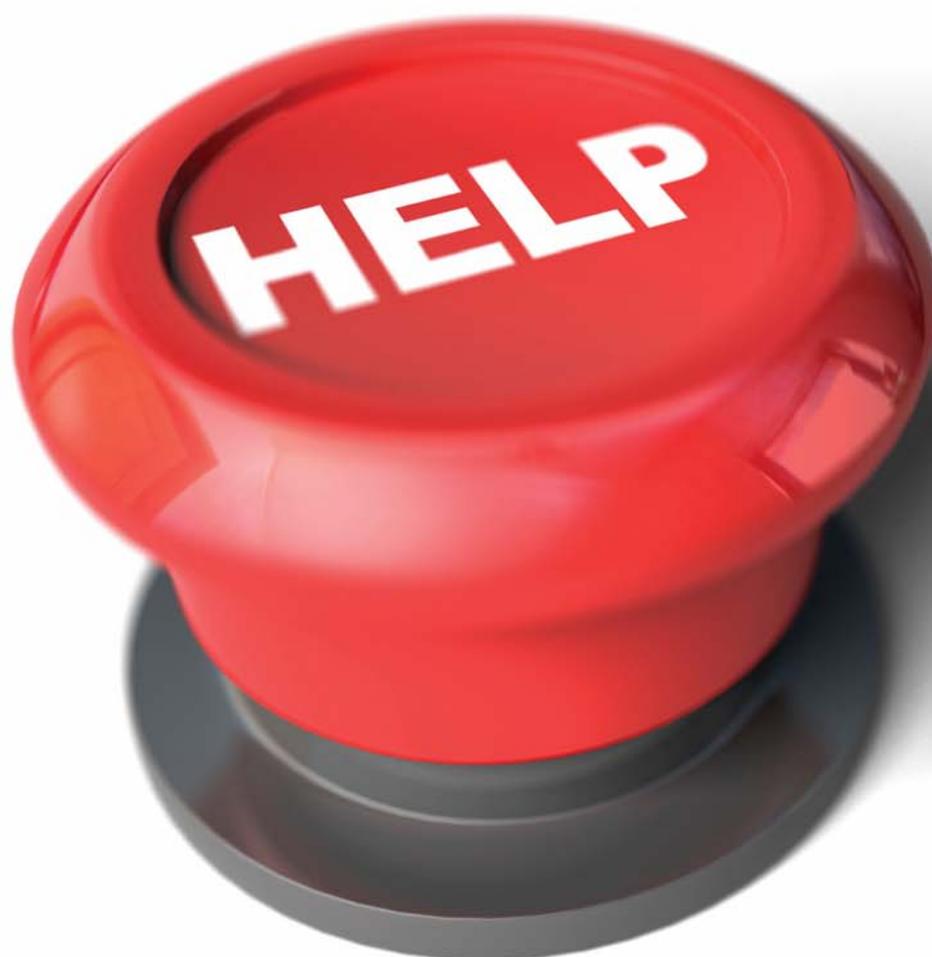


Journal of the Irish Dental Association

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Dealing with medical emergencies



Crisis

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- Promotes gingival healing
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Abbreviated prescribing information: Please consult the summary of product characteristics for full prescribing information.

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References: 1. Hoffman T, Bruhn G, Richter S, Netuschil L, Brex M. Clinical controlled study on plaque and gingivitis reduction under long-term use of low-dose chlorhexidine solutions in a population exhibiting good oral hygiene. Clin Oral Invest (2001) 5; 89-95.

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Our role is education

At last the summer has arrived. As I sit in the garden, taking in the sun, drinking a glass of cool beer, I consider what has been achieved. Another issue of the Journal, out on time, Ireland win the Grand Slam and our Irish Lions are off to South Africa to keep our hopes up. An Irish amateur wins the Irish Open golf and the football season has had us on the edge of our seats. The Government is bailing out Anglo-Irish Bank and charging the Irish people for the privilege. There is talk of high office for those who really deserve their just desserts. Vincent O'Brien (horse trainer) passes away and what a symbol of hard work and natural talent he was.

This June/July Journal reflects the work of the IDA, its members and the editorial team. There are a large number of our colleagues doing a lot for dentistry in all walks of life. The Oral Health Strategy is about to be published in July 2009. The IDA has a Best Practice Committee, a Cross Infection Control Committee (p.130), and there is a CPD Committee, which is charged with ensuring that our Association meetings are geared towards CPD, taking into consideration CPR, radiology and infection control (p.131). There is the Dental Practice Radiography File produced by an IDA Committee and available on the website (p.131). The Annual Meeting in Skillkenny was a great success, with many varied topics (pp.132-133). Nobody should miss these meetings, which are geared to education, peer review and entertainment in a most convivial atmosphere. Our deepest and most sincere thanks to the organising committee. The dinner was great as well.

Worth every penny

Well, we have our medical emergency article (pp.134-143), 'Medical emergencies in dental practice' (Wilson *et al*). This can be downloaded by looking at www.dentist.ie, and under the JIDA, you will find all the JIDAs for the past few years, which can easily be downloaded. Thanks to the Board for allowing us to provide this for you. The medical emergency article can be printed out and made easily available, close to your emergency cabinet. Save one life and your subscription to the IDA will be worth every penny for the next 10 years. All the other articles and our 'Fact File' (pp.148-149) on implants are available. Alveolar lymphangioma in infants by Fitzgerald

et al (pp.144-145) highlights how we need to be aware of the cosmopolitan changes in Ireland and think about diseases that we have never seen before. Dr Ioannis Polyzois, lecturer in periodontology, and our abstract procurer from other journals, reads avidly and gives us a true representation of articles across a broad area of dentistry from burning mouth to crown shade assessment.

The article on 'Tax planning for dentists' is a must (pp.150-151) in these tough times. Patients and dentists are suffering. The letter from our endodontic colleagues (p.115) highlights the problems facing many of us. As someone who had to go abroad to seek training in 1981 as there was no oral and maxillofacial training in Ireland, and spent many years away (23) because of a lack of consultant posts, I can only empathise with those colleagues and wish them the best in their careers.

Experts contributing

Congratulations to the IDA in securing the pay review for our HSE orthodontic colleagues (p.122) and shame on the dental state of our children in Ireland, with 75% of 15-year-olds suffering with tooth decay (p.122) and we do not have the staff to cope with this workload. Thanks to all those who send in letters, articles and quizzes, subjecting them to peer review and consideration. I am thrilled to see experts in the field contribute to the debate, highlight learning points, and I learnt a lot as I hope all of you did from Dr McDonnell's letter and Dr Machesney's excellent response. This is education at its best. The JIDA's role is one of education and we rely on all of you for your contributions.



Leo F. A. Stassen

Prof. Leo F. A. Stassen

Honorary Editor

LETTERS TO THE EDITOR

Dear Editor,

I refer to the recent quiz by Dr Machesney relating to a periapical image of a lower first molar.¹ The quiz asked for special tests, differential diagnosis and treatment based on that differential diagnosis. I wish to raise the following issues:

1. "This x-ray was taken at routine examination."

Under SI 478 of 2002, it states that: "All radiographic examinations must be justified before being taken and all doses shall be kept as low as reasonably achievable consistent with obtaining the required diagnostic information".² In the Code of Practice for Radiological Protection in Dentistry,³ it states: "Only those x-rays which, after a clinical examination and a careful consideration of both the dental and general health needs of the patient, are found to be necessary for patient care, shall be carried out. The routine use of x-rays without a specific dental or associated need is not warranted. It shall be determined if there are any previous x-ray examinations which would make further examination unnecessary". Finally, the European Guidelines on Radiation Protection in Dental Radiology⁴ state: "No radiographs should be selected unless a history and clinical examination have been performed. 'Routine' radiography is unacceptable practice". I would contend that the term 'routine' should not apply to any radiographic examination.



FIGURE 1: An example of hypercementosis on a lower premolar tooth, separated from the surrounding bone by a periodontal space.

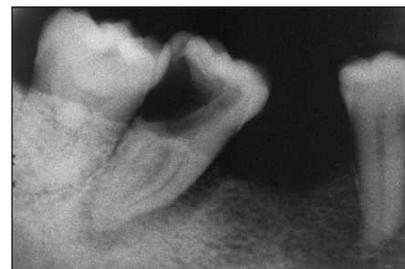


FIGURE 2: An example of condensing osteitis with an area of poorly defined radiopaque rim surrounding a periapical radiolucency on a non-vital lower molar tooth.

2. The differential diagnosis

Cemental conditions are separated from the surrounding bone by a ligament type space, as evidenced by the attached example of hypercementosis (Figure 1). In my opinion, the radiopacity associated with the apex of the mandibular first molar lacks a ligament type space or lamina dura. I also disagree with the diagnosis of condensing osteitis, which is typically an ill-defined radiopacity about the root of a non-vital tooth (Figure 2). In my opinion, the most likely diagnosis for the well-defined apical radiopacity is a dense bone island, also known as idiopathic sclerosis or enostosis. In general, this is considered a variation of normal trabecular pattern and no treatment is required. If the differential diagnosis is considered incorrect, then this would then have a knock-on effect on the proposed treatment plan suggested here.

Yours sincerely,

Dónal McDonnell BDS, FFD, MSc, FRCD(C),
Senior Lecturer Consultant in Oral Radiology,
University Dental School and Hospital,
Wilton, Cork.

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1. Machesney, A. 'Quiz'. *Journal of the Irish Dental Association* 2009; 55 (1): 14, 51.
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LETTERS TO THE EDITOR

Response

In reference to Dr McDonnell's letter to the editor regarding the quiz in the February/March edition, the quiz was referring to a routine oral examination and not to a routine radiographic examination. I agree that radiographic screening for the purpose of detecting disease should not be performed before clinical examination. In this particular case there were, however, positive historical findings and positive clinical signs that justified the prescription of a periapical x-ray following clinical evaluation.

The letter does raise a topical issue now facing all dentists regarding our requirements to carry out a clinical audit in dental radiology – more information is available on the IDA's website (Clinical Audit in Dental Radiology). The American Dental Association has produced documents illustrating the use of selection criteria available to download at www.fda.gov/cdrh/radhealth/adaxray-1.pdf.

In regard to the diagnosis, this was a case presenting in general practice and as such was not intended as a definitive diagnosis; the points raised by Dr McDonnell are worth noting and probably deserve further discussion.

Yours sincerely,

Dr Aislinn Machesney, BDentSc, DipClinDent,
2 New Cornelscourt,
Foxrock, Dublin 18.

Dear Editor,

We read Brian Merry's letter with interest (*Journal of the Irish Dental Association* 2009; 55 (2): 63). As two recently qualified endodontists who have completed a three-year advanced education programme, we cannot agree that "there is no implied threat to specialist expertise" in his letter.

The Republic of Ireland is unique among Northern Ireland, the USA, Canada, Britain and Australia in not recognising specialist training in endodontics with a specialist list. This means that there is no legal responsibility to offer referrals to patients to appropriately trained specialists. On the ground we are finding that referrals are currently down by 70%. We are happy to slash our fees, but when we find that many dentists are "dusting off that endodontic kit", doing so would only lead to the bankruptcy court.

We feel we are now competing not just with existing practitioners limited to endodontics, who vary greatly in their training, or lack thereof, but also with general dentists who have vacancies in their day book. This situation makes those other countries seem more attractive. The Republic may suffer when new graduates either fail to return to Ireland after completing their programmes or have to emigrate after trying unsuccessfully to get established, due to the Dental Council's light touch regulation in this regard. Indeed, of the four Irish practitioners who completed three-year programmes in 2007/2008, we are the only two to return to the Republic.

Yours sincerely,

Jarlath Loftus BDentSc, MFD RCS, MSc FFD RCS
Eoin M. Mullane BDS, MS, Cert. Endo. (Michigan, USA)

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PRESIDENT'S NEWS

Successful Skillkenny

In his first President's news, new IDA President DR DONAL BLACKWELL looks back on another successful Annual Conference.

It is with great pleasure that I write my first President's news as President of the Irish Dental Association.

The recent Annual Conference in Kilkenny was an outstanding success with over 500 delegates in attendance over the four-day event. Some 376 dentists attended the Conference and I was particularly delighted to welcome an additional 81 vocational trainees from the UK. It was also very encouraging to see ten of our own Irish vocational trainees and five from Northern Ireland attend.

No annual conference would be complete without the preparation and dedication of our speakers. I commend each and every one of them for their invaluable contribution to our programme. Our pre-conference programmes on Wednesday April 22 received outstanding feedback, with invaluable hands-on expertise shown to all. Our trade show saw the continued support of many of our trade sponsors with the added bonus of many newcomers to the conference. I thank them all sincerely for their continued support of the IDA.

My sincere thanks goes to the organising committee, including Drs Gerry Cleary, Maurice Quirke, Johnny Fearon, and Ed O'Reilly, and Elaine Hughes, whose hard work ensured the success of the Conference. Next year's Conference, 'Pearls of Wisdom', looks set to be yet another enjoyable event and I look forward to seeing you all in Galway from May 12-15 2010!

Our AGM went off smoothly with some lively debate and discussion arising during the meeting. The IDA Council bade farewell and paid tribute to Drs Adrian Loomes (Hon. Treasurer), John Barry (Vice President) and Robin Foyle (elected member). We welcomed Dr Garrett McGann as Treasurer and Dr Michael Crowe as Honorary Secretary designate.

It was indeed a great honour for me to take over the reins from Dr Ena Brennan as President of your Association. I hope that I will continue the great work already done by our Past President and I look forward to meeting with many of you over the course of the year. I would like to make particular reference to the tributes paid to two very valuable individuals who were honoured at our AGM. Dr Art McGann attended his 55th IDA Annual General Meeting in Kilkenny, a record surely, and I was delighted to present him with a gift on behalf of the IDA for this outstanding achievement. Mena Sherlock started her working days with the IDA over 30 years ago and she was also honoured with a gift from the Association at the AGM for her invaluable contribution to the IDA over the years. Well done to you both!

Finally, I would like to thank the South East Branch for bestowing such an honour on me to serve you as President of the Association for the next year. I would like to take this opportunity to encourage each and every one of you to get involved in your Association through your local branch, committees, and/or PDS/GP Groups. This is YOUR Association!



Dr Donal Blackwell
President,
Irish Dental Association



Practice management training day

Finding an opportunity to take time out from your dental practice is never easy. The Irish Dental Association recognises this and was delighted to offer a full day training programme designed for the busy dental practitioner. This tailor-made programme was designed to unlock the full potential of your team and increase your competitiveness, productivity and profitability. The training day took place on Friday June 12 next at the Clarion Hotel, Dublin Airport. Topics covered on the day included:

- 'Dentists and their finances' – John O'Connor, Omega Financial Management;
- 'Principles of daily practice management' – Dr Garry Heavey, practising dentist;
- 'Is your accountant working for you?' – David McCaffery, MedAccount;
- 'Managing customer relations' – Miriam McDonald, Fresh Perceptions
- 'Working within the law' – John O'Connor, O'Connor Solicitors;
- 'Incorporation and tax issues' – Bernard Doherty, Grant Thornton; and,
- 'Work/life balance' – Tom Ryan, Psychotherapist.

A report will appear in the next edition of the Journal.

Update on HSE cutbacks/moratorium

Members are advised that a new HSE circular (HSE HR circular 15/2009) has been issued covering the moratorium on employment of staff by the HSE, promotions, payment of acting up allowances, provisions relating to renewal of temporary contracts, redeployment of staff and other critical staffing issues. It is important to state that this circular has been issued by the HSE without the agreement of the trade unions and staff representative bodies.

The moratorium does not apply to a number of specified grades. In addition, it is stated that it is Government policy to increase numbers to address primary care needs in respect of children at risk, the elderly and those with disabilities, all groups that public dental surgeons have a crucial role in treating. Managers are also required to ensure the maintenance of front-line services, where possible, and to minimise the impact on patients and clients, in making recruitment decisions.

The circular also prevents sanction for any further promotions without approval by the Ministers for Finance and Health and Children. This circular has not been agreed with the IDA or other health service unions, and has been issued by the HSE on instructions from the Department of Finance, arising from a recent Government decision. A copy of the circular can be downloaded from the IDA website – www.dentist.ie. The IDA advises members to study the circular carefully, and also draws your attention to the directive sent by the IDA and other health service unions, designed to maintain safe standards of care, and protect employment and existing terms and conditions for staff.

Information regarding new HSE schemes covering early retirement, career breaks and shorter working year is also available on the website.

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IDA NEWS

President's Cup



Dr Ken Halpenny receives the President's Cup from IDA President Dr Donal Blackwell.

