare). This software is intended for use with intraoral prostheses but was easily manipulated to enable scanning and design for this auricular



FIGURES 13a-13c: Fitting the finished prosthesis.

prosthesis. The software made it possible to design the bar in such a way that the retentive elements were positioned ideally beneath the antihelix of the prosthetic ear, providing optimal aesthetics and biomechanics.[7] The implant bar was then precision milled from a homogenous block of medical-grade titanium to produce a high-strength, low-density superstructure that fit accurately and passively on the supporting implant fixtures.[10]

Conclusion

CAD/CAM technology is now routinely used in the fabrication of dental restorations;[14] however, there is a gap in the literature regarding the use of milled titanium substructures for use with implant-retained maxillofacial prostheses. This report documents the use of existing dental CAD/CAM technology in the fabrication of extra-oral prostheses and demonstrates the benefits of employing digital technology in the field of maxillofacial prosthetics.

Acknowledgements

The author would like to thank Dr Brendan Grufferty for his advice and assistance with this case.

References

1. **Raghoebar, G.M., van Oort, R.P., Roodenburg, J.L., Reintsema, H., Dikkers, F.G.** Fixation of auricular prostheses by osseointegrated implants. *J Invest Surg* 1994; 7 (4): 283-290.
2. **Federspil, P.A.** Implant retained epistheses for facial defects. *Laryngorhinootologie* 2009; 88 (Suppl. 1): S125-S138.
3. **Karayazgan-Saracoglu, B., Zulfikar, H., Atay, A., Gunay, Y.** Treatment outcome of extraoral implants in the craniofacial region. *J Craniofac Surg* 2010; 21 (3): 751-758.
4. **Abdullah, A.O., Muhammed, F.K., Zheng, B., Liu, Y.** An overview of computer aided design/computer aided manufacturing (CAD/CAM) in restorative dentistry. *J Dent Mater Tech* 2017; 7 (1) :1-10.
5. **Machado, V., Bettoni Cruz de Castro, F., Jaeger, C., Rodrigues Alfenas, E., Silva, N.R.F.A.** CAD/CAM beyond intraoral restorations: maxillofacial implant guide. *Compend Contin Educ Dent* 2019; 40 (7): 466-472.
6. **Kan, J.Y., Rungcharassaeng, K., Bohsali, K., Goodacre, C.J., Lang, B.R.** Clinical methods for evaluating implant framework fit. *J Prosthet Dent* 1999; 81 (1): 7-13.
7. **Beumer, J., Ma, T., Marunik, M., Roumanas, E., Nishimura, R.** Restoration of facial defects. In: **Beumer, J., Curtis, T.A., Marunik, M. (eds.).** *Maxillofacial Rehabilitation: Prosthodontic and Surgical Considerations*. Ishiyaku EuroAmerica; St Louis, 1996: 377-453.
8. **de Sousa, A.A., Mattos, B.S.** Magnetic retention and bar-clip attachment for implant-retained auricular prostheses: a comparative analysis. *Int J Prosthodont* 2008; 21 (3): 233-236.
9. **Wright, R.F., Zemnick, C., Wazen, J.J., Asher, E.** Osseointegrated implants and auricular defects: a case series study. *J Prosthodont* 2008; 17 (6): 468-475.
10. **Gosavi, S., Gosavi, S., Alla, R.** Titanium: a miracle metal in dentistry. *Trends Biomater Artif Organs* 2013; 27 (1): 42-46.
11. **Ortorp, A., Jemt, T., Bäck, T., Jälevik, T.** Comparisons of precision of fit between cast and CNC-milled titanium implant frameworks for the edentulous mandible. *Int J Prosthodont* 2003; 16 (2): 194-200.
12. **Swallow, S.T.** Technique for achieving a passive framework fit: a clinical case report. *J Oral Implantol* 2004; 30 (2): 83-92.
13. **Kapos, T., Ashy, L.M., Gallucci, G.O., Weber, H.P., Wismeijer, D.** Computer-aided design and computer-assisted manufacturing in prosthetic implant dentistry. *Int J Oral Maxillofac Implants* 2009; 24 (Suppl.): 110-117.
14. **Davidowitz, G., Kotick, P.G.** The use of CAD/CAM in dentistry. *Dent Clin North Am* 2011; 55 (3): 559-570.

CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:

IDA irish dental association

CPD

1. Prosthetic rehabilitation of maxillofacial defects is indicated:

- ○ A: Where surgical procedures may not provide predictable aesthetic results
- ○ B: For small, less complex defects
- ○ C: For defects involving mobile soft tissues

2. For optimum retention of a magnetically retained auricular prosthesis, what is the recommended amount and placement of the implant fixtures?

- ○ A: Two implants placed in a non-linear alignment directly beneath the antihelix
- ○ B: Three implants placed in a linear alignment directly beneath the antihelix
- ○ C: Three implants placed in a non-linear alignment directly beneath the antihelix

3. Bar and clip retention is preferred to magnetic retention for implant-retained maxillofacial prostheses when:

- ○ A: The patient has poor manual dexterity or is visually impaired
- ○ B: The implant fixtures have significantly divergent axes
- ○ C: Where optimum retention and stability is required

ChAdOx1 interacts with CAR and PF4 with implications for thrombosis with thrombocytopenia syndrome

Baker, A.T., Boyd, R.J., Sarkar, D., Teijeira-Crespo, A., Chan, C.K., Bates, E., et al.

Abstract

Vaccines derived from chimpanzee adenovirus Y25 (ChAdOx1), human adenovirus type 26 (HAdV-D26), and human adenovirus type 5 (HAdV-C5) are critical in combatting the severe acute respiratory coronavirus 2 (SARS-CoV-2) pandemic. As part of the largest vaccination campaign in history, ultra-rare side effects not seen in phase 3 trials, including thrombosis with thrombocytopaenia syndrome (TTS), a rare condition resembling heparin-induced thrombocytopaenia (HIT), have been observed. This study demonstrates that all three adenoviruses deployed as vaccination vectors versus SARS-CoV-2 bind to platelet factor 4 (PF4), a protein implicated in the pathogenesis of HIT. We have determined the structure of the ChAdOx1 viral vector and used it in state-of-the-art computational simulations to demonstrate an electrostatic interaction mechanism with PF4, which was confirmed experimentally by surface plasmon resonance. These data confirm that PF4 is capable of forming stable complexes with clinically relevant adenoviruses, an important step in unravelling the mechanisms underlying TTS.

Science Advances 2021; 7 (49): eabl8213.

mRNA-based Covid-19 vaccine boosters induce neutralizing immunity against SARS-CoV-2 Omicron variant.

Garcia-Beltran, W.F., St Denis, K.J., Hoelzemer, A., Lam, E.C., Nitido, A.D., Sheehan, M.L., et al.

