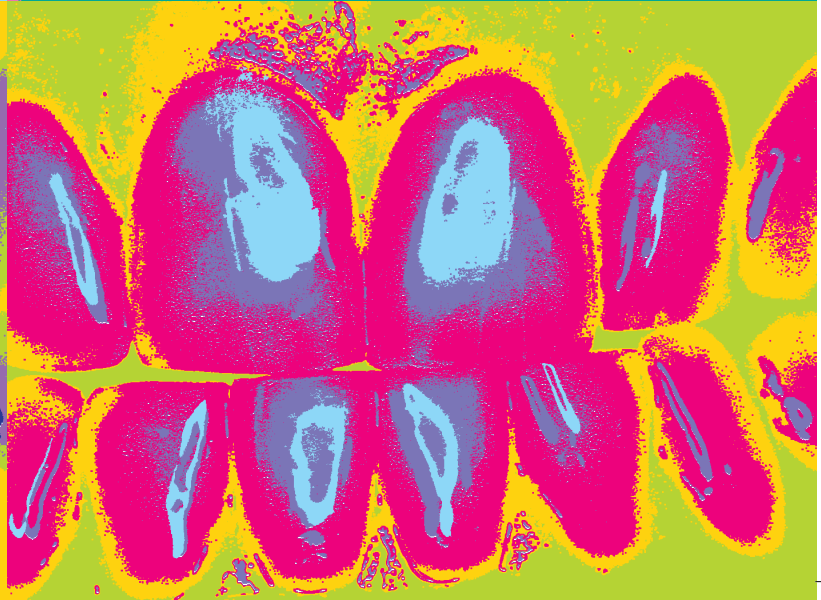
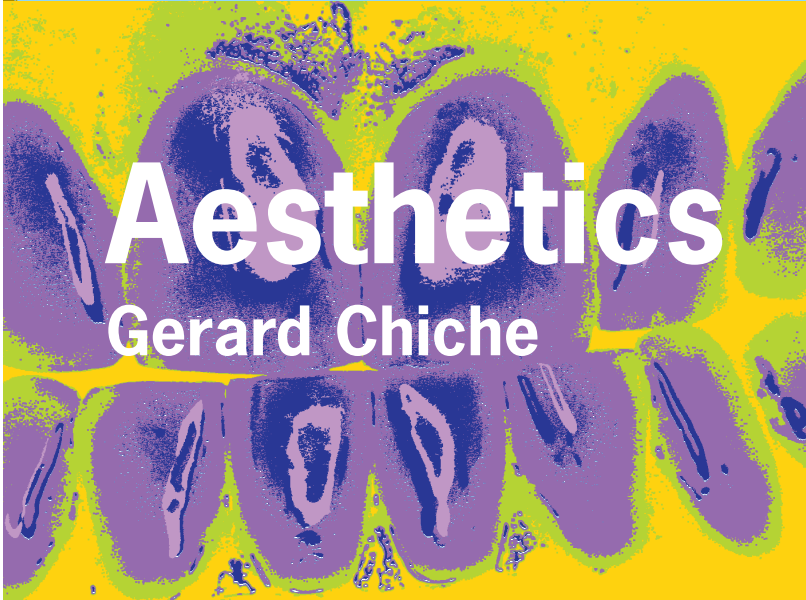




Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann



Aesthetics

Gerard Chiche

contents

The Journal of the Irish Dental Association

Iris Cumainn Déadach na hÉireann
10 Richview Office Park
Clonskeagh Road
Dublin 14
Tel: 01-2830499 Fax: 01-2830515

EDITORIAL BOARD

Editor **Aisling O'Mahony**
BDentSc, FDS, MS (Pros), DDS

Sub Editor **Jason Owens**
BDentSc, MS (Perio)

Dr Frank Brady	Oral and Maxillofacial Surgery
Prof. Louis Buckley	Periodontology/Restorative
Dr Dermot Canavan	Orofacial Pain
Dr David Clarke	Dental Public Health
Dr Paddy Fleming	Paedodontics
Dr Stephen Flint	Oral Medicine
Dr Therese Garvey	Orthodontics
Dr Brendan Glass	General Practice
Dr Clare Healy	Oral Medicine
Dr Garry Heavey	General Practice
Dr Mary Howley	Endodontics
Dr Ed Lynch	Restorative
Dr Dónal McDonnell	Radiology
Dr Eamon McKiernan	Orthodontics
Prof. June Nunn	Special Care Dentistry
Dr Tiernan O'Brien	Periodontics
Dr Anne O'Donoghue	Periodontics
Dr Frank Quinn	Restorative
Prof. Leo Stassen	Oral and Maxillofacial Surgery
Dr Colm Sugrue	Prosthodontics
Dr Helen Whelton	Dental Public Health