The Annual President's Cup took place at the Annual Conference in the luxurious surroundings of Mount Juliet Golf Club on Saturday April 25. Dr Ken Halpenny was the overall winner with Dr Dan Collins coming in second, and Dr Pat Cleary third. The visitor's prize was won by Mary Halpenny. Unfortunately, the weather conditions on this occasion were not in our favour and we had some registered players crying off on the day. However, it was a most enjoyable occasion nonetheless. The inaugural prize for the longest drive – the Dr Gary Boyle Memorial Cup – was awarded to Dr Dan Collins.

Trade golf competition



Aidan McCormack, Dental Medical Ireland, receives his prize from IDA President, Dr Donal Blackwell.

The golf competition for members of the trade suppliers took place in Mount Juliet on Wednesday April 22 as part of the Annual Conference. We had only three players at the event this year and ideally, we would love if more trade sponsors participated before embarking on a couple of very busy days at the trade show during the conference.

The overall winner of the competition, which was sponsored by the Irish Dental Association, was Aidan McCormack from Dental Medical Ireland.

PDS Seminar 2009

The annual Public Dental Surgeons Seminar will take place at Whites Hotel, Wexford, from October 7-9 next.

An interesting line-up of national and international speakers has been organised, which includes Drs Kevin Gilmore, Dan Counihan and Donal McDonnell and, from the international scene, Dr Anne Hegarty, an Irish graduate who is now based at the Eastman Clinic, and who will present on oral medicine, Dr Debbie Lewis, who will discuss dentistry for the older patient, Dr Andrew Smith, who will lecture on infection control, and 2009 will also see the return of Dr Monty Duggal to discuss quality paediatric dental care.

Another team-focused seminar is promised with our dental nurse and dental hygienist colleagues joining us on Thursday October 8 for a packed day, including a full trade show.

The seminar will also include a full trade show, which will include the leading products and services on the dental market. Our ever popular annual dinner will be the social highlight of the seminar, and will take place on Thursday evening, October 8.

Captain's Prize Golf Competition

The IDA Captain's Prize (Dr John Fahey) golf outing will take place on Saturday September 5, 2008, in Carlow Golf Club. Further details will follow when available.

National General Practitioners Meeting

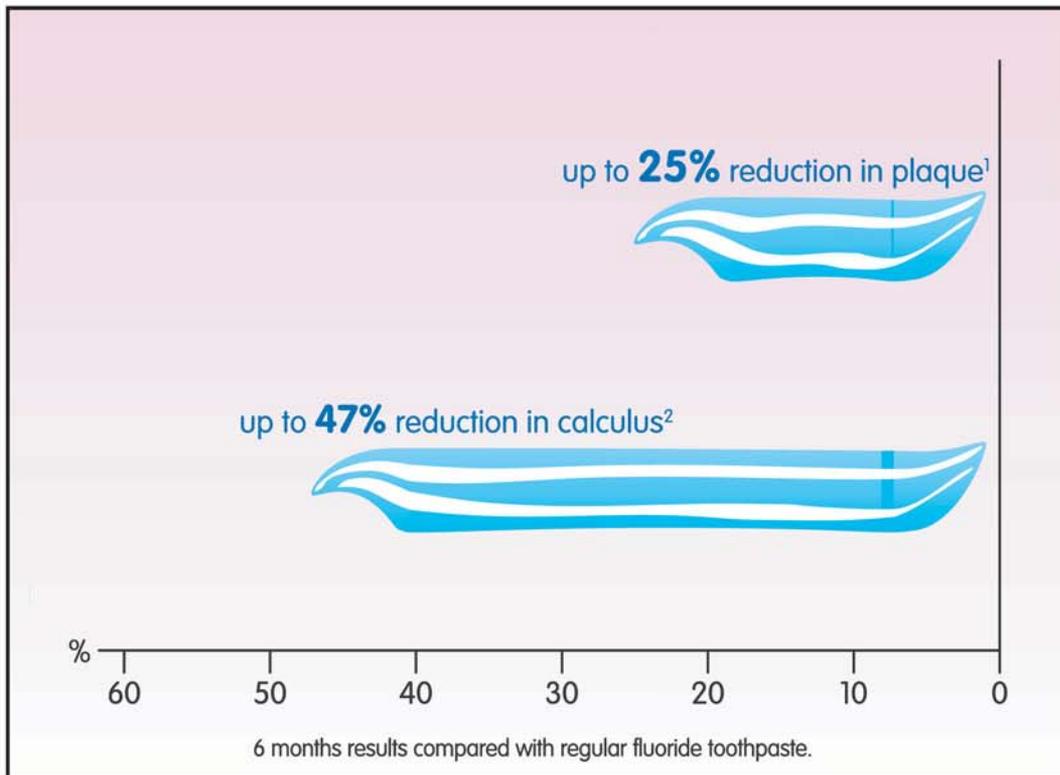
A number of pertinent issues were discussed at the General Practitioners' Group meeting, which was held at the IDA Annual Conference on Friday, April 24. Presentations were made by Dr Helen Walsh and Mr Fintan Hourihan, and discussions took place arising from these and other topics:

- It was decided that an urgent meeting should be sought with the HSE to discuss concerns about the administration of DTSS claims, reclaims and delays in payments to participating dentists.
- Recruitment of representatives from all branches is to be followed up, and draft rule changes are to be circulated by the Chairperson.
- As a result of concerns regarding the mounting number of statutory requirements being imposed on GP members, the IDA will prepare a checklist and circulate this to general practitioner members.
- It was reiterated at the meeting that the IDA will not be party to attempts to merge the DTSS and DTBS schemes.
- The IDA is to seek roll-out to dental practices of the HSE waste collection scheme for medical GPs.
- Concerns were raised about high RPII license fee charges and RPA rates. The IDA will seek easing of these rates through lobbying the Minister and the RPII.
- The meeting heard that special items are being refused (endodontic treatments, crowns and cobalts), and there is a three to four month delay regarding replacement dentures. Concern will be raised by the IDA with HSE PCRS.



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Past Presidents' Lunch



Back row (from left): Drs Barry Harrington; Joe LeMasney; Tom Feeney; Cathal Carr; Noel Walsh; Martin Holohan; Michael Galvin; Gerry McCarthy; and Pat Cleary. Front (from left): Dr Noel Power; current President, Dr Donal Blackwell; Dr Ena Brennan and President-elect, Dr Billy Davis. (Missing from the picture, but in attendance, was Dr John Barry.)

A large attendance of Past Presidents' of the Association joined us for the annual Past Presidents Lunch in Hotel Kilkenny. Fourteen Past Presidents in all attended the event, which was hosted by Dr Donal Blackwell, President of the IDA.

Dentists get on their bikes



Pictured with President of the IAAGDS, Dr Ray Bellamy (centre), are a group of dentists who cycled 85 miles to Dublin from Glasson, Athlone, in March after a meeting in the WinePort Lodge. From left: Gerry Cleary; Pat Cleary; Ray Bellamy; Barry Dace; and, Rachel Doody.

IDA appointments



The Association has announced that Elaine Hughes has recently been appointed Assistant Chief Executive Officer with IDA. Elaine moves into the role after three years as Membership Services Development Manager with IDA through which she is very well known both to the profession and the industry. Congratulations Elaine!



The Association has appointed Clare Dowling as Employment and Communications Officer. Clare graduated from the University of Limerick and went on to qualify as a solicitor. She will be working closely with the Association's Committees for General Practitioners and Public Dental Surgeons, offering advice and guidance to individual members, and enhancing our internal and external communications. All of the officers and staff welcome Clare to IDA House.

Inaugural joint orthodontics meeting



BOS Committee member Jay Kindelen enjoys the social side of the joint OSI/BOS meeting with OSI Scientific Secretary Cath Crocker, and OSI members Gerry Rahilly, David Killian and Sheila Hagan.

The RCSI was the venue in April for the first ever joint spring meeting of the British Orthodontic Society and the Orthodontic Society of Ireland. The theme was 'Contemporary Orthodontics' and over 300 delegates enjoyed lectures from internationally renowned speaker and author David Sarver, and from Dirk Weichmann, who developed the Incognito custom lingual appliance.

As always, the social aspect of the meeting was just as important as the academic side. The Guinness Hopstore hosted an evening of traditional music, dinner and dancing. Members are grateful to Catherine Crocker and Michael Ryan from the OSI who liaised with the BOS to organise this event. Meanwhile, the American Orthodontic Conference was held in Boston in late April. Padhraig Fleming (TCD 2002) was among the delegates and presented the findings of research he had completed as part of his orthodontic specialist training in London at a session for oral research abstract presentations. His study, 'A Randomised Controlled Trial of Mandibular Alignment with Two Fixed Orthodontic Appliances' had compared a self-ligating appliance with a conventional one. Congratulations to Padhraig on this achievement.

New IDA Update out now

The June 2009 edition of IDA Update has been mailed. This edition of the Update, which is available only to IDA members, contains information on a number of important topics, including:

- DTSS and DTBS fees;
- new HSE schemes;
- HSE moratorium on employment;
- trade union status for the IDA;
- blood borne viruses;
- incorporation; and,
- force majeure and adoptive leave.





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IDA NEWS

Up to 75% of 15-year-olds suffer tooth decay

The Annual Conference of the IDA recently heard details of the high incidence of tooth decay among young children in Ireland. According to Dr Rosarii McCafferty, President of the Public Dental Surgeons Group, the incidence of tooth decay among different age groups is as follows:

- at five years, between 37% and 55% suffer from tooth decay;
- at 12 years, over 50% suffer from tooth decay; and,
- at 15 years, approximately 75% suffer from tooth decay.

Dr McCafferty warned that recent cutbacks in public dental schemes would reduce the number of school going children that can be seen by a public dentist and this would lead to worsening standards of oral health among children: "Unfortunately, the public dental service has suffered badly from the recruitment embargos imposed by the HSE over the last number of years. We are aware that in some dental areas, access for children to preventive dental services has been severely limited due to loss of staff. This means that the problem is simply pushed into the future, when it will be more costly and complex to treat".

Orthodontists to receive backdated pay increase

The IDA is delighted to announce the successful conclusion of lengthy efforts to secure a salary increase with back pay for orthodontists. In 2007, the Association secured a 4.3% pay award from the Review Body on Higher Remuneration in the Public Sector for specialists in orthodontics employed by the HSE. However, in the interim, serious obstacles emerged to prevent payment of that award. More recently, the state of the public finances has been cited as a further reason to prevent payment of this award. The IDA made repeated representations to the HSE and the Department of Health and Children demanding payment of this award, and the Association has now received final confirmation that this award is to be paid to orthodontists. Provision has also been made for back-payment of the 4.3% award to June 2007. In most cases, this will amount to a significant lump sum award for members. This represents a successful and entirely merited culmination to an extensive lobbying campaign by the Association. The orthodontists concerned are one of the very few grades in the public service to receive a pay award as a result. The IDA anticipates that, in the current climate, members may encounter difficulties at local level in receiving payment and encourages members to contact IDA House promptly should difficulties arise.



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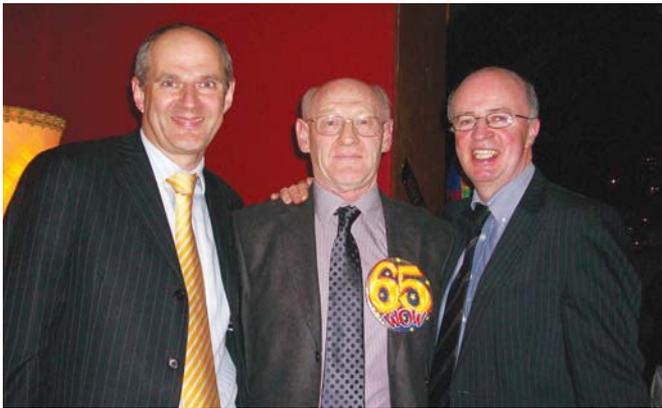
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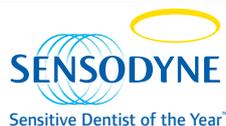
Greer Harte retires from DMI



From left: Pat O'Brien; Greer Harte; and, Aidan McCormack.

DMI celebrated Greer Harte's 65th birthday and retirement from the company with a party in La Stampa hotel on April 30, 2009. Over 20 dentists, together with current and former employees and members of Greer's family, turned out to wish Greer good luck and to thank him for his tremendous support over the years. Dr Tom Hughes spoke about the respect that the dental profession has for Greer. He described how reassuring it was to see Greer walk into the surgery as you were guaranteed to be back up and running in no time. DMI wishes Greer and his wife Rosemary good health and many happy years of retirement.

Sensodyne Sensitive Dentist award 2009 launched



Following on from the success of last year's competition, which was won by Dr Niall Sharkey, Sensodyne and the *Journal of the Irish Dental Association* are once again teaming up to find the Sensodyne Sensitive Dentist of the Year. That's the dentist who, in the words of a patient, demonstrates the most care and attention, in addition to carrying out dental work.

The patient who nominates the winning dentist will win a family holiday. The winning dentist will receive the title of Sensodyne Sensitive Dentist of the Year as well as a beautifully crafted award and the acclaim of their peers.

Once again, the competition will be promoted nationally to patients through national and local media. Dentists will receive a poster and leaflets to display in their waiting rooms. Patients will be asked to nominate their dentist for any particular acts of kindness and compassion in recent times.

Dentists are asked to support the programme by displaying the poster and brochure in their waiting rooms, reception rooms or other appropriate public areas. An independent panel of experts will adjudicate on the nominations, and the winning dentist, along with regional winners, will be announced in the *Journal*.

Teaching award for Dr Creaven



Dr Joe Creaven recently received the Perpetual Teaching Award from the Dublin Dental School and Hospital's Alumni Association. The award was made for "Excellence in Dental Teaching" at a special function in Trinity College attended by family, friends and many colleagues. He received the award from the President of the Alumni Association, Dr Barry Harrington (right, above), and was congratulated by his wife Maura and daughters – below, Joanne (left) and Helen (right).



New Gendex

Dr Paul Quinlan (right) recently invested in a new Gendex GX CB-500 iCAT and is pictured admiring his purchase with DMI's Director of Technical Sales, Richard Woods. Of the Gendex, he says: "On the software side, I found it incredibly easy and intuitive to use and it only requires basic computer experience."



Warnings on tobacco products

The FDI World Dental Federation welcomes and supports the theme of 2009 World No Tobacco Day, 'Tobacco Health Warnings'.

Health warnings on tobacco products are crucial elements in the global fight for tobacco control. The FDI World Dental Federation, speaking on behalf of more than one million dentists, strongly supports explicit health warnings and encourages their widespread implementation.

Knowledge and awareness are the first steps in changing behaviour and reducing tobacco use. Using tobacco-related oral diseases in pictorial health warnings on tobacco packaging is a very effective way of communicating the risks of tobacco use. The oral effects of tobacco use are easily visible and understandable, and may help in motivating consumers to reduce or quit.

The joint FDI/WHO publication, 'Tobacco or Oral Health' outlines how dentists and their teams can effectively engage in tobacco control. "Helping tobacco users to reduce or quit can be the single most important health advice a dentist can give," said Dr Burton Conrod, FDI President, on the occasion of World No Tobacco Day.

For information on the FDI World Dental Federation, visit www.fdiworldental.org.

Think computers before designing your new practice

During the 'Skilkenny' conference last month, CDSOft Ltd conducted some research on dentists who had just opened or were in the process of opening a practice. Based on their findings, CDSOft personnel were surprised to discover that many dentists, after investing a lot of time, money and effort into getting the practice just right in terms of design and carpentry, had failed to contact their IT provider until after the layout was complete. It was only at this stage that the dentist discovered that the IT infrastructure he/she intended to purchase would not fit in nicely with the new furniture.

For example, the server unit in a surgery needs to be housed in a well ventilated and dust free area. Generally, a surgery has not enough space allocated for this, resulting in the furniture needing to be changed around or totally redesigned. This kind of situation can be avoided easily by engaging with your IT provider during the initial stages of design, so that enough space can be allocated for cables, wires and areas for servers and PCs.

"One of our aims is to make sure that IT equipment blends in with the new dental practice. We have found in the past that sometimes, when we arrive at the practice, all of the cabinetry is complete and no space has been allocated for the computers. We prefer to be involved at an earlier stage so the positioning of your computers is subtle but effective," says Michael Walsh, Solutions Consultant at CDSOft Ltd.

New Nobel Procera system



At the 33rd International Dental Show, Nobel Biocare globally launched its innovative NobelProcera system with new prosthetic products and materials. The

company also extended the successful NobelActive launch by introducing a complete NobelActive prosthetic assortment, and presented updated long-term TiUnite® data on the most widely used osseointegrative biomaterial.