Abstract

Recent surveillance has revealed the emergence of the SARS-CoV-2 Omicron variant (BA.1/B.1.1.529) harbouring up to 36 mutations in spike protein, the target of neutralising antibodies. Given its potential to escape vaccine-induced humoral immunity, we measured the neutralisation potency of sera from 88 mRNA-1273, 111 BNT162b, and 40 Ad26.COV2.S vaccine recipients against wild-type, Delta, and Omicron SARS-CoV-2 pseudoviruses. We included individuals that received their primary series recently (<3 months), distantly (6-12 months), or an additional 'booster' dose, while accounting for prior SARS-CoV-2 infection. Remarkably, neutralisation of Omicron was undetectable in most vaccinees. However, individuals boosted with mRNA vaccines exhibited potent neutralisation of Omicron, only four- to six-fold lower than wild type, suggesting enhanced cross-reactivity of neutralising antibody responses. In addition, we find that Omicron pseudovirus infects more efficiently than other variants tested. Overall, this study highlights the importance of additional mRNA doses to broaden neutralising antibody responses against highly divergent SARS-CoV-2 variants.

Cell 2022; 6: S0092-8674(21)01496-3.

Additively manufactured dental crown with colour gradient and graded structure: a technique report

Zandinejad, .A, Revilla-Leôn, M.

Abstract

To assess the feasibility of manufacturing a dental crown with internal colour gradient and graded structure design using additive manufacturing technology, a mandibular first molar was prepared and a monolayer dental crown with 1.5mm uniform thickness was designed in a dental software (STL_{C1}). The monolayer crown design was sliced into multiple layers of 0.1mm thickness and a design for a multilayer crown was obtained (STL_{C2}). A multilayer crown was manufactured with gradient colour and graded structure using a material jetting printer. Different materials with different colours and properties were used and mixed in different ratios during manufacturing to achieve the prospected design. The feasibility of manufacturing such a crown was reported. This report confirms that multilayer dental crowns with internal gradient colour and graded structure are possible when using a multi-material jetting printer.

Journal of Prosthodontics 2021; 30 (9): 822-825.

Incidental findings in cone beam computed tomography for dental implants in 1002 patients

Kachlan, M.O., Yang, J., Balshi, T.J., Wolfinger, G.J., Balshi, S.F.

Purpose: The purpose of this study is to analyse the frequency and elevate the awareness of the prevalence of non-dental pathology in cone beam computed tomography (CBCT) scans taken for implant placement treatment planning and post-placement evaluation. The data from the CBCT should be read by an oral and maxillofacial radiologist for proper diagnosis of dental and non-dental pathology, and referred to the medical specialist for proper management when necessary.

Materials and methods: This retrospective study analysed 1,002 consecutive CBCT scans taken at a single private practice, noting the prevalence of non-dental pathology in CBCT images for all dental implant procedures. All scans were taken from November 2007 to March 2020. One board-certified oral and maxillofacial radiologist systemically read all scans and reported all findings in the maxilla and mandible, condyles and TMJ, paranasal sinuses, nasal fossa, pharyngeal airway, skull base and temporal bone, neck soft tissues, and cervical spine. The incidental findings, variation of normal anatomy, or pathology reported in these structures were categorised based on anatomic location and significance, and the incidence was investigated.

Results: Pathologies ranged from innocuous sinusitis, to more serious atherosclerotic calcification of the carotid arteries, narrowed airways, and neoplastic lesions. Fifty-one different findings were noted, of which 36 were pathologies that required referral or follow-up.

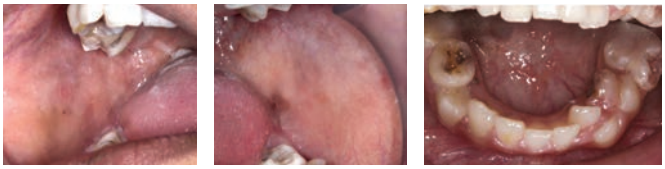
Conclusions: Incidental findings can be detected in CBCT scans for dental implants. The clinician must be familiar with the radiographic diagnosis of head and neck pathology, and/or must refer these images to an appropriate specialist for the radiographic interpretation of the full volume.

Journal of Prosthodontics 2021; 30 (8): 665-675.

Quiz answers

Questions on page 12

1. When was the onset of dry mouth? Are there any other associated symptoms, such as dry eyes or skin? Is she experiencing any functional issues associated with the dry mouth, e.g., difficulty eating hard/dry foods? Is there any family history of similar issues? Does she take any medications? Is there any history of radiotherapy to the head and neck?
2. Ultrasound.
3. Enhanced prevention for high-caries-risk child with oral hygiene instruction, diet analysis and advice, and application of fluoride varnish (22,600ppm fluoride) every three months. Consider prescription of 0.619% fluoridated toothpaste and fissure sealants of all pits and fissures of permanent teeth. Other relevant oral health advice could include information regarding tooth-friendly salivary substitutes, frequent sips of water, and use of sugar-free chewing gum.
4. Ectodermal dysplasia. Ectodermal dysplasia is a group of inherited disorders characterised by a primary defect in skin, hair, teeth, nails or sweat glands, as well as an additional abnormality in any tissue of ectodermal origin (eyes, ears, mucous membranes of mouth or nose). It is present at birth and is non progressive. Typical features include sparse and light-coloured hair. Nails can be absent, brittle, abnormally shaped and/or discoloured. Sweat glands may be absent or sparse. Dry eyes, dry skin and dry mouth are common. Dental features include hypodontia, enamel hypoplasia and hypomineralisation.



Further reading

National Foundation for Ectodermal Dysplasias. What are ectodermal dysplasias? 2022. Accessed January 15, 2022. Available from: National Foundation for Ectodermal Dysplasias | NFED.

Dermnet New Zealand Trust. Ectodermal dysplasia. 2022. Accessed January 15, 2022. Available from: https://dermnetnz.org/topics/ectodermal-dysplasia.

SITUATIONS VACANT

Associates

Co Clare. Kilrush. Full-time associate to replace relocating colleague early January. Modern surgery on a leisure marina. Well established. Full book guaranteed. Mainly private/PRSI. Fully computerised. Kodak R4, digital X-rays/OPG, intraoral cameras. Qualified support staff. Contact niallmcrty@gmail.com.

South Co. Dublin. Part-time associate (minimum two years' experience) wanted for busy general practice to ease overflowing book from senior colleague. Fully computerised, excellent support staff. Potential to purchase when principal retires. Contact dentalassooc993@gmail.com.

Dental associate required, very busy, modern four-surgery practice Cavan Town, one hour from Dublin, 40 minutes from Enniskillen. Well-above-average remuneration, hours can be flexible if required. OPG, iTero scanner, endo microscope, visiting oral surgeon and orthodontist, and resident endodontist. Contact frances@railwaydentalsurgery.com.

Cuddy Dental: Full-time associate required to replace relocating colleague from mid-January. Modern Galway city centre practice with a great support team. Contact: info@cuddydentistsgalway.ie.

Associate dentist required in Dunboyne Co. Meath. Private and PRSI patients. Digital X-ray. Flexible sessions and with a view to full time. Contact: dunboyneorthodontics@gmail.com.

Wexford Town. Associate dentist three to four days per week. Flexible days. Longstanding, busy practice, recently refurbished. Well-established patient base, excellent support team. Friendly, dynamic working environment. Starting early 2022. Contact info@brideplacedental.ie.