The Journal of the Irish Dental Association is the official publication of the Irish Dental Association. The opinions expressed in the Journal are, however, those of the authors and cannot be construed as reflecting the Association's views. The editor reserves the right to edit all copy submitted to the Journal. Publication of an advertisement does not necessarily imply that the IDA agrees with or supports the claims therein.

Published on behalf of the IDA by

IFP Media

31 Deansgrange Road
Blackrock
Co Dublin
Tel: 01-2893305
Fax: 01-2896406

In-house Editor **Daniel Attwood**
Design **Tom Cullen**
Advertising **Rebecca Markey**

101 EDITORIAL

Aisling O'Mahony discusses the entry of third party dental insurance companies into the Irish market.

101 NEWS

- 101 State dental services earmarked for major reform
- 102 Phase two of Sustaining P99 progress
- 103 Health Board Dental Surgeons Conference 2004
- 104 Obituary Pat (Paddy) Gamble

108 NEWS FEATURES

- 108 The Dental Council and complaints against dentists



- 110 The Ceka Project - Irish volunteer dentistry in Kenya

112 BUSINESS NEWS

- 112 Oral health month targets mothers and children
- 113 Talking points in dentistry

116 PRACTICE MANAGEMENT

- Protecting your income
Irvine Grey

112 SCIENTIFIC

- 118 Practical crown and bridge for predictable aesthetics
An interview with Dr Gerard Chiche
- 123 Overview of TMD and orofacial pain
In the first of a three-part series, Dr Dermot Canavan looks at temporomandibular disorders.
- 128 Statistical and clinical significance: alternative methods for understanding the importance of research findings
Dr Alan Glaros



- 132 Intraosseous Mandibular Lipoma (IML): A case report and review of the literature
Dr P. Keogh, Dr D. McDonnell and Dr M. Toner

135 CLASSIFIEDS**137 DIARY OF EVENTS**

SEPTEMBER
Oral Health Month

**138 QUIZ**

Will dental insurance affect the quality of dental care?

As dentists, we are faced with making decisions each time we treat a patient. As professionals, it is our absolute responsibility to provide the best possible care for each patient in terms of both treatment planning and execution of that plan. It is what makes our job challenging, stressful and rewarding.

Treatment planning can be difficult as we weigh the pros and cons of possibly several options, taking into consideration the patient's medical, social and financial situation. The decision ultimately rests with the patient after we inform them as best we can of the various options. Patients usually want our guidance in this decision making process and it is our responsibility to help them decide what is best for them.

DeCare International, a US-based dental provider has announced its entry into the Irish market in partnership with the VHI, by launching three new dental insurance plans (VHI DeCare Silver, Gold, and Platinum plans). This heralds a change as, until now, all clinical decisions have been made by the dentist and patient independently of a third party. Under these new insurance plans, dentists will continue to provide care for patients who will subsequently submit receipts to VHI DeCare Dental. Patients are reimbursed at a specific percentage, depending on the classification of the treatment (50-75 per cent of basic restorative treatment, 0-50 per cent for root canal treatments) and the type of insurance plan selected. There is an annual euro limit in each plan.

Although this insurance scheme is not novel, the concern is that the dental insurance industry in Ireland will follow the pattern of development in the US where many dental insurance companies effectively become involved in deciding the patients care by:

- restricting the choice of dentist to a panel selected by the insurance company;
- controlling treatment decisions by limiting the patient to the least expensive alternative treatment;
- limiting/excluding coverage of 'major dental treatment';
- requiring pre authorisation of many treatments;
- limiting or excluding referrals to specialists; and,
- excluding many dental treatments.

The process began in the US in a similar manner to here with reimbursement schemes and then developed into preferred provider organisations (PPO) and health maintenance organisation (HMO) schemes. In the PPO scheme, the insurance company limits the choice of dentist to the patient in exchange for lower rates. Patients who choose an out of network dentist will typically pay a higher percentage or all of the cost. Contracts are offered to dentists to join the network and to agree to discounted or set fees.