With these latest introductions, together with its clinically proven implant surface, Nobel Biocare is reinforcing its commitment to the market and to dental professionals by offering solutions that are exclusively science-based and that focus on exceeding clinical and aesthetic patient requirements.

New training and milling centre launched

Frank Meyer and Gerardine O'Neill of @mire 3D Dental Ltd, Dublin officially launched their new, innovative and impressive digital dental training and milling centre in May. The event attracted a large gathering of experts in the dental industry with a particularly strong turnout from the dental schools in both Cork and Dublin. Dr Jamie Newlands, Clinical Director of the Berkeley Clinic, Glasgow's Charing Cross, gave a presentation of the end-to-end digital solutions showing the workflow for the future using the Lava chairside oral scanner. Frank Meyer, owner of @mire 3D Dental Ltd, says this was the first time in Ireland that the system was presented. He also gave a presentation and displayed how the Lava digital system works from scanning stage through to finalised milling. @mire 3D Dental is located in Dublin and, according to Frank, is the only Lava CNC500 Milling Centre in Europe.

Low cost investment products

QUINN-life is offering low cost, easy-to-understand, transparent and flexible investment and pension funds, based on some of the world's largest stock markets. According to the company, it's not necessary to go down the stockbrokers' route if you are interested in investing in a portfolio of shares. A broad-based index tracking equity fund offers an excellent alternative to managing a portfolio of shares yourself. The company follows an index-tracking approach, investing in stock markets containing a broad range of companies in various industry sectors.

"Index tracking has been proven to offer better returns over the long term," says QUINN-life's general manager, Siobhan Gannon. She continues: "Investing in blue chip companies, across industry sectors and matching the performance of the market means you do not have the risk of so called 'expert' fund managers picking the wrong share."

Quiz questions

Compiled by Dr Patrick Crotty, 89 Upper Dorset Street, Dublin 1.

1. Bonding to dentine is as predictable and as durable as to enamel. True or false?
2. Self etch bonding agents seem to cause less postoperative sensitivity. True or false?
3. Adhesives are interchangeable and can be used to bond all composites. True or false?
4. LED lights cure all bonding agents and composite resins. True or false?
5. The poor marginal integrity of the composite restoration in the picture is mainly due to bulk filling with one increment of composite. True or false?

Answers on page 147.



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That's the dentist who, in the words of a patient, demonstrates the most care and attention, beyond the dental treatment provided.

An independent panel of judges will adjudicate on the nominations. The award-winning dentist will be announced in the December/January edition of the Journal while the patient who nominates the winning dentist will win a family holiday in Florida.

Posters and leaflets will be provided to dentists for their surgery waiting rooms or reception areas, and the competition will be publicised nationally by Sensodyne.

For further information, see www.sensodyne.ie or contact the Journal of the Irish Dental Association on 01-8561166.

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



journal of the irish dental association
Iris Cumainn Déadach na hÉireann



Proposal for CED independence is under discussion

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

Report on the feasibility of CED independence

During its meeting in Cologne on March 27, 2009, the CED Board discussed the functioning of the CED Brussels office. The Board mandated a task force, composed of Tom Feeney, Roland Svensson and Nina Bernot, with preparing a report on the feasibility of CED independence for discussion and possible decision by CED members at the CED General Meeting in Prague on May 29-30, 2009.

In accordance with Article 22.1 of CED Statutes, representation of CED interests and the role of the CED permanent secretariat are performed by the CED Brussels office. Since its establishment, the CED and its predecessor, the EU Dental Liaison Committee, has shared office space with the German Dental Chamber (BZÄK). BZÄK has also provided staff for CED activities. The arrangement between the CED and BZÄK is defined and governed by an agreement between the two organisations, as presented to the November 2007 General Meeting and signed on April 10, 2008, in Brussels.

CED independence will be a major topic for discussion at both the Board and General Meetings in Prague. The argument in favour of independence is that a mature organisation needs its own secretariat and should not be linked, or share offices and staff with, another organisation. Over the past few years, the CED has developed into a mature organisation, with a large membership and a visible presence in Brussels.



Nina Bernot, EU Affairs Officer, CED; and, Dr Tom Feeney, CED Treasurer.

The CED now includes 33 member and observer organisations from 31 countries, is clearly the representative organisation of the practising profession in Brussels, and is recognised as such by the EU institutions, EU national authorities and other European professional organisations. The range of CED activities in Brussels, and through its working groups and task forces, has expanded and requires constant and well-planned administrative support from a permanent secretariat.

Cross-border healthcare directive

On April 23, during its first reading, the European Parliament adopted the report on the proposal for a directive on the application of patients' rights in cross-border healthcare. This came after tough discussions in the Parliamentary committees, including on the question of the legal basis for the Directive. MEPs finally voted that the basis should be Article 95 of the Treaty (internal market) and not Article 152 (public health).

Due to many outstanding issues and concerns signalled by Member States over the last months (the extent of Member States' ability to control inflow of patients from abroad, the definition of care eligible for prior authorisation, what kind of information about treatment abroad should be available to patients, the Commission's role in encouraging co-operation between Member States), it is unclear whether an agreement will be reached in the Council by June, as tentatively scheduled. Council discussion will continue in May.

CED activity

At its November 2008 General Meeting, the CED adopted a position paper on the draft directive, on the basis of which proposals for amendments were prepared in December 2008 and submitted to relevant MEPs, who tabled them in their name.

CED response to European Commission's public consultation on fluoride

The CED welcomed the opportunity to respond to the Commission's public consultation on fluoride. The CED's response was based on contributions of CED members participating in an ad hoc task force established for this purpose. Because of time constraints, the CED was unable to conduct an exhaustive survey among all of its members.

The submission pointed out that the existing body of evidence strongly suggested that water fluoridation is beneficial at reducing dental caries, not only in children but also throughout the adult life of the population. While it is important to continually review the evidence, there is no conclusive evidence that the levels of fluoridation required to bring about such health gains pose a risk to human health.

The submission also stated that water fluoridation is used in over 30 countries, where around 350 million people – in the UK, the Republic of Ireland, Spain and elsewhere – currently benefit. While this population-wide measure has been shown to improve the dental health of children and adults across all strata, it also reduces socio-economic inequalities in dental health.

EU NEWS

Update on patient safety

On December 15, 2008, the European Commission adopted the Commission Communication and the proposal for a Council Recommendation on patient safety and the prevention and control of healthcare-associated infections. By the end of April, the Council held several discussions on the draft Council recommendation. Member States felt that several issues connected to the draft were unclear or problematic. The Council was expected to complete its discussion on April 29 and then submit the proposal to the health ministers; however, its final discussion was postponed due to an extraordinary meeting of EU health ministers on swine influenza on April 30. It remains the intention of the Czech Presidency to reach an agreement and adopt the Council Recommendation at the meeting of health ministers scheduled for June 8, 2009.

The European Parliament's ENVI committee prepared an opinion on the draft Council Recommendation in which it largely supported the draft, but went beyond the Commission's text in suggesting that concrete targets for reduction of infections be set (20% by 2015), that more nurses specialised in infection control be recruited, and that education on

resistance to antibiotics for medical and paramedical professions be promoted. The report was adopted in the plenary with an overwhelming majority on April 23, 2009. The Parliament's vote is politically significant and the Czech Presidency has reportedly included some elements of the report in its latest draft.

Opinions were also produced by the Committee of Regions and the Economic and Social Committee, and they were both largely supportive of the Commission's proposal.

CED activity

Nina Bernot stressed the CED's interest in contributing to future initiatives on patient safety during the meeting of the EU Health Policy Forum on December 10, 2008, and has been in contact with the relevant DG SANCO officials since then. She also participated in the first meeting of the Commission-led Patient Safety and Quality of Care Working Group on April 28. The Brussels office will continue to monitor and report on the discussions in the Council and participate in the Patient Safety and Quality of Care Working Group.

Update on tooth-whitening products

The European Commission (DG Enterprise) has continued to postpone the discussion on a proposal to amend the Cosmetics Directive in line with the opinion by the Scientific Committee on Consumer Products, adopted on December 18, 2007. The Commission now intends to present the proposal at a meeting on June 9-10, 2009. The new proposal will reportedly adhere to the Commission's long-held position that tooth-whitening products (TWP) with more than 6% H₂O₂ should be classified as cosmetics and mentioned in the Directive (opposed by some Member States). The Commission intends to present alternatives regarding who should be authorised for "first use" of 0.1-6% H₂O₂ (dentist or professional), which is another contentious issue among Member States; as reported to the CED office, the Commission's intention is not to get involved in the discussion but simply to present language that would respect different national arrangements and be agreeable to all Member States.

CED activity

Following the adoption of the CED Resolution on the implementation of the final SCCP opinion on TWPs during the CED GM in November 2008, the CED's position was communicated to the Commission and Member States concerned, both through the CED members (and their MEPs) and the Brussels office. DG Enterprise has refused to meet with the chair of the CED TWPs WG, Dr Stuart Johnston, and the Brussels office, claiming that they have no further information about the process and do not see a way for a CED contribution. Enterprise and Industry Commissioner Günther Verheugen replied on March 31 to MEP John Bowis on the issue of the Commission's work on the amendment of the Cosmetics Directive. He reiterated the Commission's position and stated that the Commission services were in close contact with the CED and will continue briefings on each step of the process.

Update on amalgam

The Commission held a meeting on the opinions on dental amalgam of SCENIHR and SCHER with anti-mercury NGOs and groups on January 20, 2009. The groups requested that further examination of the risks of mercury be conducted by the scientific committees and the Commission confirmed that a report of their discussion would be submitted to the new scientific committees. The Commission's position on the issue was that a decision whether or not a new opinion on the risks associated with mercury in dental amalgam should be produced, was up to the scientific committees. In April, meanwhile, SCENIHR issued a request for a scientific opinion on mercury sphygmomanometers in healthcare and the feasibility of alternatives.

Mercury sphygmomanometers are exempt from the EU-wide ban on the sale of all mercury-containing measuring devices, which is in effect from April 3, 2009, and the request for an opinion signals continued political pressure against the use of mercury in healthcare.

CED activity

The CED Board discussed the issue at their meeting in Cologne on March 27 and agreed that a letter should be sent to the Commission reaffirming the CED's position on dental amalgam. On May 4, a letter by the CED Amalgam Working Group chair was sent to the Commission.



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IDA promoting best practice

In its ongoing efforts to improve services to members, the IDA has begun a number of new initiatives to promote best practice.



These initiatives will help members to deal with the ever-changing landscape of best practice, continuing professional development (CPD) and clinical audit. More detailed information on all of the topics discussed below is available by contacting IDA House, or logging on to the members' section of the IDA website – www.dentist.ie.

Best practice

The IDA's Best Practice Committee, which is Chaired by Dr Eamon Croke, and includes Drs Anne O'Donnell, Robert Gallagher, Brendan Glass, Marielle Blake and Stephen Flint, aims to encourage the development and introduction of best practice standards in relation to the practice of dentistry. To this end, the Committee has devised a range of guidelines on four areas of relevance to dental practitioners: cross infection control; radiology; waste management; and, employment issues. The guidelines are featured in the 'Best practice' section of the IDA website members' area. The Best Practice Committee will work to maintain and update this information.

Cross infection control

Infection control is the responsibility of the whole dental team. Advice and guidelines on infection control, first published by the Dental Council in 1993, have been amended over the years as the principles of infection control as applied to contemporary dental practice are better understood, and more knowledge and research becomes available.

This section of the website will provide access to new information or guidelines on infection control as it becomes available, including discussions around:

- how to write a cross infection safety statement;
- staff protection;
- decontamination and sterilisation;
- equipment and maintenance;
- laboratory protocols; and,
- disposal of clinical waste.



See www.dentist.ie for information on best practice.

Radiology

Radiology is an intrinsic component of dentistry and one that has seen significant changes in recent years, involving both technology and regulation. This section of the website is designed to aid practitioners by acting as an easily accessed resource in a rapidly changing, regulated environment.

Waste management

Dental surgeons are required to comply with a range of regulations and legislation regarding waste management. Environmental health officers can now inspect practices to ensure that dentists are compliant with waste management under the 2005 Health and Safety Act.

This section of the website offers advice on management of a variety of waste, including: sharps; x-ray fluid; out of date medicine; lead foil; amalgam; and, old x-ray equipment. It also advises on devising a practice waste plan, including the need to keep good records of waste disposal.

Employment issues

The IDA commits significant resources to advising members on their contractual rights and, in the case of those dentists who employ staff, their

contractual obligations. In addition, the Association has prepared a number of guidance notes on issues such as leave entitlements and pro-forma contracts, as well as grievance and disciplinary procedures. This section includes links to HSE HR circulars and policies, procedures and guidelines, many of which have been negotiated by trade unions and the HSE.

Continuing professional development

At the recent IDA Annual Conference in Kilkenny, Assistant Chief Executive Elaine Hughes outlined the Association's plans with regard to mandatory CPD. As most dentists are aware, CPD will be mandatory from January 2010, and current advice from the Dental Council is that dentists should record their CPD from January 2009. Under the new system, CPD will run according to a five-year – or 250-hour – cycle. This must include CPD in three core areas – CPR, infection control and oral radiology. All dentists will be required to complete CPD in these core areas during a cycle. The other topics a dentist chooses will depend on their individual specialty and interests.

Role of the IDA

Ms Hughes outlined the IDA's goals with regard to CPD, which include:

1. Assisting in the provision of CPD for the dental profession.
2. Assessment of existing other providers and resources in Ireland and abroad.
3. Assessment of additional need for CPD.
4. Co-operation with other providers to address this need.
5. Evaluation and assessment of CPD provision and additional needs.
6. Evaluation of new ways of provision of learning, e.g., technology, podcasts, internet, etc.

For example, it is intended that in the future, attendance at the entire IDA Annual Conference will provide a dentist's full CPD requirement for one year. This will include content on the three core topics, which would be included every year.

The IDA sees itself as at the forefront of CPD, and is working to maintain this position. Ms Hughes introduced delegates to plans for an online learning tool, which will be launched by the IDA at the end of summer 2009. With the collaboration of a professional online education company, Aurion Learning, the IDA will develop a contact management system to allow all delegates attending any CPD event, including branch meetings, national meetings, IDA Annual Conference, and the Public Dental Surgeons Seminar, to easily record their CPD hours and monitor CPD activity on a monthly basis.

This password-protected tool will be accessible through the members' section of the IDA website and will contain a range of CPD materials. The Association initially plans to purchase material (which will be vetted for suitability), but eventually it is intended that members will be able to upload lectures from IDA meetings (in fact, the Conference presentations were recorded for that purpose). The relevant PowerPoint presentations will be available alongside the broadcasts, and each section will feature questions at the end to test the dentist on the material, allowing them to fulfil their CPD requirement.

IT skills

With research indicating that less than 50% of IDA members use email on a regular basis, the IDA recognises that there is a need to assist members in building IT skills, thus easing the process of fulfilling CPD requirements. The Association is working on a package to provide members with a PC/laptop, printer and training, as well as training in practice management skills.

Clinical audit in radiology

Most dental practitioners will be aware that their x-ray equipment must be licensed by the Radiological Protection Institute of Ireland (RPII) and that the practice is subject to certain licence conditions for the protection of workers and the general public. However, in addition, all dental practitioners are now legally required to perform clinical audits in radiology in accordance with Dental Council guidelines.

Statutory Instrument (SI) 478 (2002) and, subsequently, SI303 (2007), are the law requiring dentists to adhere to best practice in radiology, while also providing for the health protection of individuals against the dangers of ionising radiation in relation to medical exposures. Each holder of a radiography machine must carry out a clinical audit as per the Dental Council guidelines of 2008 every five years; that internal audit must withstand external review. In 2008, the Dental Council published their criteria for a clinical audit in dental radiography. They are:

- selection criteria;
- technique selection;
- x-ray equipment;
- patient dose;
- processing;
- image quality;
- image interpretation;
- records;
- training;
- and,
- internal audit.

A working group made up of Drs Andrew Bolas, Eamon Croke, Maurice FitzGerald and Maurice Quirke have put together a 'Dental Practice Radiography File' (DPRF), which will allow practitioners to collate all relevant information and data in order to conduct an internal audit in every dental practice. The file, if completed correctly, will allow practitioners to meet all Dental Council criteria and their legal obligations.