Part-time or full-time associate required for busy private practice. Great team support. Happy, great environment to work in. Safety of all our highest priory. Immediate start. Send CV and references to Tfbc16@gmail.com.

Classified advertisements are accepted via the IDA website – www.dentist.ie – only, and must be pre-paid. The deadline for receipt of advertisements for inclusion in the next edition is **Friday, March 11, 2022.** Classified ads placed in the *Journal* are also published on www.dentist.ie for 12 weeks. **Please note that all adverts are subject to VAT at appropriate rate.**

Advert size	Members	Non-members
up to 25 words	€80	€160
26 to 40 words	€95	€190

The maximum number of words for classified ads is 40.
If the advert exceeds 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:

- Situations wanted
- Situations vacant
- Practices for sale/to let
- Practices wanted
- Equipment for sale/to let

Classified adverts must not be of a commercial nature. Commercial adverts can be arranged by contacting Paul O'Grady at Think Media.

Galway. Dental associate required for busy, modern practice in Co. Galway. Please send CV to loughreadentalassociate@gmail.com.

Carrigtwohill, Co. Cork. We require a part-time associate to replace a relocating colleague. Please apply with CV to carrigdp@outlook.com.

Associate dental surgeon position available in west Cork. Modern surgery. All digital. Full support given. Contact 086-825 6460, or email obrien100@gmail.com.

Associate dentist required in a busy, private dental practice in Tralee, Co. Kerry. Immediate start. One day per week with the potential to increase to two/three days per week in later months. Apply with CV to info@flynnsdentalcare.ie.

Cork. Douglas. Associate required. Busy practice. Flexible hours and dates. Excellent support staff. Two surgeries. Laboratory. Computerised. Email douglasclinic@ymail.com.

Dame Street Dental is seeking an associate dentist to join our modern and vibrant team of 30+ people. CBCT, intra-oral scanners, specialist dentistry. Candidate must have at least three years of experience and genuine passion for dentistry. Excellent remuneration. Fully private. Contact jobs@damestreetdental.ie.

Boyne Dental is looking for an associate dentist to join our high-technology, modern and vibrant team. Excellent opportunity to join a patient-centric and enthusiastic team of dentists and nurses. Private/PRSI clinic. Contact enquiries@boynedental.ie.

Galway city centre practice requires associate dentist. Central location in professional catchment area. Must be warm, friendly, outgoing with great people skills. Interest in advanced restorative dentistry an advantage. Email in confidence to galwaypractice091@gmail.com today.

Modern busy Cork City suburban practice requires associate dentist with good skillset and experience for part/full-time position. Email ob1kob2@gmail.com.

Sligo Town. Experienced, Part- leading to full-time associate for a strong profile, very busy practice, no GMS. Supportive, progressive environment. Modern, digitalised equipment, endo experience very beneficial. High demand for cosmetic/restorative treatments. Right candidate, excellent remuneration. Email niall@innovativedental.com.

Full-time experienced associate required for private practice in Bray with a view to ownership. Interest in aesthetics, well-being, three/four surgeries. CV to drjohnmurphy@gmail.com.

Canty Dental, Cork City. Associate dentist required to join our modern clinic. Two to three days per week starting. No weekends. Private/PRSI. Immediate start. Contact info@cantydental.ie.

Part-time dental associate required for fully private dental practice located in north Dublin. Monday, Friday and Sunday shifts available. Great remuneration and support staff. Contact northdublindentalassociate@gmail.com.

MyDental Cherrywood requires a full-time associate dentist to join our team. Special interest in prosthetic dentistry. Very modern and busy clinic. Email CV to careers@mydental.ie.

Fee Dental: award-winning, state-of-the-art north east practice seeks part-time associate. One hour from Dublin/Belfast. Contact mbcar06@gmail.com.

Full-time and part-time associate positions in busy Donegal practice. Very busy. Mix of private, PRSI, medical card. Friendly staff and patients. Contact Michael at mvlavin@gmail.com.

Bespoke Dental Malahide is looking for an associate dentist to join our high-

technology, modern clinic for two to three days per week. If you're patient focused and enthusiastic about your work, join our team by applying with CV to info@bespokedental.ie.

Dentists

Donegal. Part-full-time dentist required for busy, modern, well-equipped practice. Computerised. Digital X-rays. Excellent support staff. Private/PRSI/medical card. Email CV to twintowndentist@gmail.com.

Locum/full-time position available in a very busy three-operatory practice in beautiful Boyle. Mix of private/PRSI/medical card. 50% renumeration. Immediate start available. Contact: Boyledental@hotmail.com.

Roscrea/Limerick dental clinic seeking experienced general dentists and orthodontist to join our multidisciplinary team of specialists and professional support team through our partnership programme. Contact: jobs@shieldsdentalclinic.ie.

Due to exciting company growth, we have great opportunities for dentists to join our Waterford, Kilkenny or Carlow practices. Strong, established books, great earning potential. Full/part-time options. Modern practices with skilled, friendly support teams. Contact careers@dentalcareireland.ie.

Part-time dentist required for a busy practice in Longford Town. Flexible sessions with a view to full time. Full book guaranteed. Great team support. Contact annedental@hotmail.co.uk.

Dentist required for Buncrana, Co. Donegal. Full/part-time. Private and PRSI patients. Experience welcomed. Digital practice. Supportive staff. Friendly area to live and work. Contact: crana.dental18@gmail.com.

General dentist for three to four days per week in a busy private practice in Wexford Town. Recently refurbished with new equipment, and fully digital with digital scanner. Very friendly team and a very nice and relaxed practice to work. Contact Owldental11@gmail.com.

Dentist required for part-time role providing composite bonding and/or facial aesthetics. Extremely busy modern practice with high demand for these services. Flexibility re hours. CVs to colinpatricklynam@hotmail.com – www.swords-dental.ie.

Enthusiastic dentist required to cover principal's maternity leave. Full books, fully digital, OPG, private practice, part time. Starting January 2022. Only one hour north of Dublin. Competitive remuneration. Any days/hours will be considered. Send CV to Kingscourtdentalpractice@gmail.com.

Letterkenny. Full-time dentist position is available from May 2022 in a busy PRSI and private practice. Lovely staff, friendly place. CV to office.hundental@gmail.com.

Shields Dental Group is seeking experienced general/Invisalign dentists. Join our multidisciplinary team in our Limerick and Roscrea private dental clinics as a partner. Contact jobs@shieldsdentalclinic.ie.

Shields Dental Clinic Group is seeking an experienced general dentist to join our brand new private dental clinic in Blackrock, Dublin, through our Partnership Programme. Contact jobs@shieldsdentalclinic.ie.

Part-time dentist required for modern private practice in Dublin 3. Must be IDC registered. Contact northdublinclinic1@gmail.com.

Central Dental Clinic Lucan requires a dentist with a minimum of two years' experience. Responsible approach to dentistry, good communications skills with patients and colleagues are essential. Central Dental Clinic is a modern, well-equipped clinic with a friendly environment. Contact office@centraldentalclinic.ie.