Once in the network, dentist profiling can occur where the insurance provider identifies dentists who are more conservative, and refer less, and identify those that cost the insurance company most. Networks can then be set up within the existing network, like a PPO within a PPO and offered as a discounted programme to a specific market or company. The insurance industry calls this cost containment.

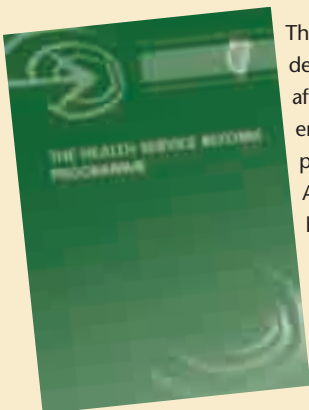
The dental HMO scheme is a capitation scheme that pays the dentist on a per capita (head) basis rather than on a fee per item of treatment. Dentists need a large patient pool and patients often complain of their inability to see their provider in a timely fashion due to the large number registered to that particular dentist.

Although these issues are not immediate, it is important in the years ahead that we do not lose our freedom of independent practice, that clinical decisions remain between the dentist and the patient alone. It is our responsibility as a dental profession to set the standard of care and maintain these high standards even if faced with pressure from insurance companies to contain costs. It is encouraging to see the Irish Dental Association's awareness of the significance of this issue and I look forward to hearing its views on the proposed scheme following root and branch discussions. We need to remain vigilant as there is a lot at stake.



Aisling O'Mahony
Editor

State dental services may be earmarked for major reform



The Irish health service, which includes all state dental services, is facing a significant overhaul after the Government confirmed that it is to embark on a major new health service reform programme.

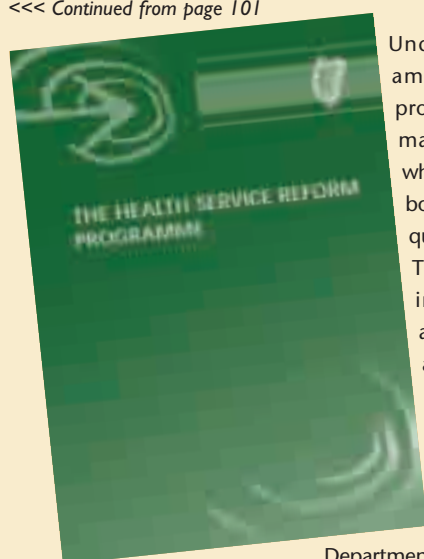
Although many major decisions have yet to be finalised, it has already been confirmed to the Dental Council that the Post Graduate Medical and Dental Board (PGM&DB) will be abolished. The PGM&DB was established under the 1978 Medical Practitioners Act to promote and coordinate the development

of postgraduate medical and dental education, as well as advising the Minister for Health and Children on such matters. At present, it is believed that its functions will be allocated to different agencies including the Dental Council. However, no formal discussions have taken place yet between the Council and the Department.

Completion of the reforms, which are expected to take more than two years to complete, will result in the abolition of the seven existing health boards, the Eastern Regional Health Authority and the three area boards. Taking their place as the provider of all state health services in Ireland will be one governing body — the Health Services Executive (HSE) — which will be complemented by the Health Information and Quality Authority (HIQA).

Continued on page 102 >>>

<<< Continued from page 101



Under the Government's ambitious reform programme, the HSE will manage service delivery, while the HIQA will manage both health information and quality.

The HIQA will be an independent statutory agency directly accountable to the Minister for Health and Children. It will have its own governance structures and will be funded by the

Department of Health and Children.

The HIQA will also provide external and independent review of quality and performance and its analysis will inform policy development within the Department of Health and Children.

To oversee the initial changes implemented under the new reform programme, an Interim Health Services Executive (IHSE) has been established. The IHSE's role will be taken over by the HSE in June 2005 — 12 months after the Government's decision to reorganise the country's health services was given full approval.

The IHSE's Executive Chairman, Kevin Kelly, explained the guiding principle behind the changes: "Unless the outcome of this reform process creates a better environment for both patients and staff, it will have been a fruitless exercise," he said. "Value for money is also an important element in enhancing the delivery of quality services."

Ireland's existing health service structures have been in place for over 30 years, and the Government admits that the planned overhaul will not be completed within the next 24 months.