The concept of the DPRF is to allow the practitioner to hold all the relevant information in one location. This allows for easy reference, the collation of data, and facilitates the practice of internal audit. It is also hoped that the file provides the framework to allow internal audit to be a task that does not unduly take the practitioner away from their clinical work and hence does not become an overly onerous task.

IDA members can download a comprehensive document from the IDA website. It is imperative that all practitioners familiarise themselves with these regulations to help them conduct clinical audit in their own practice.

IDA CONFERENCE

At the Conference



From left: Fintan Hourihan; Dr Maurice Quirke; Dr Rosarii McCafferty; Dr Ed O'Reilly; Dr Martin McAleese; President Mary McAleese; Dr Donal Blackwell; Dr Billy Davis; Dr Ena Brennan; and Dr Garrett McGann.



At the IDA Art Exhibition in aid of the CEKA Irish dental project in Kenya were (from left): Dr Billy Davis; Dr Ena Brennan; Kenyan Ambassador H.E. Catherine Muigai Mwangi; Dr Donal Blackwell; Ms Jane Wangui Muigai; Dr Conor McAllister, and IDA CEO Fintan Hourihan.



The family of IDA president Dr Donal Blackwell.



The IDA team (from left): Dario Gioe; Mena Sherlock; Elaine Hughes; Jessie Keatley; Claire Cosgrave; and, Fintan Hourihan.

With over 500 delegates making their way to Hotel Kilkenny, Skillkenny 2009 ranks as one of the most successful IDA Annual Conferences yet. The whole dental team was represented and catered for, and presentations covered aspects of running a business, and of education, as well as the latest scientific and clinical research.

The pre-conference programme of practical instruction was well attended, and covered a wide variety of areas, from endodontics to composite layering. Once again, the IDA AGM was held during the Conference, and Thursday morning saw lively discussion of a number of issues.

On Thursday afternoon, in a session chaired by Dr Jane Renehan, the IDA presented an extensive programme of information on the steps the Association is taking to support members in obtaining mandatory CPD, taxation issues for dentists, and interim results from the Association's major survey of Irish dentists, full results of which will be available soon. This was followed by a very entertaining and thought-provoking presentation by Professor Brian O'Connell on one of the biggest issues facing dentistry in Ireland – dental tourism. Prof. O'Connell offered a

range of perspectives, from the media, to patients, to dentists in other countries. His presentation sought to open a discussion on what is actually happening, and how Irish dentists can respond to the issue, while educating patients, and keeping their best interests to the forefront.

In the parallel programme on Thursday, Dr Mary Egan presented on 'Irrigation in root canals – what's old, what's new, what's the future'. Dr Egan re-emphasised the importance of irrigation in successful endodontics, and presented an overview of the most effective materials and methods to achieve the best results. She was followed by Dr Barbara Coyne, who shared her extensive experience in paediatric dentistry, providing an invaluable insight into the most common reasons for referral to a specialist in paediatric dentistry, and her approaches to treatment, emphasising the vital role of education, and obtaining a detailed history form both parents and child.

On Friday, the packed conference hall heard from a distinguished group of speakers. Dr Tiernan O'Brien used case studies from his own practice to illustrate a presentation on 'Learning from our errors in implant dentistry'.

IDA CONFERENCE



Dr Ena Brennan hands over the IDA chain of office to Dr Donal Blackwell.



Dr Art McGann received a presentation on the occasion of his 55th Annual Conference.



Mena Sherlock is congratulated by Dr Donal Blackwell, who made a presentation to her marking 30 years service to the Association.



IDA CEO Fintan Hourihan addresses the AGM.



At the presentation of the Costello Medal were (from left): Mrs Jacqueline Costello; IDA President Dr Donal Blackwell; and recipients Laura Fee and Aiyat Elsherif representing Dublin Dental Hospital.



Delegates at Skillkenny 2008.

The Conference was also privileged to welcome Professor Denis Tarnow from the United States to speak on a range of issues around implant dentistry, from planning to avoid complications, to a first look at brand new research he has conducted on immediate versus delayed socket placement. Professor Tarnow asked questions of the audience, challenging assumptions and encouraging delegates to think differently, and emphasised the need to think biologically as well as mechanically, when carrying out implant treatment.

Dr Dermot Canavan gave a comprehensive presentation on minimising pain in dental procedures, discussing the need to properly assess patients for pain syndromes that might affect how they react to local anaesthesia and pain medication. He encouraged delegates to develop a protocol for dealing with pain, and to inform patients of this protocol, as fully informed patients experience fewer complications, and better recovery.

Friday's session also included advice on financial matters from John O'Connor, who reviewed the effects of falling interest rates,

as well as the need for dentists to protect their lifestyle with income protection and proper pension provision.

Epidemiological matters were also addressed this year with a lively presentation from Dr Jimmy Steele on teeth and dentistry in the early 21st Century. Dr Steele talked about the evolutionary imperatives that drive our need for healthy teeth, and how longer life spans, and greater expectations of dental health and retention of teeth, have clinical, social, and indeed economic implications.

Alongside the many presentations and meetings, courses and workshops in CPR and clinical audit in radiology were available to members. A full trade show gave delegates the chance to take a closer look at the latest products and services available to dental practitioners. IDA President Dr Ena Brennan stepped down and Dr Donal Blackwell took office for the coming year. And of course there was an extensive social programme, culminating in the gala dinner, at which the IDA was honoured to welcome President Mary McAleese and her husband Martin.

Medical emergencies in dental practice

Abstract

Serious medical emergencies are fortunately a rare occurrence in the dental practice environment; however, if an emergency situation is encountered a delay in treatment may result in potentially avoidable consequences. The risk of mortality or serious morbidity can be reduced by ensuring that basic emergency equipment and medications are in place, and that the dental team is appropriately trained in basic life support measures. This article aims to provide an overview of the basic emergency medications and equipment that should be present in dental practices, and to discuss specific responses to some of the more common adverse medical events that can present while providing dental treatment.

Journal of the Irish Dental Association 2009; 55 (3): 134 – 143.

Introduction

Medical emergencies can and do occur in a dental practice setting. The dentist has a responsibility to recognise them and initiate primary emergency management procedures in an effort to reduce morbidity and mortality when such adverse events arise. This article aims to provide an overview of the basic emergency drugs and equipment that should be present in dental practices, and to discuss specific responses to some of the more common adverse medical events that can be encountered while providing dental treatment.

Incidence

Fortunately, the incidence of emergency events seen in the general practice setting is rare but when an emergency does occur it can be life threatening. The more common problems include vasovagal syncope (faints), hypoglycaemic episodes, angina, seizures, choking, asthmatic attack and anaphylaxis (**Table 1**). Excluding syncope, adverse medical events have been reported to occur at a rate of 0.7 cases per dentist per year¹ or on average an event once every three to four years.² It has also been reported that medical emergencies occur in dental hospital practice more frequently but in similar proportions to those in general dental practice.³

Table 1. Prevalence of medical emergencies reported by dentists over a 12-month period.¹

| Emergency | Cases per dentist per year | Average number of years before a case is encountered |
|-----------------------|----------------------------|--|
| Vasovagal syncope | 1.9 | 0.5 |
| Angina | 0.17 | 5.7 |
| Epileptic fit | 0.13 | 7.2 |
| Hypoglycaemia | 0.17 | 5.6 |
| Asthma | 0.06 | 15.1 |
| Choking | 0.09 | 11.2 |
| Anaphylaxis | 0.013 | 75.5 |
| Myocardial infarction | 0.006 | 151 |
| Cardiac arrest | 0.003 | 302 |
| Unspecified collapse | 0.026 | 37.6 |

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Medical risk assessment

The recognition of 'at-risk' patients and subsequent appropriate management is paramount in reducing the probability of an adverse event. Acknowledgement that any dental patient may have a medical emergency during dental treatment is a key start point.

A thorough medical and drug history is mandatory and should be undertaken by the dentist in person. Patient-completed health questionnaires should be confirmed by a verbal history (**Appendix**). Identification of at-risk patients will allow modifications to be made to treatment planning and may highlight those patients whose treatment may be more appropriately conducted at specific times or in specialist centres. Medical and drug records should be updated annually, and any changes highlighted during ongoing treatment plans should be re-assessed and recorded at every visit. This is more important now than ever as we are treating an ageing population who may have substantial co-morbidities and who are undergoing complex and frequently changing medical therapies.

Emergency drugs in the general dental practice

To manage the more common medical emergencies encountered in general practice, the following drugs should be available:⁴

1. **Oxygen.**
2. **Oral glucose** solution/tablets/gel/powder.
3. **Glucagon** injection 1mg IM.
4. **Salbutamol** aerosol inhaler (100 micrograms/actuation).
5. **Adrenaline** IM injection (1:1,000, 1mg/ml).
6. **Glyceryl trinitrate** (GTN) sublingual spray (400 micrograms/dose).
7. **Aspirin** dispersible (300mg).
8. **Midazolam** 5mg/ml or 10mg/ml (buccal or intranasal).

Where possible, drugs in solution should be in a pre-filled syringe. The intravenous route for administration of drugs in medical emergencies should only be employed if the dental practitioner has had sufficient experience in gaining IV access, as much time may be lost in establishing an appropriate line. Intramuscular, inhalational, sublingual, buccal and intranasal routes are all much quicker routes of administration in an emergency. All emergency drugs should be stored in a designated storage unit, which is appropriately labelled and readily accessible, should be in date, and should undergo weekly checks.

Oxygen containers should be portable and of sufficient capacity to allow for flow rates of 10l/min. A full 'D' size cylinder contains 340l of oxygen and should allow a flow rate of 10l/min for 30 minutes. This should be adequate to oxygenate the patient to allow for arrival of the emergency services. Two cylinders are

advisable to allow for potential failure of one and consideration should be given to higher volume units for more rural practices.

Medical emergency and resuscitation equipment

Access to resuscitation drugs and equipment must be immediate and all staff members must be familiar with their correct use and location. The minimum equipment recommended includes:⁴

1. **Portable oxygen cylinder** (D size) with pressure reduction valve and flowmeter.
2. **Oxygen facemask** with tubing (**Figure 4**).
3. **Oropharyngeal airways** (sizes 1,2,3 and 4) (**Figure 6**).
4. **Pocket mask** with oxygen port (**Figure 3**).
5. **Self-inflating bag** and mask apparatus with oxygen reservoir and tubing (1l size bag), where staff have been appropriately trained (**Figure 5**).
6. Variety of well fitting adult and child **face masks** for attaching to self-inflating bag.
7. **Portable suction** with appropriate suction catheters and tubing, e.g., the Yankauer sucker.
8. Single use **sterile syringes and needles**.
9. '**Spacer**' device for inhaled bronchodilators.
10. **Automated blood glucose measurement device** (**Figure 7**).

Automated external defibrillators

Myocardial infarction (MI) is usually as a result of thrombosis in a coronary artery, and over 50% of patients who die as a result of an MI will do so within the first hour. Death is usually as a result of ventricular fibrillation and in most cases this is preceded by ventricular tachycardia.

Automated external defibrillators (AEDs) reduce mortality from cardiac arrest caused by ventricular fibrillation and pulseless ventricular tachycardia by passing an electrical current across the myocardium. This results in depolarisation of cardiac muscle and resumption of normal conduction. Studies of survivors of sudden cardiac arrest have shown that defibrillation within one minute of witnessed cardiac arrests has led to survival rates greater than 90%.⁵ CPR without defibrillation will not convert ventricular fibrillation and survival rates from sudden cardiac arrest decrease by 10% with every one-minute delay in receiving defibrillation.⁵ The provision of an AED enables all dental staff to attempt defibrillation safely with relatively little training, as AED technology does not require ECG rhythm recognition by the operator.

It is an expectation of the public that AEDs should be available in every healthcare environment and the dental surgery is not seen as an exception. AED units that are suitable for dental practices cost in the region of €1,500 and are easily sourced through online healthcare equipment suppliers.

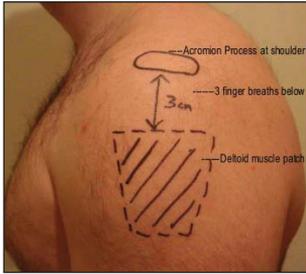


FIGURE 1: Deltoid intramuscular injection site.

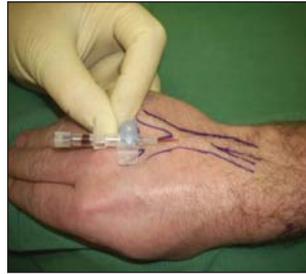


FIGURE 2: IV access to dorsal hand veins using a winged Venflon® cannula.



FIGURE 3: Pocket facemask with oxygen port.



FIGURE 4: Oxygen facemask with tubing.



FIGURE 5: 1l oxygen reservoir with mask and tubing.



FIGURE 6: Size estimation using the angle of the mandible as an anatomical reference point.

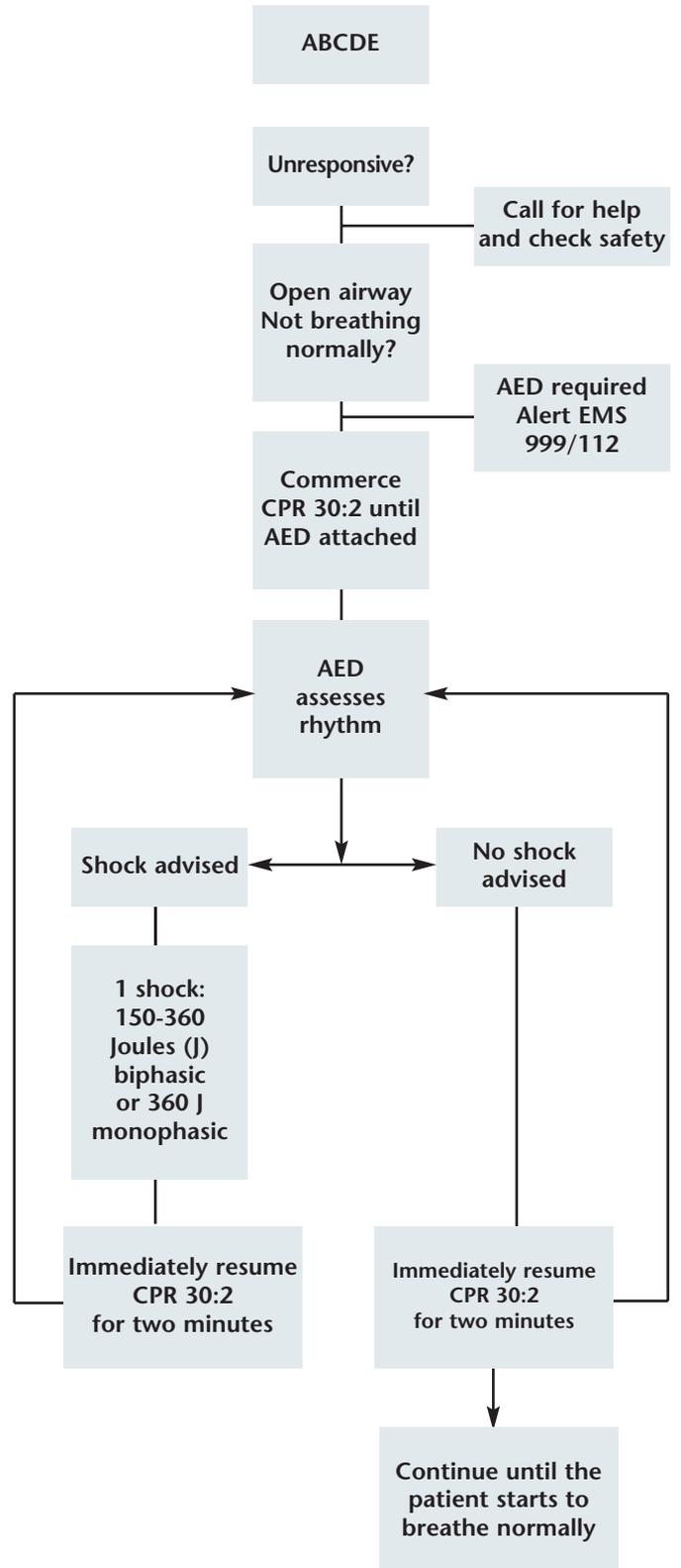


FIGURE 7: Blood glucose estimation device.



FIGURE 8: Automated external defibrillators and chest pads on display.

Defibrillator (AED) algorithm:⁶



The primary survey in medical emergencies

- Remember to remain calm.
- Ensure that the patient, your staff and you are safe. For example, ensure there are no sharp instruments in the area that may cause further harm.
- Inspect the patient: does he/she look unwell?
- If the patient is conscious ask: "Are you alright"? If he/she is unconscious or there is no response to questioning, then shake gently and repeat the questioning.
- If the patient responds normally, then you can assume that he/she has a clear airway, is breathing normally and is maintaining cerebral perfusion.
- If answers are in short sentences or stridor is present, then an airway problem is likely.