We are seeking experienced general dentists and orthodontists to join our award-winning clinical and support teams in our well-established and very busy clinics in Limerick City and Shannon. Please email dr.odonovan@alexandradental.ie. Immediate start.

Experienced dentist required, Carlow Town, in private, well-established clinic. Be part of a great multidisciplinary team with many visiting specialists. Special interests encouraged in fully supportive environment. Excellent backroom support. CEREC, in-house laboratory, digital scanner, CBCT. Email CV to bbarrett@pembrokedental.ie.

Dental Care Ireland has exciting, high-earning opportunities available nationwide. Offering strong, established book, within modern, state-of-the-art practices. Supported by friendly and skilled support teams. We look forward to hearing from you to discuss further. Email careers@dentalcareireland.ie.

Experienced Invisalign dentists or general dentists with orthodontist experience required to join Shields Dental Group in our Blackrock, Limerick and Roscrea private clinics. Email jobs@shieldsdentalclinic.ie.

Part-time dentist required for our busy practice. High earning potential. Private/PRSI/GMS. Friendly team. Contact info@squaredental.ie.

We are looking for a full/part-time general dentist/orthodontist to join our team in a busy private clinic in north Dublin. Dental Council membership. Available immediately. Modern working environment. Great earning potential. CTBC scan, OPG. Contact Andreea.stelia@yahoo.com.

Balbriggan Dental and Facial Clinic (private practice) seeks general dentist with a minimum of four/five years' experience for two to three days per week. Contact paulmcevoycd@dentistry.ie.

Busy, friendly, high-tech surgery needs part-time dentist. Two chairs, CBCT, intraoral X-ray. To join full-time dentist, oral surgeon, orthodontist. Contact Ildiko@rathardental.ie.

Enniscorthy – Smiles Dental is looking for a passionate dentist to join our state-of-the-art, well-established, fully private practice in Enniscorthy, Co. Wexford. Position offers five days per week, established patient book, excellent earning potential plus up-front bonus! Contact Sophie.Collier@bupadentalcare.co.uk.

Smiles Dental is looking for passionate dentists to join our private, well-established, state-of-the-art practices across Ireland in Athlone, Drogheda, Dun Laoghaire, Wexford, Galway and Dublin. Positions up to five days per week, established lists, great earning potential. Contact Sophie.Collier@bupadentalcare.co.uk.

Experienced general dentist required to join a modern, digitalised, fully private Galway City practice. Full support team, lab, co-ordinators, etc. Will suit an enthusiastic candidate who wants to work with a progressive team. Excellent renumeration potential. Training supported and provided. Contact shauna@3dental.ie.

Experienced cosmetic dentist required to join modern, digitalised, fully private Galway/Limerick City practices. Experience with bonding, veneers, crown and bridge work, short-term ortho beneficial. Full support team, lab, co-ordinators. Strong record in delivering cosmetic patients. Excellent renumeration potential. Contact shauna@3dental.ie.

Location: Ashbourne. We provide: mentoring in cosmetic dentistry, prosthodontics , RCT, smile rehabilitation, great remuneration. Requirements: young dentist, willingness to learn top-class dentistry. Contact pkorpal@gmail.com.

Part-time dentist required for our private, busy, modern practice. State-of-the-art equipment with digital scanner. Training supported and provided. Position suits an enthusiastic associate who wishes to develop with a progressive team. Excellent earning potential. Contact: northdublindentalassociate@gmail.com.

We have a high earning opportunity for a dentist to join our established practice based in the Midlands. Busy private practice, skilled and friendly support teams in place. State-of-the-art and modern computerised facilities. Flexible options. Contact careers@dentalcareireland.ie.

We have a high earning opportunity for a dentist to join our established north Dublin practice. Full-time position within our modern, computerised practice. Supported by our skilled, friendly support team. We look forward to hearing from you. Contact careers@dentalcareireland.ie.

Locums

Locum/full-time position available in a very busy three-operatory practice in beautiful Boyle. Mix of private/PRSI/medical card. 50% renumeration. Immediate start available. Contact: Boyledental@hotmail.com.

Locum experienced dentist required for part-time position to cover maternity leave starting mid-March for one year in busy general practice in Celbridge. Favourable public/private ratio. Replies with CV to brian.corcoran26@gmail.com.

Locum orthodontist wanted for east Cork practice for two to three days per week from June for 12-14 weeks. Option to stay for one day per week for another 12 weeks if suited. Maximum 30 patients per day – might suit new graduate. Contact locumorthocork@outlook.com.

Specialists/limited practice

Irish practice seeks endodontist to replace departing colleague. Previous associate income of $500,000. UK or Irish primary degree a must. Two-year renewable contract. Contact: Johnflavelle@mail.com.

Roscrea/Limerick dental clinic seeking experienced general dentists and orthodontist to join our multidisciplinary team of specialists and professional support team through our partnership programme. Contact: jobs@shieldsdentalclinic.ie.

Dental specialists required to join an existing specialist practice in Bray, Co. Wicklow. Apply with CV to dentalspecialist76@gmail.com.

Specialist oral surgeon required for a busy dental practice in Wexford Town for one day per month. Contact Owldental11@gmail.com.

We are seeking experienced general dentists and orthodontists to join our award-winning clinical and support teams in our well-established and very busy clinics in Limerick City and Shannon. Please email dr.odonovan@alexandradental.ie. Immediate start.

Orthodontist position available in very busy four-surgery orthodontic practice in north Co. Dublin. Recently renovated, modern clinic. Digital OPG, ceph and iTero. Excellent support staff including orthodontic therapist. Flexible working schedule available. Contact dentistcodublin@gmail.com.

Periodontist wanted full or part time for well-established, multidisciplinary practice in Limerick City. Existing waiting list for periodontal treatments and implants. Contact clarkeemily@yahoo.com.

Orthodontist wanted part to full-time to join three-surgery multidisciplinary, busy practice in Letterkenny, Co. Donegal. Full orthodontic list. OPG/ceph/CBCT/OptiScan. Contact: siomurr@hotmail.com.

Orthodontists – Smiles Dental is looking for passionate orthodontists to join our well-established, state-of-the-art practices across Ireland, including Dublin. Positions offer established referral bases, great earning potential, strong support teams, monthly or weekly days available. Contact Sophie.Collier@bupadentalcare.co.uk.

Opportunities – Smiles Dental has orthodontist, endodontist, oral surgery and prosthodontic positions available across its practices, including Dublin. Please get in touch to find out more! Contact Sophie.Collier@bupadentalcare.co.uk.

Orthodontist required to join modern, digitalised, fully private Galway/Limerick City practices. Potential to work in multiple chair set-up supported by multiple assistants/co-ordinators. Excellent renumeration potential. Contact shauna@3dental.ie.

Orthodontist required to join our busy, fully digitalised practice at Rathfarnham Orthodontics. Excellent and friendly support staff. Flexible working schedule. Great earning potential and opportunity for the right candidate. Apply by email to info@rathfarnhamortho.ie.