Calling for input from all sides, Kelly said that employees from all sectors should have a say. "I strongly believe that these reforms will not be successful unless they are underpinned by a thorough and comprehensive process of communications at each stage," said the Executive Chairman. "Already, I have been enormously impressed by the dedication, commitment and enthusiasm of all involved in the services, and this gives the interim executive grounds for optimism that, by everyone working together, the reforms, which I sense all believe must be achieved in the interest of patients and clients and staff, can and will be delivered."

Despite there being few clear indications on many major decisions, the Government has confirmed that there will be no involuntary redundancies as a result of the reforms. It has also confirmed that the HSE's headquarters, which will involve the decentralisation of up to 300 jobs, will be in Naas, Co Kildare and the headquarters of the HIQA, which will involve the decentralisation of 50 jobs, will be in Cork City. These two organisations are due to be established on a statutory basis by January 1, 2005.

More information on the changes facing Ireland's healthcare services can be found at www.healthreform.ie.

Phase two of sustaining progress agreed

As a result of the prevailing economic uncertainty, the pay terms provided for in the current national wage agreement, Sustaining Progress, covered only the first 18 months of the three-year agreement. Therefore, after reaching this halfway stage, a review, together with progress in implementing the agreement to date, was undertaken.

This review has now been completed and has resulted in Part Two of Sustaining Progress, the full outcome of which will be published shortly. However, the main changes to public service pay and related issues are that Part Two will come into effect on June 1, 2005, and will last for 18 months. In the public service, the following pay increases will apply:

- 1.5 per cent from June 1, 2005, except for those earning up to and including €351 per week (€18,315 per annum) where a two per cent increase will apply;
- 1.5% from December 1, 2005; and,
- 2.5% from June 1, 2006.

This public service pay agreement will conclude on June 30, 2006.

Benchmarking

In relation to benchmarking, as stated in the first Public Service Pay Agreement under Sustaining Progress, the parties agreed that the benchmarking exercise under the Programme for Prosperity and Fairness was an important initiative in developing a better system of pay determination in the public service. The parties also agreed that this process is an appropriate way of determining public service pay rates in the future.

An agreement has been reached between the parties that the Benchmarking Body will commence the next benchmarking review in the second half of 2005 and will report in the second half of 2007. Membership of the Benchmarking Body and its terms of reference will be agreed between the parties no later than July 2005. Prior to the establishment of the Body, the parties will agree on the list of grades to be reviewed.

Matters concerning the implementation of the outcome of the benchmarking process will be discussed by the parties in the context of discussions on whatever arrangements on pay and conditions are to be put in place on the expiry of Sustaining Progress.

Workplace matters

Other benefits in this phase of Sustaining Progress include an undertaking to increase maternity benefit from 70 per cent to 80 per cent of earnings, and an increase in the ceiling on redundancy payments from €507 per week to €600 with effect from January 1, 2005.

The Labour Court will also be asked to review the National Minimum Wage and to make a recommendation to the Minister for Enterprise, Trade and Employment in advance of May 2005.

Restorative Dentistry – State of the Art – 2004

The Faculty of Dentistry at the Royal College of Surgeons in Ireland will take restorative dentistry as the theme for this year's annual conference. The conference will take place in the college between Thursday, October 28 and Saturday, October 30, 2004. Diagnosis, treatment planning, conservative dentistry, endodontics, removable prosthetics, aesthetics and prosthodontics will be covered in the two-and-a-half-day meeting. It promises to be a comprehensive review of restorative dentistry and an absolute must for all dentists and students involved in this discipline.

The faculty is pleased to include a very strong national and international panel of speakers. Among the contributors will be Professor George Zarb, University of Toronto, who will speak on diagnosis and treatment planning in restorative dentistry. He is also the invited speaker for the Edward Leo Sheridan lecture. Dr Zarb will consider how implant dentistry has changed our attitude to dental treatment as the theme for his presentation. George Zarb needs no introduction to the restorative dental community and the Faculty is very pleased to have him speak twice during the meeting.

The Faculty is also pleased to welcome other colleagues from North America. Dr Shane White, a graduate of Trinity College Dublin, is a recognised authority on luting agents and cementation technique.

In addition, Professor John Osborne, who is a material scientist, will address whether amalgam is still safe or not. Those of us who heard Professor Osborne in Kilkenny some years ago will know that this should be a very special presentation.

Dr Ned Van Roekel is going to bring his unique perspective as an educator and clinician and will address the topic of restorative treatment outcomes.