Airway:

Assess airway patency:

Gurgling suggests a liquid or semi-solid foreign body obstruction.

Partial obstruction: Inspiratory 'stridor' (laryngeal level or above), expiratory 'wheeze' suggests lower airway obstruction.

Complete obstruction: No breath sounds, silent chest.

Breathing:

Assess for signs of respiratory distress:

Sweating, central cyanosis (tongue, mucous membranes), use of accessory muscles of respiration (neck muscles) and abdominal breathing.

Listen to the breath sounds by placing your ear over the mouth.

Count respiratory rate (RR): Normal adult RR is 12-20 breaths/min; child is 20-30 breaths/min.

Assess depth and symmetry of inspiration by observing chest expansion.

Circulation:

Assess carotid pulse or radial pulse.

Look at the colour of the hands and fingers: are they blue, pink or mottled? Assess the limb temperature by feeling the patient's hand: is it cool or warm?

Assess capillary refill time: apply blanching pressure for five seconds on the fingertip at heart level. Normal refill time is <3 seconds.

Check blood pressure equipment and competency allows.

Disability:

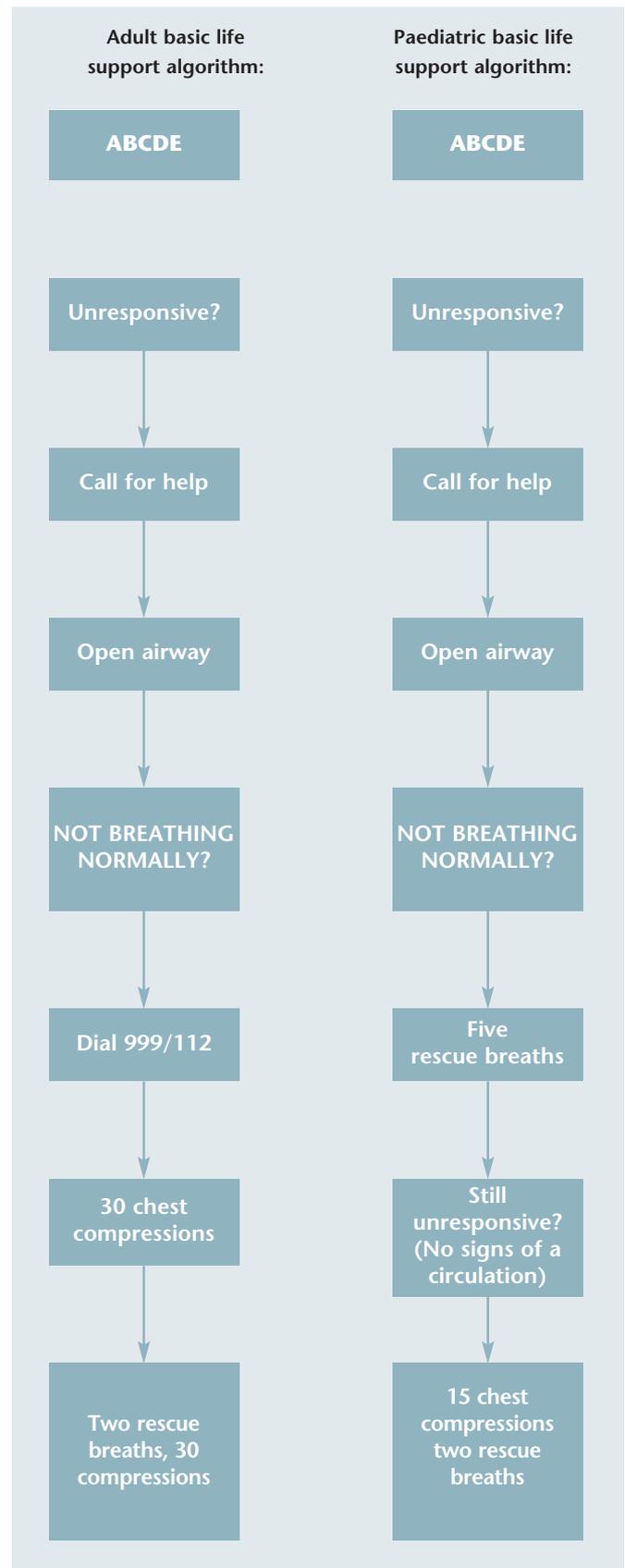
Assess the level of consciousness with AVPU score:

- Alert?
- Responds to Vocal stimulus?
- Responds to Pain?
- Unresponsive?

Examine **pupils** for size, equality and light reflex.

Exposure:

Loosen or remove some of the patient's clothes if necessary to allow for a thorough assessment. Respect the patient's dignity and minimise heat loss.

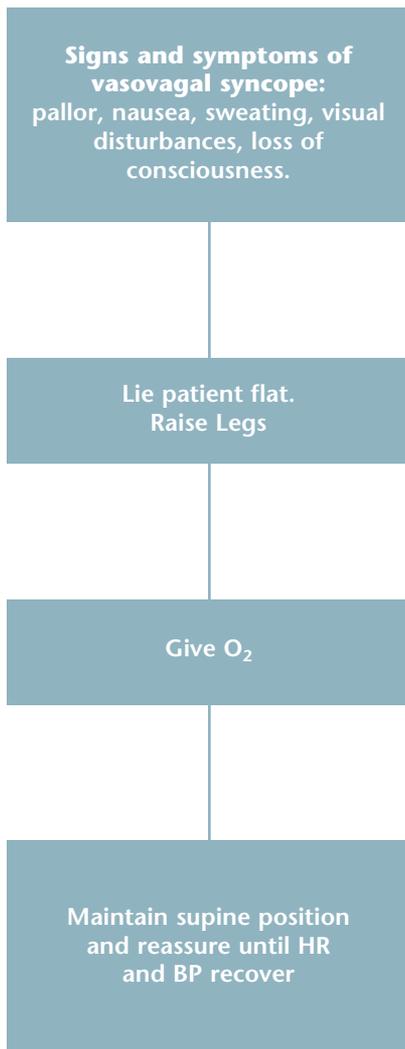


Specific responses to emergency situations

Vasovagal syncope

Syncope is defined as sudden, transient loss of consciousness, with spontaneous recovery. This is a neurally mediated response and is commonly provoked by emotion, pain, fear or standing for long periods. Physiologically, it involves reflex bradycardia with or without peripheral vasodilation. It is unlikely to occur if the patient is lying supine.

Algorithm for the management of syncope:



Patients with significant medical problems, or when syncope is prolonged or complicated by seizure activity, should be transferred to a hospital environment for further assessment as indicated.

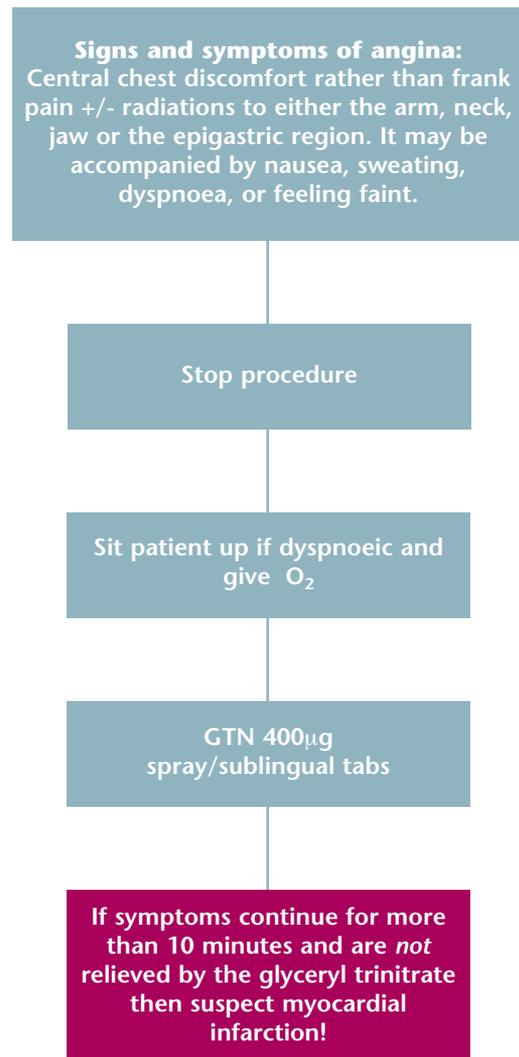
Angina

Angina pectoris is the result of myocardial ischaemia caused by an imbalance between myocardial blood supply and oxygen demand. Typically, angina is precipitated by exertion, eating, exposure to cold, or emotional stress. It lasts for approximately one to five minutes and is relieved by rest or glyceryl trinitrate.

It can be classified as:

- Stable:** induced by effort and relieved by rest.
- Unstable:** occurring at increasing frequency or severity or at rest.
- Decubitus:** precipitated by lying flat.
- Variant:** caused by coronary artery spasm (rare).

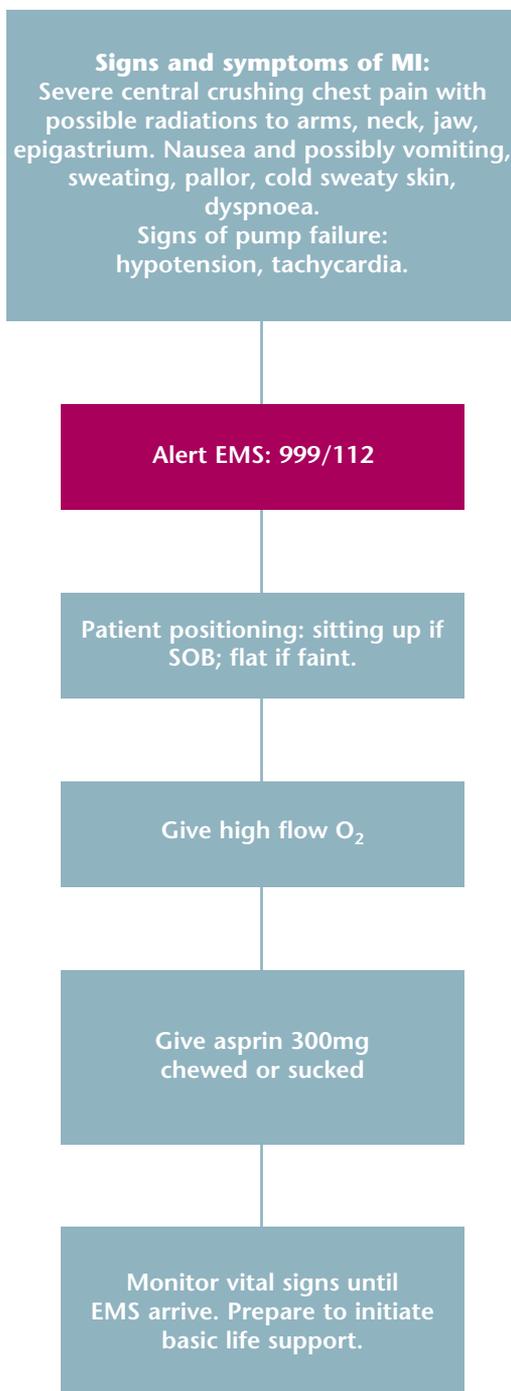
Algorithm for the management of angina:



Myocardial infarction

Myocardial infarction (MI) is the irreversible necrosis of heart muscle secondary to prolonged ischaemia. This usually results from an imbalance of oxygen supply and demand. Approximately 90% of MIs result from an acute thrombus that obstructs an atherosclerotic coronary artery, resulting in complete occlusion of the vessel.

Algorithm for the management of acute myocardial infarction:



Epilepsy

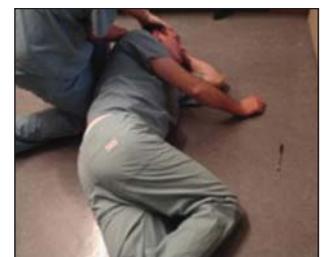
This is a recurrent tendency to spontaneous, intermittent, abnormal electrical activity in a part of the brain, manifesting as seizures.⁷

Seizure types are characterised firstly according to whether the source of the seizure within the brain is localised (partial or focal seizure) or widely distributed (generalised seizures). Partial seizures are further divided on the extent to which consciousness is affected. If it is unaffected, then it is termed a simple partial seizure; otherwise, it is a complex partial seizure. A partial seizure may spread within the brain and become a secondary generalised seizure. Generalised seizures are divided according to the effect on the body but all involve loss of consciousness. These include absence (petit mal), myoclonic, clonic, tonic, tonic-clonic (grand mal) and atonic seizures.

Status epilepticus

Traditionally, status epilepticus was characterised by 30 minutes of continuous seizure activity or by multiple consecutive seizures without return to full consciousness between the seizures. It is now thought that a shorter period of seizure activity causes neuronal injury and that seizure self-termination is unlikely after five minutes. As a result, some specialists suggest times as brief as five minutes to define status epilepticus.⁸

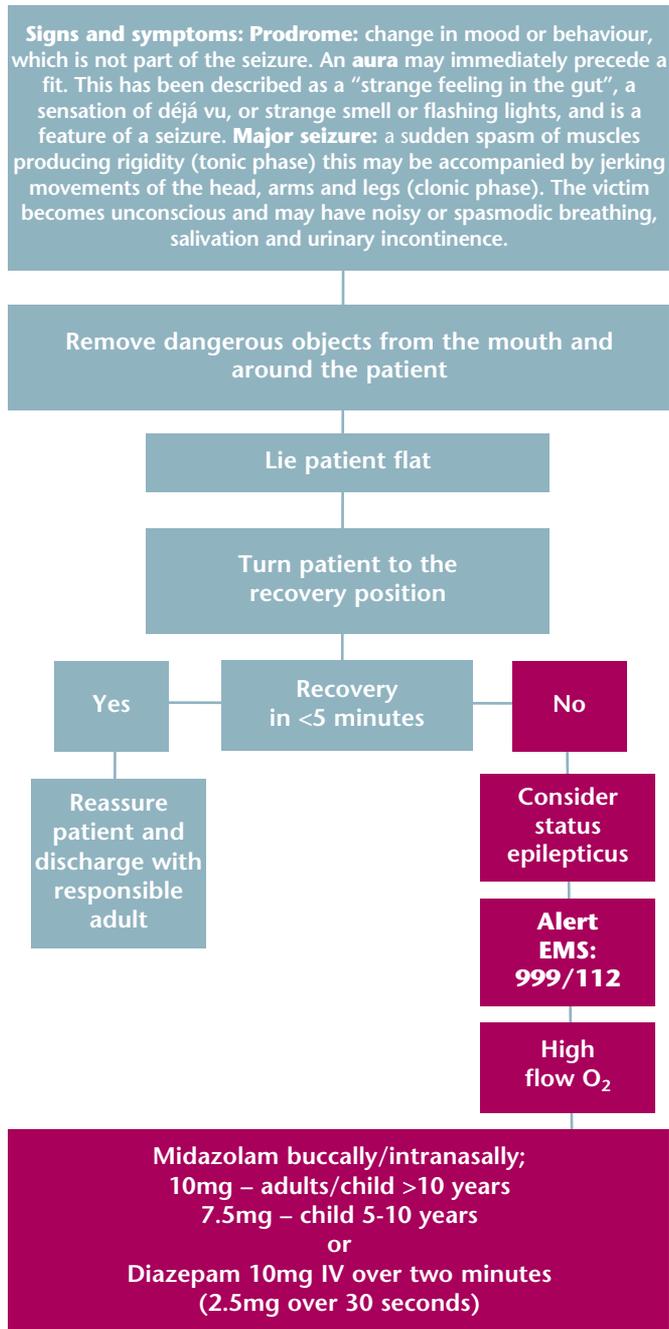
The Resuscitation Council (UK) guidelines from 2006 recommend that medications should only be administered if convulsive movements occur for greater than five minutes or recur in quick succession.⁴ Intravenous diazepam is considered first-line treatment for control of prolonged seizures; however, it may be more appropriate to administer a single dose of midazolam via the buccal or intranasal route in a dental practice setting depending on the experience of the dental clinician in gaining IV access.



FIGURES 9, 10, 11, and 12: An example of how to place an unconscious patient into the lateral recovery position – always ensure that the chin is in an elevated position to maintain airway patency.