We currently have opportunities in the following areas: orthodontics, endodontics, oral surgery and prosthodontics to support our Dublin, south east and west coast practices. Established books and great earning potential within our modern practices. Contact careers@dentalcareireland.ie.

Due to exciting growth within our Northumberland Road practice, we are now looking for patient-focused practitioners in the field of prosthodontics and orthodontics to join our well-established and successful team. We look forward to hearing from you. Contact careers@dentalcareireland.ie.

Prosthodontist required to join Lucey Dental & Aesthetics in Greystones. Practice is state of the art, multidisciplinary, digitised, fully private. CBCT, ceph, intra-oral scanner, OPG. Sessional basis. Excellent remuneration potential. Email Manager@luceydental.ie.

Shields Dental Clinic is seeking an endodontist, periodontist and orthodontist to join our brand new private dental clinic located in Blackrock. Contact jobs@shieldsdentalclinic.ie.

Dental education

The Dublin Dental University Hospital is seeking to recruit qualified dentists with a passion for teaching for the following divisions: paediatric, restorative and periodontology. To apply, please email a copy of your CV and preferred division to HR@dental.tcd.ie.

Dental nurses/receptionists/managers

Dental nurse required part time for a busy Dublin southside orthodontic practice. Some orthodontic experience desirable but not essential. Please send CV to dublinorthodental@yahoo.com.

The Dublin Dental University Hospital is seeking to recruit qualified full-time dental nurses to join our team. Applicants must be registered with Irish Dental Council. To apply, please email a copy of your CV to HR@dental.tcd.ie.

Full-time permanent position required for a qualified or well-experienced dental nurse. Brand new practice in south Dublin. Friendly team already in place. Email coynee@tcd.ie.

Dental hygienists

Looking for an experienced, professional dental hygienist to join our practice in Carlow. Computer proficiency and experience working with EXACT. Email dentalhygienistireland21@gmail.com.

We are currently seeking a full-time hygienist to join our dynamic team. Excellent support staff, fully digital, excellent terms. Contact info@cleardentalcare.ie.

Part-time hygienist required in Cork city centre practice. Taking over an established book. Supportive team in place. Contact info@shandondental.ie.

MyDental Clinic Cherrywood requires a dental hygienist to join our growing team. We are located in south Dublin close to the green Luas line. Successful candidate must be registered with the Irish Dental Council. Please submit your CV to careers@mydental.ie.

MyDental Clinic Cherrywood requires an experienced dental hygienist to join our team. State-of-the-art, busy clinic in south Dublin. Flexible work hours. Please submit a CV to careers@mydental.ie.

Wexford Town. Hygienist, one to two days per week. Flexible days. Well-established patient base, recently renovated, modern surgery. Excellent, supportive team. Friendly, dynamic workplace. Starting early 2022. Contact info@brideplacedental.ie.

Hygienist required, Skerries, north Co. Dublin. Well-established patient base. Private/PRSI only. Excellent support staff, computerised. Tuesdays initially with possibility of increasing days if suited. Start January 2022. Email CV to reception@skerriesdental.ie.

We are looking for an experienced part-time hygienist to join our warm and supportive team here at Portobello Dental Clinic in Dublin. Private patients, fully digital with excellent clinical and administrative support, and access to AirFlow. Contact helen@portobellodental.com.

Full hygiene book. Vard Dental, south Dublin A96W8X4. Excellent remuneration package, additional holidays, bonus. Working schedule will be agreed with successful candidate(s). Small, friendly, caring, innovative team with great patients. Please submit CV to david.vard@varddental.ie.

We are looking for a friendly hygienist to join busy practice in Ashbourne only 20 minutes' drive from Dublin. Great remuneration, flexibility with the dates. Contact pkorpal@gmail.com.

Mayo. Hygienist required for two days per week in our busy, well-equipped and established practice in Castlebar, Co. Mayo. Contact Shane Cadden on 094-902 5281, or email castlebardentalclinic@gmail.com.

Dental practice, Headford, Co. Galway, seeking qualified dental hygienist to join a dynamic team two days a week, Mondays and Wednesdays. Established books, fully computerised. Excellent support staff. Please email CV to meadowhilldentalsurgery@soegateway.com.

Waterford city centre. Full-time hygienist position available (five days – no weekends), to cover maternity leave, beginning end of February. Lovely staff and patients. Excellent conditions. CV to info@waterforddentist.ie please.

Dental hygienist required for two days a week to join our dynamic, progressive dental team in north Cork. 30 minutes from Limerick, 45 minutes from Cork. Established full book, fully computerised. Contact cdreception2@gmail.com.

Part-time hygienist required for busy practice in Ongar village. Full book, replacing outgoing hygienist, generous renumeration, starting February. Please send CV to ongar.dental@gmail.com or call Jonathan on 087-055 2625 for further information.

Enthusiastic hygienist required to take over in Rathfarnham's oldest and busiest dental practice. Great team, pay, and facilities. Hours negotiable. Reply with CV to rdphygienist@gmail.com.

Hygienist position available two days per week, flexible. Gorey, Co. Wexford. Immediate start. Hourly pay rate. Can cover commuting costs. Newly renovated surgery. New A-dec chair. New equipment. Fully qualified support staff. Email info@thebridgedentalsurgery.ie.

Orthodontic therapists

MyDental Clinic Cherrywood requires an orthodontic therapist to join our team. Flexible work hours. Full support from orthodontist and current team provided. State-of-the-art clinic with all modern equipment including iTero machine. Please submit CV to careers@mydental.ie.

Orthodontic therapist positions available at White Smile Dental in Dublin 4 and Cork City. Flexible working hours. State-of-the-art facilities with iTero and OPG. Support from a team of experienced specialists, orthodontists, therapists and support team. Contact drerikawhitesmile@gmail.com.

PRACTICES FOR SALE/TO LET

Brand new, fully fitted dental practice for rent in Cabra, Dublin 7. One chair available Monday, Tuesday, Thursday, Saturday, Sunday. Contact: guy@whitesmiledental.ie.

Unique opportunity to acquire a thriving general practice in south Tipperary town centre location. Three surgical rooms. Ideal for someone looking for the right work/life balance in outdoor activity region. Owner retiring. Freehold/leasehold negotiable. Contact seirldent@gmail.com.

For sale, Cork city centre Two-surgery, leasehold practice. Principal cutting back. Available to transition. Phone Michael on 087-283 5282, or Email mmcatrobinhill@hotmail.com.

Dublin city centre. Private, two surgeries, modern equipment – HSE standards. Very busy, long established, strong passing trade, surrounded by schools. Digitalised/computerised. Good new patient numbers. Low overheads. Ample room to expand hours and services. Principal retiring. Contact niall@innovativedental.com.

Sligo. Very busy two-surgery modern practice. Well established, excellent footfall. Ample room to expand. Digitalised/computerised. Excellent new patient numbers. Low medical card. Excellent profits. Principal available for transition. Email niall@innovativedental.com.

Multi-surgery, well-established, busy practice for sale in south Leinster. Large patient base and catchment area with thriving hygiene book. Computerised patient management system. Fully private. Contact steven@medaccount.ie or call 086-068 1242.

Dublin: residential practice for sale. Work from home in two-surgery practice attached to six-bed period house. Ample parking. Established 30+ years, owner retiring. Close to all transport, shopping, offices, etc. Low overheads, private and PRSI patients only. Enquiries to 2021dental@gmail.com.

Co. Kerry. Long-established, private, PRSI, very busy, three-surgery practice. Excellent location. OPG/central sterilising, hygienist, computerised, digitalised, very well equipped. Strong new patient numbers. Area wide open. Excellent profits, flexible options. Principal available for transition. Contact niall@innovativedental.com.

A platform for practice

Dr Cristiane da Mata is the new Honorary Editor of the *Journal of the Irish Dental Association*, and wants the *Journal* to become a platform where everyone involved in dental practice can share experience and knowledge.

Could you tell me about your professional background?

I am originally from Brazil, and qualified as a dentist there in 2000. I worked in practice for a few years, but I always knew I wanted an academic career. I moved to Ireland in 2006, following my husband who came to work in Cork, and I couldn't work as a dentist before sitting the statutory exams (which I did a few years later). So, I decided to work as a dental nurse, and worked with a specialist prosthodontist for a year. This was an interesting experience, which taught me a lot. Some of my best friends come from this time. When I realised we were staying in Ireland, I decided it was then time to pursue academia as I had always planned. I visited the Cork Dental Hospital to discuss the possibility of doing a PhD, and was put in contact with Prof. Finbarr Allen, who had similar research interests to mine. He encouraged me to apply for the PhD, to sit the MFDS exams of the RCSI, and to go for the Dental Council statutory exams. I am truly grateful for all his support and mentoring throughout the years. After my PhD project, which examined the use of atraumatic restorative treatment on older patients, I became very interested in public health and policy making, so I completed a Master's in Public Health, and became a lecturer in restorative dentistry in 2015.

What made you apply for the role of Editor?

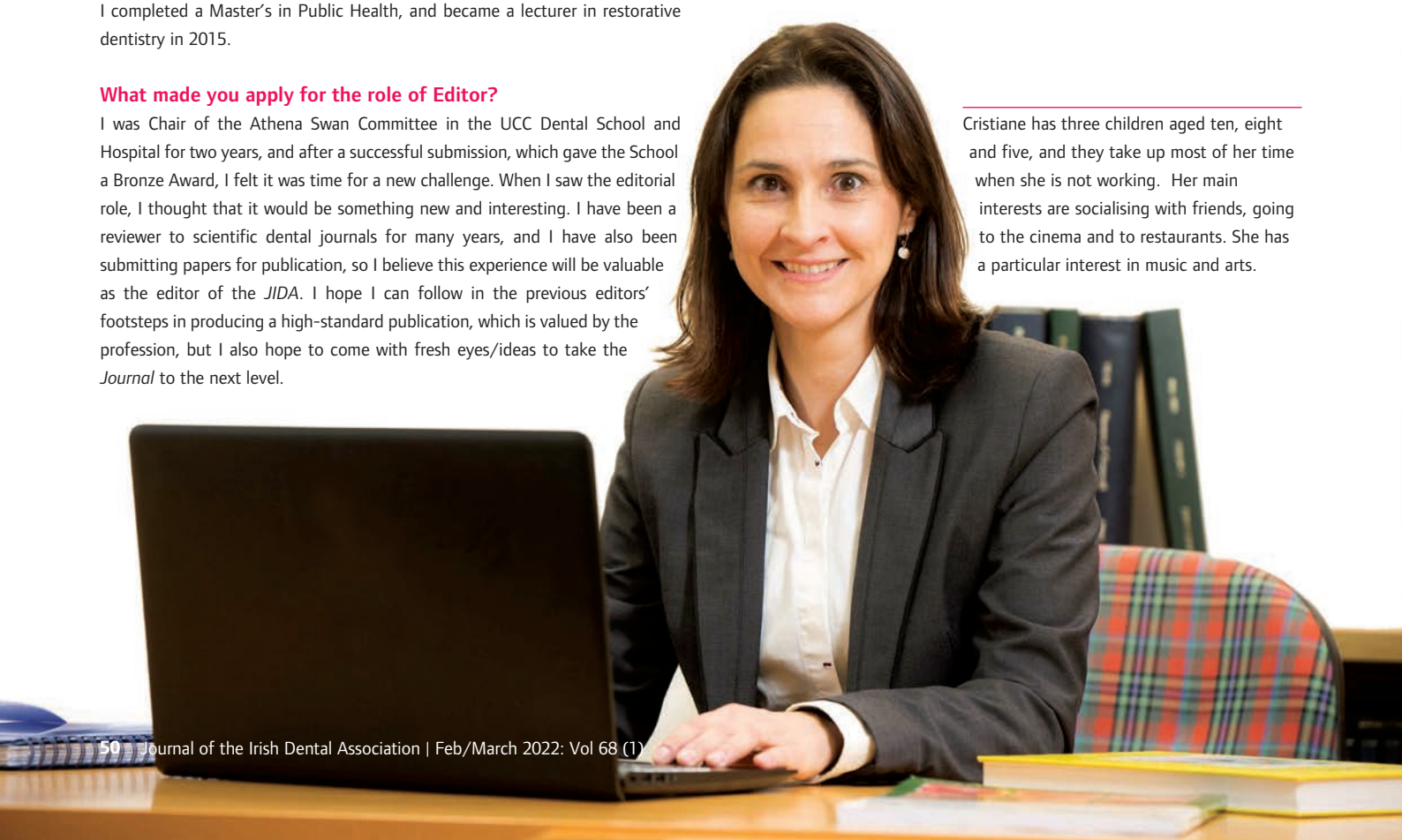
I was Chair of the Athena Swan Committee in the UCC Dental School and Hospital for two years, and after a successful submission, which gave the School a Bronze Award, I felt it was time for a new challenge. When I saw the editorial role, I thought that it would be something new and interesting. I have been a reviewer to scientific dental journals for many years, and I have also been submitting papers for publication, so I believe this experience will be valuable as the editor of the *JIDA*. I hope I can follow in the previous editors' footsteps in producing a high-standard publication, which is valued by the profession, but I also hope to come with fresh eyes/ideas to take the *Journal* to the next level.

What are your main aims as Editor of the JIDA?

My main aim is to produce evidence-based content that will be interesting and applicable to the general practitioner. I would like to keep open communication channels with the readers, so they can help decide on the contents they want to see published. Disseminating the results of research that is conducted in Ireland and abroad is an important role of the *Journal*, but I also want to ensure we have clinical articles, which will be of interest to the readers and that can directly contribute to their day-to-day practice.

How would you like to see the *Journal* progress into the future?

I would like to see the *Journal* as an interactive and informative platform, where general practitioners, specialists, academics and other members of the dental team can talk and exchange knowledge and expertise. In summary, I would like to see everybody involved and contributing.