SCIENTIFIC

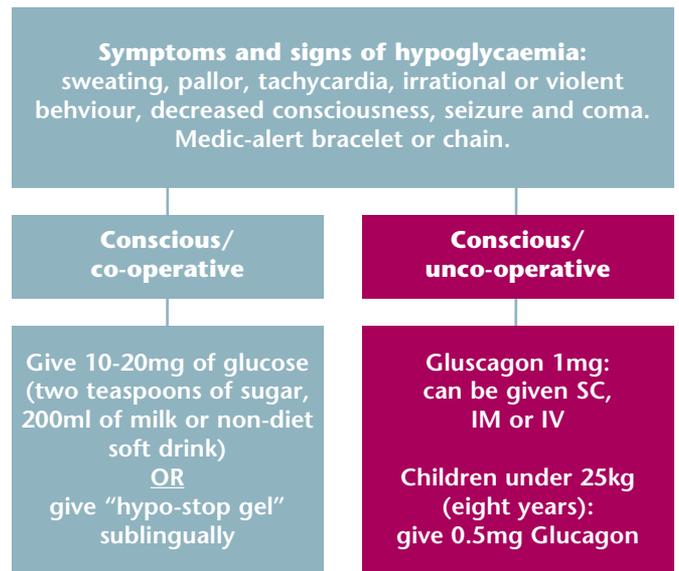
Algorithm for the management of seizures seen in patients with epilepsy:



Hypoglycaemia

Plasma glucose is normally maintained at levels between 3.6 and 5.8mmol/l. Cognitive function deteriorates at levels <3mmol/l. In people with diabetes, the most common cause is a relative imbalance of the administered versus required insulin or oral hypoglycaemic drugs.

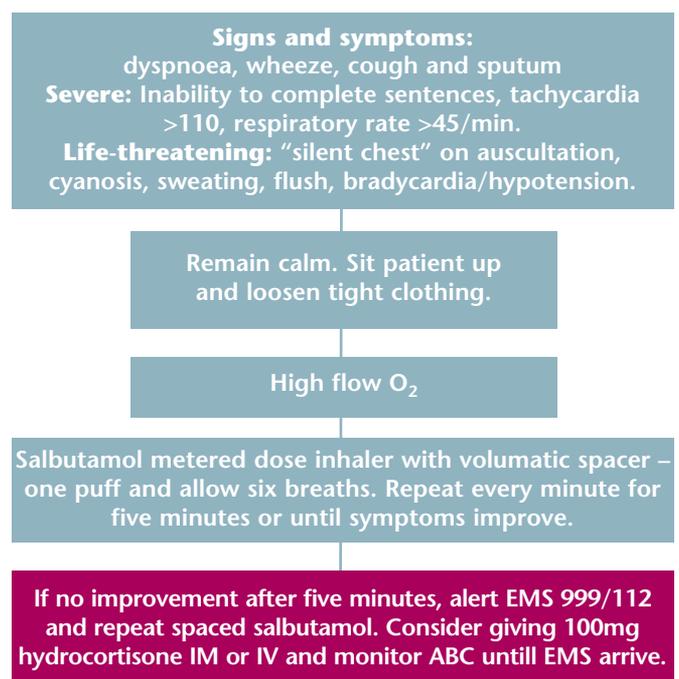
Algorithm for the management of hypoglycaemia:



Asthmatic attack

Asthma is characterised by recurrent episodes of dyspnoea, cough, and wheeze caused by reversible airway obstruction. Ireland has the fourth highest prevalence of asthma worldwide with approximately 470,000 (one in eight) people affected by the chronic condition. Its prevalence in 13- to 14-year-old school children increased by 40% between 1995 and 2003 (15.2% to 21.6%). It is the most common respiratory disease in adults; approximately 80 people die in Ireland every year from it – this is more than one death per week – and 30% of these are under 40 years of age.⁹

Algorithm for management of an asthmatic attack:



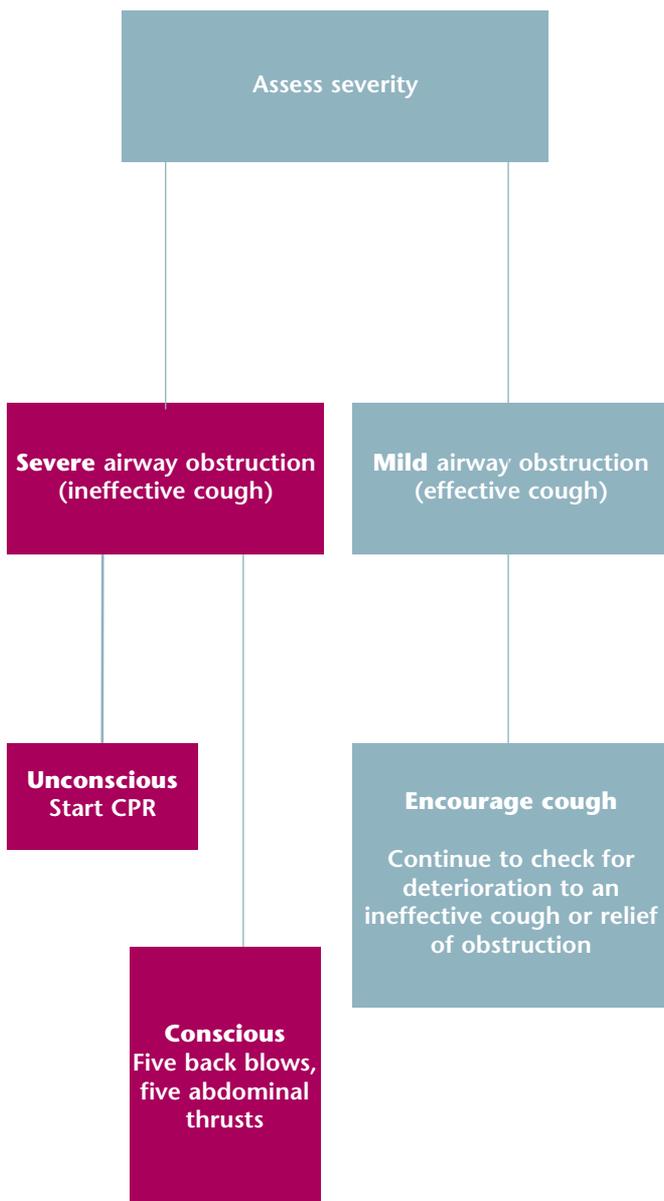
Choking

Foreign bodies may cause either mild or severe airway obstruction. A severe airway obstruction can progress to unconsciousness and cardiac arrest within minutes.

Mild obstruction: Patient can answer questions, speak, cough and breathe.

Severe obstruction: Inability to answer questions, dyspnoea, wheeze, silent cough, cyanosis, unconsciousness.

Algorithm for the management of foreign body obstruction:



Anaphylaxis

Anaphylaxis is a generalised immunological condition of sudden onset, which develops after exposure to a foreign substance. It ultimately results in the release of inflammatory mediators (histamine, prostaglandins, thromboxanes, platelet-derived growth factors and leukotrienes) producing clinical manifestations.

Early treatment with intramuscular adrenaline is the treatment of choice for patients having an anaphylactic reaction. It is an alpha-receptor agonist and receptor binding reverses peripheral vasodilation and reduces oedema. It also has beta-receptor activity and activation results in dilation of the bronchial airways, an increase in myocardial contractility, and suppression of histamine and leukotriene release.

Algorithm for the management of anaphylaxis:

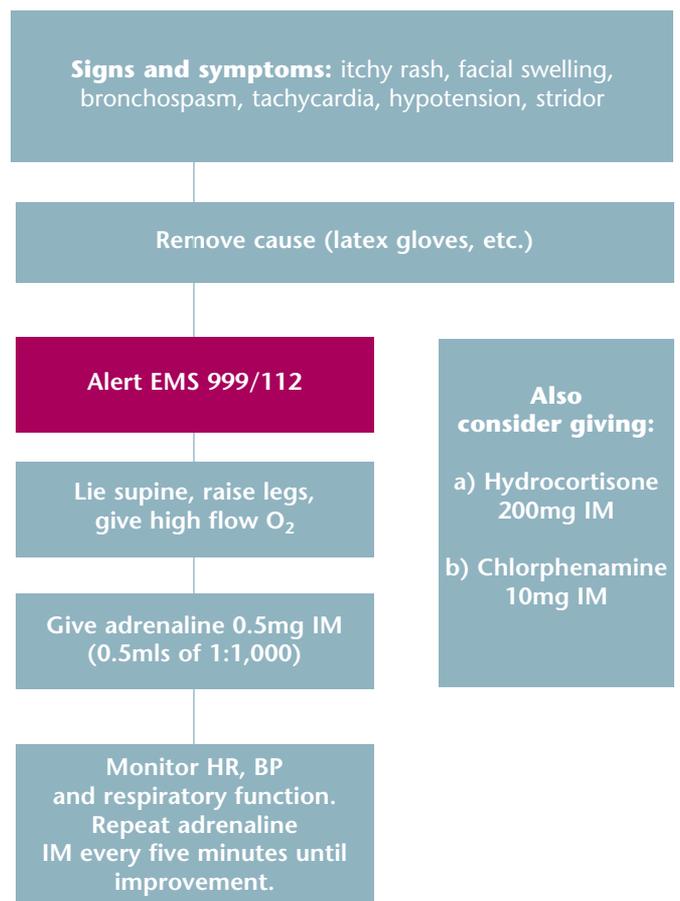
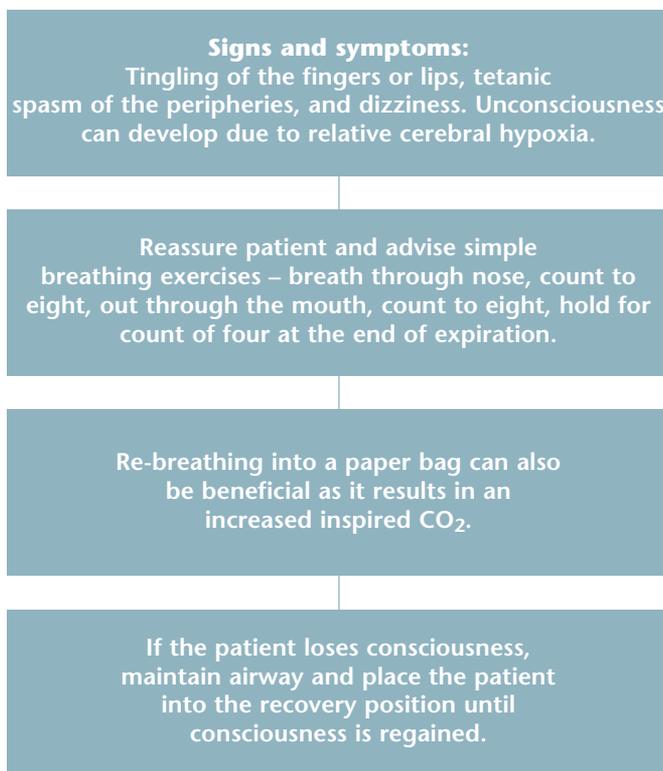


FIGURE 13: Adrenaline autoinjector.

Hyperventilation

Hyperventilation is breathing occurring more deeply and rapidly than normal. The normal adult respiratory rate is 11-18/min but anxiety can result in a hyperventilatory state. CO₂ is ‘blown off’ and results in a decrease in arterial pCO₂. The resultant fall in arterial CO₂ concentration causes cerebral vasoconstriction and respiratory alkalosis.

Algorithm for the management of hyperventilation:



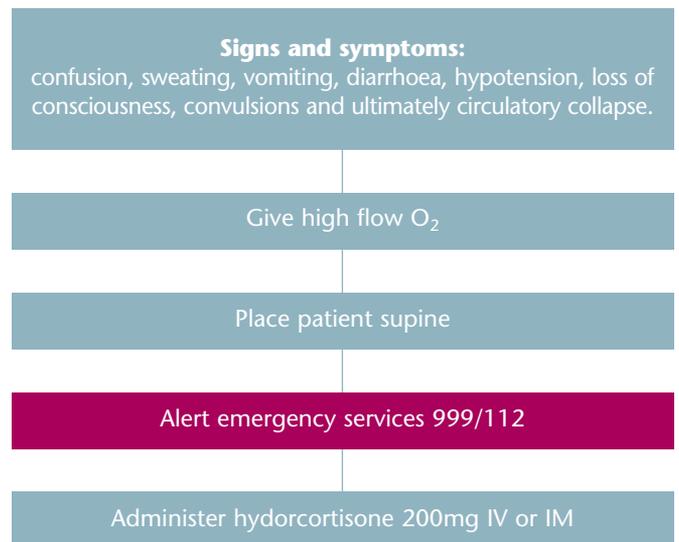
Adrenal crisis

The adrenal cortex produces three steroid hormones, which include glucocorticoids (cortisol), mineralocorticoids and androgens. Cortisol is the most important human glucocorticoid. It is essential for life, and regulates or supports many important metabolic, cardiovascular, immunologic and homeostatic functions in the body. An acute exacerbation of chronic cortisol insufficiency results in ‘adrenal crisis’, and is most commonly precipitated by surgical stress or sepsis. Primary adrenal insufficiency is rare and is due to adrenal gland destruction. This is most commonly idiopathic in nature but may also occur with certain types of infections such as tuberculosis. Secondary adrenal insufficiency is a relatively common phenomenon. It may occur as a consequence of hypothalamic–pituitary disease, or more commonly due to suppression of the hypothalamic–pituitary axis by exogenous steroid therapy. Cortisol production is increased as a response to stress; however, if the adrenal cortex is unable to synthesise an adequate quantity of cortisol, required to meet increased demands, a crisis may be precipitated and a potentially life-threatening medical emergency may develop.

Since the 1950s, it has been common practice to prescribe pre-operative supplemental steroids to provide ‘stress coverage’ to patients identified as having adrenal insufficiency. However, available evidence no longer supports routine recommendations for steroid supplementation for all dental procedures.¹⁰ Salivary cortisol studies have shown that non-surgical dental procedures do not stimulate cortisol production at levels comparable to those of oral surgery,¹¹ and it is now accepted that routine non-surgical dental treatment presents a negligible risk for the development of an adrenal crisis, and steroid cover is no longer necessary.¹²

The situation is less clear for those patients requiring surgical dental treatment and it would seem wise to ensure that these patients are covered until further evidence is made available. In general, risk reduction can be achieved in at-risk patients by scheduling them for early morning appointments (endogenous cortisol levels are higher), ensuring that their usual steroid dose has been taken before the procedure, and providing adequate analgesia and anxiety control medications if necessary.

Algorithm for the management of an acute adrenal crisis:



Staff training

Staff must undergo training in the management of emergencies to a level based on their clinical responsibilities. Skills learned should be refreshed annually and training can be undertaken within the general practice or at designated training centres. All new staff members must undergo resuscitation training as part of their induction.

A questionnaire survey among UK dentists reported that one in five deemed themselves “not very well” or “not at all” prepared to manage medical emergencies should they arise in their surgeries, and 96% expressed a need for further training.¹³ The need for continued training was also expressed by Australian dentists, where just over half deemed themselves proficient in CPR.¹⁴ In Ireland there also appears to be an inadequate availability of refresher courses in this important area. The management of medical emergency situations should therefore be a core subject in the proposed continued professional development programme.

Alveolar lymphangioma in infants: report of two cases

Précis

Two cases are presented of alveolar lymphangiomas found in newborns. Presentation, diagnosis and management are discussed. Photographs are shown to help practitioners to recognise these lesions.

Abstract

The alveolar lymphangioma is a benign but relatively rare condition found only in the oral cavities of black infants. Dentists practising in Ireland may be unaware of this condition due to its racial specificity. This paper presents two case reports of multiple alveolar lymphangiomas found in black infants in a children's hospital in Ireland. The epidemiology, aetiology, clinical presentation, histology, and management options are discussed. The photographs should aid the practitioner in recognising these lesions.

Journal of the Irish Dental Association 2009; 55 (3): 144 – 145.

Introduction

There are several minor conditions of the oral cavity found in newborns. Fortunately, most are benign and self-limiting. The general practitioner may be familiar with the more common conditions such as alveolar and palatal cysts (also known as Bohn's nodules, Epstein's pearls and dental lamina cysts), natal teeth (present at birth), and neonatal teeth (those erupting in the first month of life). In contrast to these common conditions, which are seen in all ethnic groups, the alveolar lymphangioma is a benign but relatively rare condition found only in the oral cavities of black infants.