Cristiane has three children aged ten, eight and five, and they take up most of her time when she is not working. Her main interests are socialising with friends, going to the cinema and to restaurants. She has a particular interest in music and arts.

IDA
irish dental association

EXCLUSIVE MONEY SAVING DEALS FOR IDA MEMBERS

Dental Protection

Professional indemnity

At least €700 discount

(11.5% reduction on your annual Dental Protection fee)

MEDICAL OXYGEN

- Cylinder and refill of medical oxygen
- Medical kit with masks for children and adults

UP TO 30% SAVINGS

IRISH OXYGEN
TECHNICAL AND MEDICAL GASES

CREDIT CARD TERMINAL TRANSACTIONS
AIB Card Services

- AIB Card Services
- Clover Mini Terminal – 36 mth lease €19.50pm or up front purchase €425
- No joining fee
- Full rates contact IDA House
- Save thousands of Euro each year

3 MOBILE

Landline & Broadband
- up to **40% savings**
Mobile - €15.75 + VAT
5 GB data
FREE Smartphone

Call (01) 687 6099

AED'S DEFIBRILLATOR

UP TO 26% SAVINGS
HEART SAFETY SOLUTIONS 1850 432 787

PRACTICE WEBSITE

IDA approved FULLY RESPONSIVE website designed and maintained from €1,500 +VAT
Call Think Media at (01) 856 1166

EXCLUSIVE **FREE ACCESS** TO THE JOURNAL OF THE AMERICAN DENTAL ASSOCIATION

EMPLOYMENT – LAW –

- Access to confidential employment law advice
- Free representation at HSE investigations
- Pro forma contracts
- Advice and support
- Covid specific advice

DOYLE MAHON INSURANCES

INSURANCE

CAR | PRACTICE | HOME

up to 50% reduction in your insurances premiums with Doyle Mahon
(053) 912 3630 Colm Mahon

INCOME PROTECTION

- DG Mutual (tax relief available)
- Dentists' Provident
- Aviva
- Friends First
- New Ireland
- Irish Life

Omega Financial Management

CLASSIFIED ADVERTS

50% reduction for members

TRAINING PROGRAMMES

INCLUDING FREE weekly online webinars

All courses, CPD events discounted by up to

50%

for IDA MEMBERS

including Annual Conference, hands-on courses, Team Training, HSE Seminar, ADA Cerp Accredited.
MANY EVENTS EXCLUSIVE TO IDA

Skudexa ▽ ® 75 mg/25 mg film-coated tablets (tramadol hydrochloride/dexketoprofen). Abbreviated Prescribing Information

Please consult the Summary of Product Characteristics (SmPC) for full prescribing information.

Presentation: Film-coated tablets containing tramadol hydrochloride 75 mg and dexketoprofen 25 mg. Excipients with known effects: croscarmellose sodium and sodium stearyl fumarate

Use: Symptomatic short term treatment of moderate to severe acute pain in adult patients whose pain is considered to require a combination of tramadol and dexketoprofen.

Dosage: Adults: 1 tablet (75 mg tramadol hydrochloride/ 25 mg dexketoprofen), additional doses as needed with a minimum dosing interval of 8 hours. Maximum daily dose 3 tablets/day. Use lowest effective dose for the shortest duration necessary to control symptoms. Maximum duration of use is 5 days. Patients with mild-moderate hepatic dysfunction or mild renal dysfunction: maximum daily dose is 2 tablets/day. Elderly: initial dose is 2 tablets/day can be increased to a maximum of 3 tablets/day after good tolerance established. Use with caution in patients over 75 years.

Contra-indications: Hypersensitivity to any component or other NSAID or excipients. 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. Active peptic ulcer/gastrointestinal/haemorrhage or any history of gastrointestinal bleeding, ulceration or perforation, chronic dyspepsia, 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. Acute intoxication with alcohol, hypnotics, analgesics, opioids or psychotropic medicinal products. Concomitantly with MAO inhibitors or within 14 days of having taken them. Inadequately controlled epilepsy. Severe respiratory depression. Pregnancy and lactation.

Warnings and precautions: *Dexketoprofen:* Caution in allergic conditions. Avoid use with concomitant other NSAIDs including COX-2 selective inhibitors. 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 older people. Ensure cure of oesophagitis, gastritis and/or peptic ulcer before starting treatment. 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. Caution in patients with impairment of renal function, receiving diuretic therapy or those who could develop hypovolaemia. Ensure adequate fluid intake. Caution in liver impairment. Appropriate monitoring and advice required with history of hypertension and/or mild to moderate heart failure. Special caution in patients with cardiac disease, especially episodes of previous heart failure. Only treat patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease after careful consideration. Similarly for risk factors for cardiovascular disease (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking). Caution in haematopoietic disorders, systemic lupus erythematosus, connective tissue disorders, impairment of hepatic and/or renal functions, history of hypertension and/or heart failure, diuretic therapy, the elderly. Older people are more likely to be suffering from impaired renal, hepatic and cardiovascular function. Serious skin reactions (some of them fatal), including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis were reported very rarely. Particular caution is required in patients with congenital disorder of porphyrin metabolism, dehydration, directly after major surgery. Severe acute hypersensitivity reactions have been observed on very rare occasions. Discontinue treatment at the first signs of severe hypersensitivity reactions. Can cause asthma attacks or bronchospasm, particularly in subjects allergic to acetylsalicylic acid or NSAIDs. Avoid use in case of varicella. Do not use with warfarin, other coumarins or heparin. Can mask the symptoms of infectious diseases. *Tramadol:* Use with particular caution in patients with an addiction, head injury, shock, reduced level of consciousness of uncertain origin, disorders of respiratory centre or function or increased intracranial pressure. Use with caution in patients sensitive to opiates. Care should be taken in treating patients with respiratory depression, with concomitant CNS depressant drug administration or significant excess of the recommended dose as resulting respiratory depression cannot be excluded. Convulsions have been reported with recommended doses of tramadol, this risk may increase when exceeding the recommended upper daily dose limit (400mg). Seizure risk increases in patients taking other seizure threshold lowering medications. Only treat patients susceptible to seizures with tramadol if circumstances are compelling. Tolerance, psychic and physical addiction may develop. For patients with abuse/dependence potential only treat for short periods under strict medical supervision. Consider tapering dose gradually when discontinuing treatment to prevent withdrawal symptoms. Tramadol in combination with other serotonergic agents or alone can cause serotonin syndrome. Opioids can cause sleep-related breathing disorders including central sleep apnoea (CSA) and sleep-related hypoxemia consider decreasing the total opioid dosage in patients with CSA. Opioid analgesics may occasionally cause reversible adrenal insufficiency requiring monitoring and glucocorticoid replacement therapy. CYP2D6 deficiency may reduce the analgesic effect, whereas ultra-rapid metabolisers of CYP2D6 incur risk of opioid toxicity even at commonly prescribed doses. Extreme caution and close monitoring for opioid toxicity required when administering tramadol to children for post-operative pain relief. Not recommended in children with compromised respiratory function. *Skudexa:* Not for use in children and adolescents. Concomitant use with sedative medicines such as benzodiazepines or related drugs should be reserved for patients with no alternative treatment options, using the lowest effective dose and an as short as possible treatment duration while following them closely for signs of respiratory depression and sedation.

Interactions: *Dexketoprofen:* Other NSAIDs, anti-coagulants, heparins, corticosteroids, lithium, methotrexate, hydantoines and sulphonamides, diuretics, ACE inhibitors, antibacterial aminoglycosides and angiotensin II receptor antagonists, pentoxyfilline, zidovudine, sulfonylureas, beta-blockers, cyclosporin and tacrolimus, thrombolytics, anti-platelet agents and SSRIs, probenecid, cardiac glycosides, mifepristone, quinolone antibiotics, tenofovir, deferasirox, pemetrexed. *Tramadol:* MAOIs, coumarin derivatives (e.g. warfarin), mixed agonists/antagonists opioid receptors (e.g. buprenorphine, nalbuphine, pentacozine), SSRIs, SNRIs, tricyclic antidepressants, antipsychotics and other seizure threshold-lowering medication (e.g. bupropion, mirtazapine, tetrahydrocannabinol), sedative medicines such as benzodiazepines, centrally depressant medications or alcohol, cimetidine, carbamazepine, ondansetron (5-HT3 antagonist) and substances inhibiting CYP3A4 (e.g. ketoconazole, erythromycin).

Pregnancy and lactation: Contra-indicated during pregnancy and lactation. Do not use in women attempting to conceive.

Side-effects: *Skudexa: Common (≥ 1/100, <1/10):* dizziness, nausea, vomiting. *Uncommon (≥ 1/1000, <1/100):* thrombocytosis, laryngeal oedema, hypokalaemia, psychotic disorder, headache, somnolence, periorbital oedema, vertigo, tachycardia, hypertensive crisis, hypotension, abdominal distension, constipation, dyspepsia, raised LFTs, face oedema, hyperhidrosis, urticaria, haematuria, asthenia, chills, discomfort, feeling abnormal, BP increased, increased alk phos, increased LDH. For less frequent side effects and side effects associated with the individual constituents see SmPC.

Pack size: 15 tablets. **Legal category:** POM A **Marketing authorisation number:** PA 865/20/1

Marketing authorisation holder: Menarini International Operations Luxembourg S.A., 1 Avenue de la Gare, L-1611 Luxembourg. **Marketed by:** A.Menarini Pharmaceuticals Ireland Ltd Further information is available on request to A Menarini Pharmaceuticals Ireland Ltd, 2nd Floor, Castlecourt, Monkstown Farm, Monkstown, Co. Dublin Co. Dublin, Ireland A96 T924 or may be found in the SmPC.

Date of preparation: August 2021

▽ This medicinal product is subject to additional monitoring. This will allow quick identification of new safety information. Healthcare professionals are asked to report any suspected adverse reactions via the HPRA Pharmacovigilance website: www.hpra.ie. Adverse events should also be reported to A. Menarini Pharmaceuticals Ireland Ltd. Phone no: 01 284 6744.

A.MENARINI PHARMACEUTICALS IRELAND LTD *Healthcare for Life*

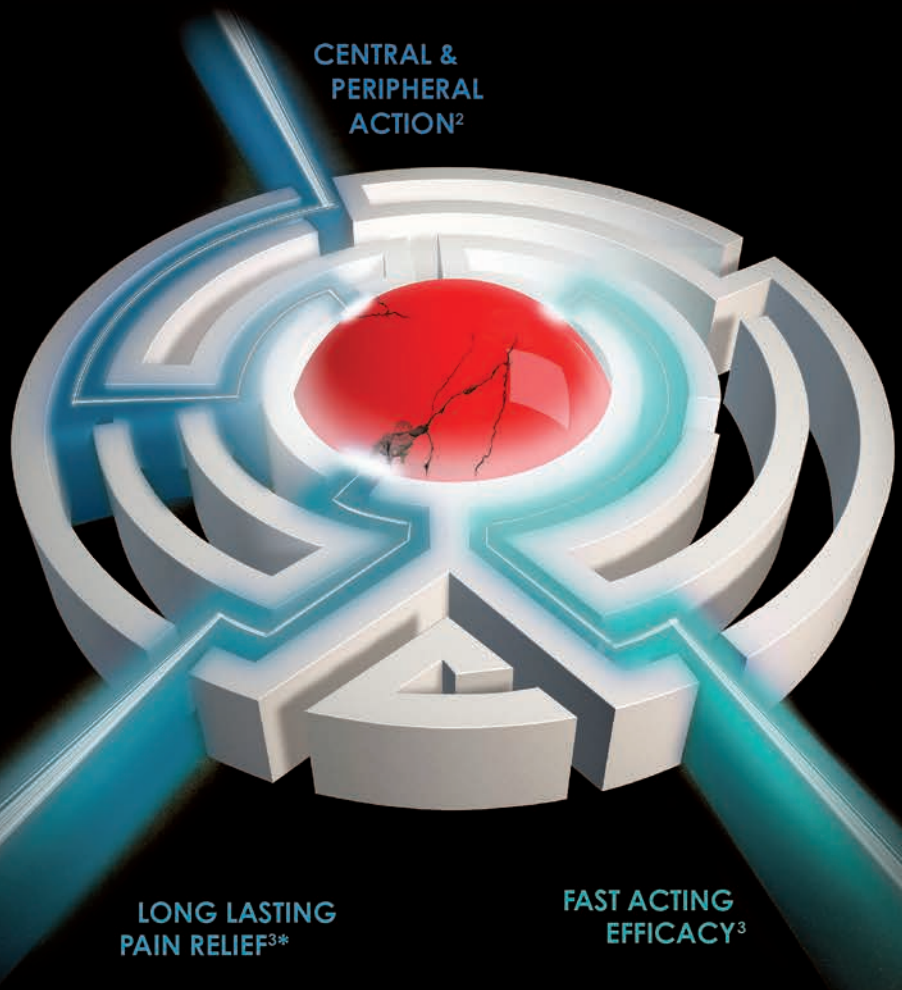
20 YEARS IRELAND LIMITED

SKUDEXA® ▽

Tramadol Hydrochloride + Dexketoprofen

75mg/25mg film-coated tablets

Fixed Dose Combination for Moderate to Severe Acute Pain[1]



Multimodal analgesia with **central** and **peripheral** action.[2,4,5]

* In a model of acute pain (third molar extraction) Skudexa demonstrated a median duration of action of 8.1 hours post-dose[3]

References: 1. Skudexa Summary of Product Characteristics, August 2021 2. Moore RA et al. BMC Anaesthesiol. 2016; 16:9 3. Moore RA et al. The Journal of Headache and Pain. 2015; 16:60 4. McQuay HJ et al. Br J Anaesthesia. 2016; 116:269-276 5. Gay-Escoda C et al. BMJ OPEN 2019; 9:e023715. doi 10.1136/bmjopen-2018-023715

Date of item: September 2021. IR-SKU-14-2021