Case 1

A five-month-old male, born in Ireland to Nigerian parents, was referred by his cardiologist to the Dental Department at Our Lady's Children's Hospital, Crumlin. The reason for referral was a "fleshy overgrowth on the lower gum". The patient had an unremarkable birth, and was diagnosed post-natally with Tetralogy of Fallot. At the time of examination, he was awaiting open heart surgery, but was stable. The patient's mother gave a history of bilateral oral lesions of three months' duration. These lesions did not appear to cause any discomfort and did not interfere with feeding. Examination revealed the presence of two lesions, one on each side at the lingual surface of the mandibular ridge. The lesion on the right

hand side was yellowish in colour and 6mm in diameter. The lesion on the right had a bluish colour and was 3-4mm in diameter. No treatment was necessary, and anticipatory guidance in relation to oral health for children with congenital heart disease was provided to the patient's mother. On review two months later, both lesions had completely resolved, and the oral cavity was found to be normal.

Case 2

A four-week-old male, born in Ireland to a Nigerian mother and Sierra Leonean father, was referred by his cardiologist to the Dental Department at Our Lady's Children's Hospital, Crumlin. This patient had a diagnosis of hypoplastic left heart syndrome made antenatally. He had undergone a Norwood procedure when he was three days old. Now stable, his cardiologist referred him to the Dental Department in relation to swellings in the mouth. The duration of these lesions was unknown. On examination, four lesions were identified, one in each quadrant. The bluish, fluctuant swellings were approximately 6mm in diameter, located on the crest of the ridge in the upper arch, and on the lingual surface of the ridge in the lower arch, all at the first primary molar region. Their clinical features were highly characteristic of the alveolar lymphangioma and no further investigations were necessary. This

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FIGURE 1: Photograph of right mandibular alveolar ridge showing lesion on the lingual aspect of the ridge (Case 1).

infant was followed closely by the dental team as he remained an inpatient. Three weeks later, three of the four lesions had begun to involute. They had reduced in size and were less tense upon palpation. Their bluish hue had subsided, and the lesions had taken on an appearance of a mucocoele that had burst. One of the lesions had increased in size, however, and the patient's mother had some concerns about this. She was reassured, and plans were made to review him in two weeks. At this review, when the patient was 10 weeks old, the fourth lesion had begun to involute, and the others had resolved further. The patient was discharged that week, and it was not deemed necessary to follow his case any further.

Discussion

The alveolar lymphangioma was first described in 1976¹ but was not reported in the dental scientific literature until 1986.² It is reported to occur in 2.2% to 4% of healthy black infants, and it is not found in any other racial group.^{3,4} It has a 2:1 male-to-female distribution.⁴ Clinically, the lesions resemble a mucocoele or an eruption cyst. They range in size from 1mm to 9mm in diameter (averaging 3-4mm) and have a bluish domed fluid-filled appearance. The lymphangiomas have a characteristic site preference, being found at the first primary molar region of the developing alveolar ridge. They are located at the crest of the maxillary ridge, and at the lingual surface of the mandibular ridge.¹ Most affected infants display multiple lesions, with the most common distribution being bilateral lesions on the mandibular mucosa.¹ Generally, only one lesion is found per quadrant, although there is one report of a case in which multiple lesions were found in a single quadrant.² At biopsy, these lesions are reported to collapse readily, releasing a clear fluid.⁴ Histologically, these lesions have been interpreted as lymphangiomas.^{1,2,4,5} Microscopy shows a benign proliferation of endothelium-lined lymphatic structures loosely supported by thin, fibrous connective tissue cores. The lymphatic channels can be found to contain scattered lymphocytes and a finely fibrillar material.^{1,2} Rests of dental epithelium may be found but are not thought to be significant. The lesions are not associated with erupting teeth, and as the crest of the alveolar ridge contains no salivary gland tissue, they are not mucous-retention phenomena. The aetiology of the alveolar lymphangioma is unknown. There is no known relationship between the alveolar lymphangioma and any other congenital defects. The racial specificity and the bilateral site-specificity suggest a developmental, possibly genetic aetiology. Treatment is generally conservative, allowing for spontaneous regression, which may take several months.^{1,4} Surgical removal has been suggested, but only in cases where the lesions are



FIGURE 2: Photograph of right mandibular alveolar ridge showing lesion on the lingual aspect of the ridge (Case 2).



FIGURE 3: Photograph of left maxillary alveolar ridge showing lesion at the junction of the crest and lingual aspect of the ridge (Case 2).

interfering with feeding.⁵ Excision is generally not required for diagnosis, as the clinical features are sufficiently distinctive to allow for differentiation from other oral lesions such as the dental lamina cyst, eruption cyst, mucocoele, and congenital epulis of the newborn.

Dentists practising in Ireland would have been unlikely to have come across the alveolar lymphangioma in the past, but with increased immigration to Ireland from Africa, it is now quite possible that an infant with one or more of these lesions might present to the general dentist. Many commonly used textbooks of oral medicine and paediatric dentistry contain no reference to the alveolar lymphangioma, and it is infrequently reported in the scientific literature. As such, it may be a diagnostic dilemma for many practitioners. Fortunately, no intervention is needed, and once these lesions are recognised and diagnosed, providing reassurance for the parents along with monitoring of the lesion is the only treatment required.

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ABSTRACTS

A systematic review of the survival and complication rates of implant-supported fixed dental prostheses with cantilever extensions after an observation period of at least five years

Aglietta, M., Siciliano, V.I., Zwahlen, M., Brägger, U., Pjetursson, B.E., Lang, N.P., et al.

Objective: The aim of this systematic review was to assess the survival rates of short-span implant-supported cantilever fixed dental prostheses (ICFDPs) and the incidence of technical and biological complications after an observation period of at least five years.

Material and methods: An electronic MEDLINE search supplemented by manual searching was conducted to identify prospective or retrospective cohort studies reporting data of at least five years on ICFDPs. Five- and 10-year estimates for failure and complication rates were calculated using standard or random-effect Poisson regression analysis.

Results: The five studies eligible for the meta-analysis yielded an estimated five- and 10-year ICFDP cumulative survival rate of 94.3% (95% confidence interval [95% CI]: 84.1-98%) and 88.9% (95% CI: 70.8-96.1%), respectively. Five-year estimates for peri-implantitis were 5.4% (95% CI: 2-14.2%) and 9.4% (95% CI: 3.3-25.4%) at implant and prosthesis levels, respectively. Veneer fracture (five-year estimate: 10.3%; 95% CI: 3.9-26.6%) and screw loosening (five-year estimate: 8.2%; 95% CI: 3.9-17%) represented the most common complications, followed by loss of retention (five-year estimate: 5.7%; 95% CI: 1.9-16.5%) and abutment/screw fracture (five-year estimate: 2.1%; 95% CI: 0.9-5.1%). Implant fracture was rare (five-year estimate: 1.3%; 95% CI: 0.2-8.3%); no framework fracture was reported. Radiographic bone level changes did not yield statistically significant differences either at the prosthesis or at the implant levels when comparing ICFDPs with short-span implant-supported end-abutment fixed dental prostheses.

Conclusions: ICFDPs represent a valid treatment modality; no detrimental effects can be expected on bone levels due to the presence of a cantilever extension per se.

Clin Oral Implants Research 2009; 20 (5): 441-451.

Shade matching assisted by digital photography and computer software

Schropp, L.

Purpose: To evaluate the efficacy of digital photographs and graphic computer software for colour matching compared to conventional visual matching.

Materials and methods: The shade of a tab from a shade guide (Vita 3D-Master Guide) placed in a phantom head was matched to a second guide of the same type by nine observers. This was done for 12 selected shade tabs (tests). The shade-matching procedure was performed visually in a simulated clinic environment and with digital photographs, and the time spent for both procedures was recorded. An alternative arrangement of the shade tabs was used in the digital photographs. In addition, a graphic software program was used for colour analysis. Hue, chroma, and lightness values of the test tab and all tabs of the second guide were derived from the digital photographs. According to the CIE L*C*h* colour system, the colour differences between the test tab and tabs of the second guide were calculated. The shade guide tab that deviated least from the test tab was determined to be the match. Shade matching performance by means of graphic software was compared with the two visual methods and tested by Chi-square tests ($\alpha=0.05$).

Results: Eight of 12 test tabs (67%) were matched correctly by the computer software method. This was significantly better ($p<0.02$) than the performance of the visual shade matching methods conducted in the simulated clinic (32% correct match) and with photographs (28% correct match). No correlation between time consumption for the visual shade matching methods and frequency of correct match was observed.

Conclusions: Shade matching assisted by digital photographs and computer software was significantly more reliable than by conventional visual methods.

Journal of Prosthodontics 2009; 18: 235-241.

Burning mouth syndrome: the role of contact hypersensitivity

Marino, R., Capaccio, P., Pignataro, L., Spadari, F.

Background: Burning mouth syndrome is a burning sensation or stinging disorder affecting the oral mucosa in the absence of any clinical signs or mucosal lesions. Some studies have suggested that burning mouth syndrome could be caused by the metals used in dental prostheses, as well as by acrylate monomers, additives and flavouring agents, although others have not found any aetiological role for hypersensitivity to dental materials.

Objective: To evaluate the extent and severity of adverse reactions to dental materials in a group of patients with burning mouth syndrome, and investigate the possible role of contact allergy in its pathogenesis.

Materials and methods: We prospectively studied 124 consecutive patients with burning mouth syndrome (108 males; mean age 57 years, range 41-83), all of whom underwent allergen patch testing between 2004 and 2007.

Results: Sixteen patients (13%) showed positive patch test reactions and were classified as having burning mouth syndrome type 3 or secondary burning mouth syndrome (Lamey's and Scala's classifications).

Conclusion: Although we did not find any significant association between the patients and positive patch test reactions, it would be advisable to include hypersensitivity to dental components when evaluating patients experiencing intermittent oral burning without any clinical signs.

Oral Diseases 2009; 15 (4): 255-258.

Autotransplantation of teeth: an overview

Amos, M.J.

Abstract: Autotransplantation is the surgical repositioning of a tooth within the same patient. It can be thought of as a controlled avulsion and re-implantation of a tooth in a new, surgically prepared socket. The indications for its use are discussed, as too are factors affecting the success and the clinical procedures. The preservation and regeneration of the periodontal ligament is the key to success of this treatment. A case involving the transplantation of a premolar tooth into the central incisor location in a child is presented to show the different stages of the process.

Clinical relevance: Autotransplantation is an underutilised technique, which, when used within a multidisciplinary team, can offer an ideal treatment option for child or adolescent patients with missing or failing anterior teeth.

Dent Update 2009; 36: 102-113.

Quiz Answers

Answers to quiz (from page 125)

- 1. False.** Currently, adhesion to dentine is prone to deteriorate with time and bonds produced with one bottle self etch systems are the most susceptible to failure.
- 2. True.** Because etching and bonding are done concurrently, it is not possible to etch any deeper than the primer can penetrate.
- 3. False.** Self etching adhesives have a low pH, which may interfere with the polymerisation of self cure and dual cure composites.
- 4. False.** Many LEDs have narrow band widths, which may not activate catalysts found in clear and low chroma composite resins and bonding agents.



- 5. True.** Shrinkage stresses generated during the polymerisation of a single increment composite filling, especially in class 1, 2 and 3 cavities, inevitably lead to marginal gaps, which stain. Postoperative sensitivity and recurrent decay may then be complications.

FACT FILE

Restorative implant dentistry

DR DECLAN FURLONG presents an introduction to the concepts, terminology and components of single tooth restorations in implant dentistry.



While all implant systems have different and unique design features, for most systems the components are similar in concept and the restorative principles remain the same.

Implant

Implant platform – the cervical surface of the implant onto which the cover screw, healing abutment and final abutment seat. It frequently incorporates an anti-rotational connection and screw access hole.

Connection – a feature that prevents rotation of the implant abutment. This can either protrude above the platform (external connection) or project down into the screw access hole (internal connection). It can take a variety of geometric forms including a hexagon, triangle or tapered cone.

Screw access hole – a compartment within the implant with access from the platform. This compartment receives the cover screw, healing abutment screw and final abutment retaining screw. Internal connections are housed within the screw access hole.

Components

Implant driver – like a small screw driver, this component aids placement and removal of the cover screw, healing abutment and final abutment retaining screw. The tip of the driver can take a variety of geometric forms and is often hexagonal. It engages into a recess in the head of the appropriate component, which is a negative of the driver tip in design. In the majority of cases, a cover screw is placed on the implant at the time of surgery and the implant is left to osseointegrate undisturbed beneath the gingiva.

Cover screw – this is a low profile component that threads down into the screw access hole and covers the screw access hole, connection and platform to seal them from debris and in growth of hard and soft tissue during the integration period. It usually projects less than 1mm from the platform, ideally at the level of the surrounding bone, to allow soft tissue closure over the implant. Following an appropriate period for integration

(usually three to four months), the implant is exposed/uncovered at the second stage surgery. The cover screw is replaced by a healing abutment.

Healing abutment – this component fits onto the platform and threads into the screw access hole much like the cover screw. However, it is taller, allowing itself to project through the gingival tissues. Healing abutments come in various heights (ranging from 2-6mm) to allow for variations in gingival thickness. They are also known as healing caps and sulcus formers. After allowing sufficient time for soft tissue maturation around the healing abutment (six to eight weeks), the impression can be taken. The two types of impression techniques are implant level and abutment level.

Implant level impressions

This is the more common. An impression coping is used to transfer the position of the implant in the mouth to a cast. It fits uniquely to the implant connection and platform, and is secured in place with a retaining screw. There are two types of impression copings: pick up and transfer.

Pick up copings – these are more common and are so called because they are picked up within the impression. Once secured to the implant, a hole is cut in the tray (open tray technique) to allow access to the head of the retaining screw. When set, the impression material locks the coping in position, so loosening of the retaining screw is required to allow removal of the impression and the enclosed impression coping.

Transfer copings – these are shorter in height and can be used with a closed tray technique. This is advantageous when the patient has limited opening. The coping does not become locked in the impression, but remains on the implant when the impression is removed. It is then removed from the implant and retrofitted into the impression.

For both pick up and transfer impressions, an implant analog is attached to the impression coping and the cast is poured up.

Implant analog – this is a replica of the implant to allow transfer of the impression to the cast. When the cast is poured up the analog is seated within the cast in the exact position where the implant is in the mouth.



FIGURE 1: Implant – two types, showing the platform, connection and screw access hole: 1a: external connection (Biomet 3I); and, 1b – internal connection (Ankylos).

FIGURE 2: Implant drivers – three types (from left): Ankylos; Nobel Biocare; and, Biomet 3I.

FIGURE 3: Cover screws – three types (from left): Ankylos; Biomet 3I; and, Nobel Biocare.

FIGURE 4: Healing abutments – three types: (from left): Biomet 3I; Nobel Biocare; and, Ankylos.

FIGURE 5: Impression copings and analog (from left): Pick up coping; transfer coping (both Biomet 3I); and, analog (Nobel Biocare).

FIGURE 6: Implant restorations: Upper (from left): custom abutment (Biomet 3I); stock abutment (Ankylos); and, UCLA abutment (Biomet 3I). Lower (from left): cement retained crown; retaining screw (Biomet 3I); and screw retained crown.

FIGURE 7: Torque wrench – two types: Upper: Biomet 3I; and, Lower: Ankylos.

Abutment level impressions

When a stock abutment is being used it can be fitted to the implant and the impression taken of the abutment rather than the implant platform. This can be done with conventional crown and bridge techniques or by using a snap-on transfer cap.

Snap-on transfer cap – this is a plastic coping that fits uniquely onto the abutment and transfers the position of the abutment from the mouth into the impression.

Abutment analog – this is used to transfer the position of the abutment from the transfer cap in the impression to the cast.

Implant crown types

The implant crown can be cement retained or screw retained.

Cement retained crowns – these comprise two components, the abutment and the crown. An abutment is designed to replicate a 'prepared' tooth and a conventional crown is made to fit over the abutment.

The abutment can be either a stock abutment or a custom abutment.

Stock abutment – this can be used where implant position and angulation are ideal and where customised emergence profile is less essential.

Custom abutment/UCLA abutment – this is a plastic cylinder, which can be waxed up to create a customised abutment design and is then cast.

Screw retained crowns – are one piece in design and are waxed up from a UCLA abutment. A screw access hole protrudes through the occlusal

surface of the crown, to allow access to the retaining screw. Screw retained crowns are more suitable when there is limited interocclusal space and have superior retrievability. Cement retained crowns are generally superior aesthetically due to the absence of a screw access hole in the crown.

Connecting implant crowns

Both screw retained crowns and cement retained crown abutments are connected to the implant by the retaining screw, which is tightened by a torque wrench.

Torque wrench – this is used to definitively tighten the retaining screw to between 15 and 35Ncm (depending on the system).

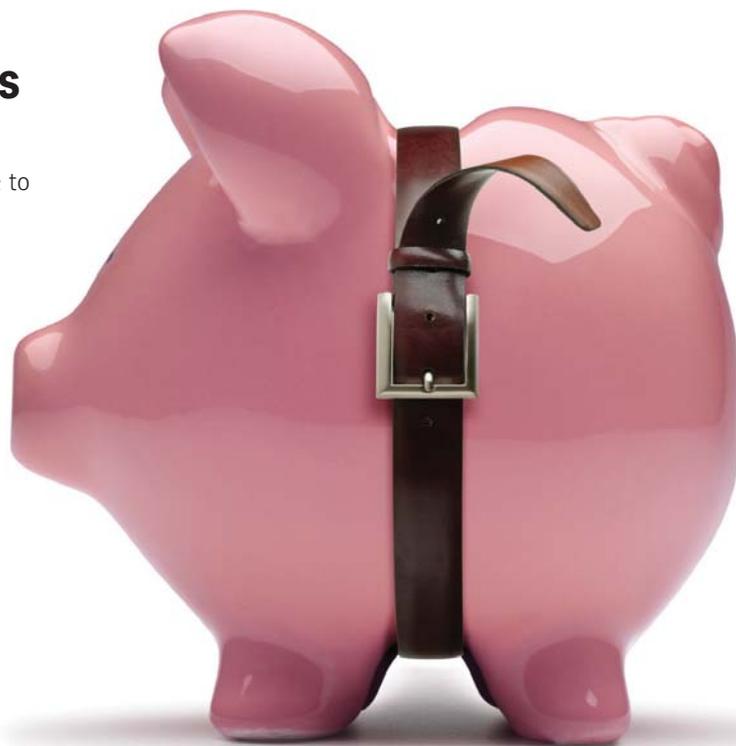
For a cement retained crown the screw access hole is sealed with wax, silicone or PTFE tape prior to cementation of the crown with a light cement. For a screw retained crown the head of the screw is covered with wax, silicone or PTFE tape and the screw access hole is sealed with composite.

This guide to the concepts, terminology and components of single tooth restorations in implant dentistry is designed as a reference for those practitioners new to this field of dentistry.

Dr Declan Furlong BdBent ScMFDS RCSI is a specialist in implant dentistry. He received his postgraduate training in implant dentistry at Southern Illinois University. He is a fellow of the International Congress of Oral Implantology.

Tax planning for dentists

BERNARD DOHERTY of Grant Thornton offers advice to dentists on how to approach their tax planning in the light of budgetary changes.



The Supplementary Budget brought bad news for the self-employed taxpayer. The top rate of income tax has been increased to 55%, with the prospect of further increases to come. The Minister for Finance has also indicated that “unnecessary” tax reliefs may be removed or substantially reduced. Taxpayers should carefully review their financial affairs and examine what can be done now in order to mitigate these changes. We set out below some of the main areas to be considered.

Income levy

This income levy is payable on gross income from all sources before any tax reliefs, capital allowances, losses or pension contributions.

The 2009 annual rates of the income levy are:

- 1.67% on income up to €75,036 p.a.;
- 3% on income between €75,037 and €100,100 p.a.;
- 3.33% on income between €100,101 and €174,980 p.a.;
- 4.67% on income between €174,981 and €250,120 p.a.; and,
- 5% on income in excess of €250,120 p.a.

The above rates and bands apply on an individual basis, i.e., a married couple will have separate rates and bands. Couples should consider whether it is worthwhile transferring income-earning assets (properties, shares) between spouses to avail of lower levy rates.

Personal pension contributions

Tax relief for pension contributions is available at the marginal rate of tax (41%). The amount available for relief is an age-dependant fraction of an individual's net relevant earnings (2008 – €275,238). This net relevant earnings limit has been slashed to €150,000 for 2009; this will have a dramatic effect on dentists' ability to provide for their retirement.

For example, in 2008 the maximum contribution that a 45-year-old

individual could obtain tax relief on was €68,810; this has been reduced to €37,500 for 2009. The pension arena for company directors is far more favourable when compared to the options available to the self-employed. Dentists are specifically precluded from incorporating their business under the Dentists Act. It may be possible in certain circumstances to incorporate a portion of the operations of a dental practice to give dentists access to the benefits of a corporate pension scheme.

Income recognition

It may be possible, depending on the accounting policy of the practice, to defer income recognition into future years. Any associated tax payments on income deferred would be delayed accordingly.

For example, if a patient pays €10,000 up front to cover a treatment that will require ongoing work by the dentist/orthodontist over a period of three years, it may be appropriate for the practice to defer say 25% (€2,500) of the cost of the treatment to be spread over years two and three. The tax payment associated with the income deferred is delayed until that income is recognised. In this example it represents a cash flow benefit of approximately €1,400. Professional accounting advice should be sought before pursuing such a policy.

Change of accounting year-end

A change of accounting year-end can be a useful way of reducing the tax burden of a highly profitable period by averaging such profits with profits of a less successful period. The extension of an accounting period has the effect of averaging profits over a longer period; this diminishes the tax burden of a more profitable period. This technique requires careful management to ensure that the desired result is achieved.

Early filing

If you are due a refund of tax, e.g., over-payment of preliminary tax, you should file your tax return early to obtain the refund at the earliest possible opportunity. Effectively, this is an interest-free loan to Revenue. Revenue can in certain circumstances withhold repayment of tax refunds for up to three months without paying any interest. You should endeavour to gather your records as soon as possible after the year-end and arrange for your accountant to prepare your accounts and tax return.

Maximising interest deductions/paying down debt

You should endeavour to ensure that you are securing a tax deduction on all financing costs. Some interest costs may not be tax deductible; however, when structured correctly a tax deduction may be achieved. Consider the order of paying down loans: pay off loans that do not qualify for tax relief and loans with high interest rates first. This can represent a significant saving if your financial affairs are structured efficiently over a number of years.

Crystallise losses on capital assets

If you are holding assets, e.g., share investments, which, if sold, would create a loss, you might consider crystallising these losses to be offset against any capital gains arising. Current year losses may also reduce gains made earlier in the same tax year. A review of your investment portfolio should be carried out before the year-end to identify opportunities to crystallise losses and identify negligible value claims. Care should be taken not to fall foul of the "bed and breakfast" rule, i.e., if the shares are re-acquired within four weeks, the loss is ring-fenced.

Capital allowances

Capital allowances are available on equipment and certain parts of the fit out of your surgery. You can deduct a proportion of these costs from your taxable profits and reduce your tax bill.

Tax audits

Any business or individual can be picked for a tax enquiry. Revenue selects tax returns on a random basis as well as following risk assessments. So your return may be chosen even though it contains nothing specific that has drawn the inspector's attention. Precise accounting records are always the best defence against the inspector's accusing finger. Ensure that you have your books and records up to date. An increasing area of attention for Revenue inspectors is the locum dentist. The issue is whether the locum is self-employed or an employee of the dental practice. Ensure that you are comfortable with the tax status of your locums; the tax liability for any errors in this area rests with the dental practice regardless of whether the locum files their own tax return or not. Refer to your accountant for advice on this complex area.

Availing of tax reliefs

There has been much speculation in recent weeks about tax reliefs that may be repealed or heavily curtailed in the next budget, such as:

- retirement relief (a relief from capital gains tax on the disposal of a business asset to a third party or child. Assets to the value of €750,000 can be disposed of to a third party without incurring a charge to capital gains tax. There is currently no upper value limit on a disposal to a child);
- business relief (a 90% abatement in the taxable value of a gift or inheritance of business assets); and,
- capital gains tax/capital acquisitions tax offset (allows the capital gains tax liability of a donor to be set off against the capital acquisitions tax liability of a donee on a gift).

It may be advisable to expedite any plans to take account of the relatively favourable tax environment.

Conclusion

Now is the time to review your financial affairs. Actions taken now can sow the seeds of benefits to be reaped in the future. As always, sound professional advice should be sought.

Bernard Doherty is a Tax Partner at Grant Thornton.



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Associate dentist required to join busy family practice in South East Galway. Modern surgeries, full chair-side and clerical support, OPG, etc. Please Tel: 086-809 5809, or Email: rothwellauct@eircom.net.

Dental associate required for very busy practice in Carlow. Fully computerised, digital radiography. Excellent support staff and very modern surgery. Tel: 087-299 8930, or Email: montgomeryhousedc@gmail.com.

Superb opportunity, Carlow Town – full-time experienced associate wanted in modern practice to replace departing colleague. New surgery and equipment. Fully computerised, four-handed dentistry. Friendly, skilled staff, PRSI, private, GMS, OPG, hygienist, orthodontist, rotary endo, nitrous oxide. Email: rmulhall@pembrokedental.ie.

Dentist required for maternity cover mid July until October – entirely computerised three-surgery practice in Dublin south central. Hygienist, excellent team support. Private and PRSI only – no GMS. Minimum three years experience. Tel: 086-063 90286, or reply with CV to hewals@yahoo.com.

The Seapoint Clinic is seeking applications from experienced dental assistants who are looking to work on a permanent full-time basis, to join dynamic private dental practice. Comprehensive range of general, cosmetic and specialised dental treatments such as endo provided. Email: info@seapointclinic.ie.

Locum dentist wanted to cover maternity leave in modern practice near Tralee, Co. Kerry. Starting mid August 2009. Possibility of associate position. Excellent equipment and working environment. Tel: 087-982 1604, or Email: alannamaharaj@hotmail.com.

Full-time dentist required to replace outgoing associate to start September. Dublin Southwest area. Fully computerised. Email: ada@smileclinic.ie.

Dentist required immediately for modern six-chair facility. Fully digitalised, excellent facilities and equipment. Majority private and PRSI. Some GMS. Excellent team atmosphere. Email: emmet@smiles.ie.

Dentist required two days a week in busy North Dublin dental practice. Start asap. Tel: 01-847 0305.

Full-time experienced dentist required in Lucan for a July start. Full book, new surgery, excellent facilities and staff. Great remuneration. Contact Brian, Tel: 086-168 6056.

Locum dentist required for minimum of two months April/May. Busy North Cork practice. Tel: 087-767 1515, or 063-81088, or Email: mu_sorrento@hotmail.com.

Locum dentist wanted in Kerry tourist town. Start June 22 for two to three weeks to cover holiday leave. Very modern practice with excellent support staff. Ideal work/holiday location. Tel: 087-235 6197.

Part- and full-time dentists required in Dublin 15. Practice is located in a new primary care centre. Digital x-ray including OPG. Fully computerised. Full appointment book. Send CV to dentistwest@gmail.com.

Colchester, Essex. Full-time, experienced dentist required for modern NHS/private practice with digital x-ray, Cerec and supportive staff. Good remuneration. Please Email: countryparkdental@yahoo.com.

Dental surgeon required for very busy Midland practice. Good mix of private, PRSI and GMS patients. Friendly support staff, computerised, rotary endo, digital x-ray. Tel: 086-867 0350 after 8.00pm for details.

Dentists, orthodontists, dental hygienists and dental nurses required for high profile state-of-the-art fully digital D4 dental clinic. Please Tel: 01-667 8000, or Email CV to HR@dermadental.ie.

Hygienist wanted for Galway City practice. 1/2 days per week initially with more to follow. Please email CVs to renmoredental@gmail.com, or post to Renmore Dental Practice, 5 Dublin Road, Renmore, Galway.



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Exciting opportunity for dental nurse with Dental Council registered radiography qualification to work part-time in dental radiology practice in South Dublin. Please Email CV to: apolloniadent@gmail.com.

Part-time dental nurse required for Edenderry, Co. Offaly. Contact Dr Ronan Kennedy, Tel: 046-973 1304.

PRACTICE WANTED

Dentist seeks practice for sale or partnership within commuting distance of Galway City. All replies treated with strict confidence. Replies to John, Email: galwayassociate@gmail.com.

PRACTICES FOR SALE/TO LET

For sale or rent, Listowel, Co. Kerry. Long established practice, freehold, owner retiring. Tel: 087-279 2048.

Rooms available in Clondalkin village centre adjoining established doctor's surgery. Rent €8,000 per annum. Tel: 085-759 0029.

Room available, 1,150 sq. feet (107 sq. metres), finished to a high standard, enjoying a prominent position in Listowel, with a well established pharmacy on the ground floor. Unit enjoys a large volume of footfall, with parking available nearby. Enquiries to Majella, Tel: 087-687 0560.

Fully equipped dental surgery available at Vhi SwiftCare Mahon, Cork. Latest Pelton & Crane Unit, Sirona G5 OPG, and Bridges Software. Available weekdays 8.00am-5.00pm. Ideal opportunity for practitioner requiring a surgery at a second location. Please Email: fiona.cahill@vhiswiftcare.ie.

New dental suite for lease at Vista Primary Care (Naas). Easily accessible from the M7, providing primary care medical services to Kildare, Carlow, Laois, and Wicklow. Turnkey fit-out available. For further information, please contact Mr Darragh Kettle, Tel: 045-881184, or Email: darraghkettle@vistaprimarycare.com.

Unit for rent, Northbrook Clinic, Ranelagh. Available on daily basis. On site OPG, lateral skull and CT scan. Parking. Tel: 01-496 7111.

Practice for sale – Dublin City Centre. Dynamic ambitious progressive colleague required for rapidly expanding, beautifully equipped two-surgery practice. Fully computerised. All mod-cons. Ample room to expand. Low buy-in costs. Tel: 086-807 5273, or Email: niall@innovatedental.com.

For sale – modern well-established two-chair surgery, ample room to expand. Fully equipped, modern Sirona units, x-ray, OPG, fully computerised. Only surgery in beautiful, thriving location near Galway City. Large hinterland population base. Immediate sale – very reasonable price. Email galwaydental@yahoo.ie.

DIARY OF EVENTS

June 2009

Midland Branch IDA – Golf Outing

June 19 Glasson Golf Club, Athlone, Co. Westmeath
Tee-time 12.30pm. Dinner 8.00pm. The fee for golf and dinner is €100. Please forward cheque to Dr Clem Sullivan, 13 Fee Court, Abbeycarton, Co. Longford.

Irish Society for Disability & Oral Health – Annual Conference

June 26 Farmleigh House, Dublin
Opening address: President Mary McAleese, ISDH Patron. Guest Speakers: Mr Chris Fitzgerald, Dr Janice Fisk, Ms Trudi Fawcett, Dr Austin O'Carroll, Dr Lesley Longman, and Dr Chris Dickinson. For further information, contact Dr Adrienne Dolan, Email: a.dolan@o2.ie. Details of the programme can be downloaded from www.isdh.ie.

September 2009

IDA Golf Society – Captain's Prize

September 5 Carlow Golf Club

Irish Academy of American Graduate Dental Specialists (IAAGDS) – Annual Scientific Conference

September 26 Conrad Hotel, Earlsfort Terrace, Dublin 2
Time: 9.00am-1.00pm (short lectures). Free to attend for all dentists.

October 2009

Public Dental Surgeons Seminar 2009

October 7-9 Whites Hotel, Wexford

December 2009

IDA Golf Society – Christmas Hamper

December 11 The Royal Dublin Golf Club



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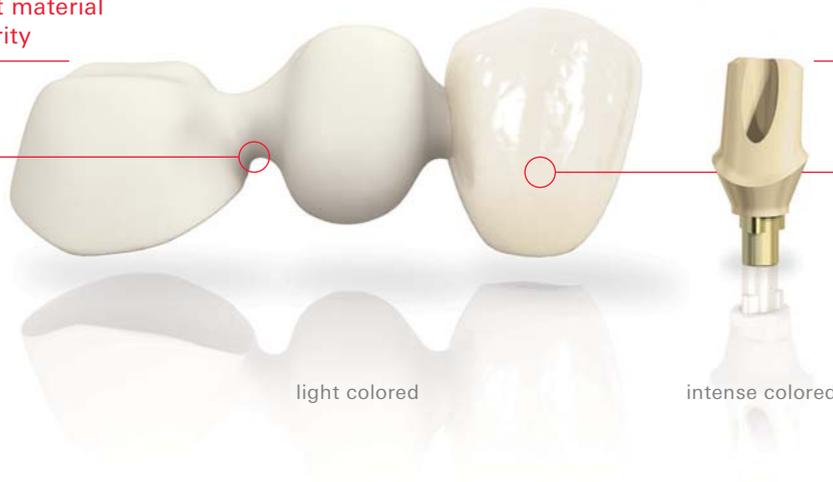
medium



intense

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intense colored



* Nordic Institute of Dental Materials (NIOM) NobelProcera™ Zirconia testing: S306269B, S306205B.

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