From the UK, Dr Harold Preiskel will speak on tooth supported removable dentures. Professor Trevor Burke, Editor of Dental Update magazine, will address indirect posterior composite restorations and Dr Paul Brunton, University of Manchester, will speak on the topic of direct composite restorations. Mr Martin Kelleher brings the latest information and his insights on tooth whitening and bleaching.

The panel of speakers is completed by colleagues from all parts of Ireland, each of whom will speak on a topic of special interest to them. The conference is sponsored by NobelBiocare, and it will be promoting the Procera Laboratory network in Ireland. As part of this promotion a laboratory day course will be held on October 28. More details of this programme are available from NobelBiocare Ireland.

The full program is available for inspection on the Faculty of Dentistry website facdentistry@rcsi.ie and further information and registration details are also available from the Faculty of Dentistry at 01-4022239 or 01-4022256. The number of places will be limited and early application for your place on this course is strongly advised.

Health Board Dental Surgeons Conference 2004



Dr Maeve O'Connor, President Elect, HBDS Group Committee, invites you to the HBDS 2004 conference from Wednesday, October 13 to Friday, October 15 in Galway.



Fenlon, Private Practice-Limited to Paediatric Dentistry and staff member at Our Lady's Hospital for Sick Children, will discuss 'The Nervous Patient'. And, Dr Paddy Flemming, Senior Lecturer/Consultant in Paediatric Dentistry at Our Lady's Hospital for Sick Children and the Dublin Dental School and Hospital, will lecture on 'Children with Syndromes: Implications for Dental Treatment'.

Thursday morning's topic is the anterior space. Dr Evelyn Sheehy, Head of Paediatric Dentistry at Guy's Hospital, London, will discuss trauma management. While, Dr Kevin O'Regan will discuss orthodontics and Dr Paul Quinlan will cover maintaining the space. The afternoon we see radiological criteria and bleaching covered.

On Friday morning, Dr David Ryan, Senior Lecturer/Consultant in Oral and Maxillo Facial Surgery, will consider legal aspects and Mr Mike Clarke from Dental Protection will advise on record keeping.

These topics, I believe, will be of interest to general dental practitioners, as well as health board dental surgeons.

All are welcome, either on a daily basis or for the whole conference. The CDE points for the full seminar will be 11.25.

Our venue, the four-star Connemara Coast Hotel, is a traditional Irish hotel. Just 10 minutes from Eyre Square, it enjoys breathtaking views of Galway Bay, the Aran Islands and the Burren. Facilities include a comprehensive leisure centre with outdoor Canadian hot tub, therapy room and tennis courts. Further information on hotel facilities and what to see and do locally can be found on the hotels web site www.sinnotthotels.com.

A sincere thank you to my committee and the staff of IDA House who have worked diligently to make this conference a success.

September is here and it is time once again to look forward to meeting old friends and making new at our final Health Board Dental Surgeons Conference. This year we have chosen beautiful Galway as our location.

In the past few years, our conference has enjoyed great popularity, with last year's conference reaching record numbers.

This year we have excellent speakers covering a range of topics available to us:

Wednesday starts with Dr Jacinta McLoughlin, Senior Lecturer in Public Dental Health in the Dublin Dental School and Hospital, who will update us at this crucial time on the current status of the Irish health service reforms.

Also on Wednesday, Dr Frank Burke, Head of Department of Restorative Dentistry, University Dental School and Hospital, Cork, presents his research on biofilm and water-lines. In addition, Dr Billy

Obituary

Pat (Paddy) Gamble

Nuair a chuala mé an scéal fé bás Páidí, mo chara dílis ar an 8ú la de Márta, ba mhór an brón agus an trua a thit orm.

D'fhill mise, im proifisiún, mar fiachclóir, go Corcaigh, i 1981 agus de réir mar a chuir me aithne ar Páidí Gamble, do chuaigh mo meas is mo omós do Páidí i dtreise.

Cuimhnigí sibhse féin, go raibh sé sár oirimúil, duine ionmhain ab ea é. Bhí sé fial, fad-radarcach, gnáth eolas faoi, go raibh sé thar a bheith cártannach. Duine cumasach reasúnta é, ina gairm thar bárr é, maidir le curam is aireachas dá othair.

Dhá ghné, ar ndóigh, a bhí ar fheabhas aige ná gur sár-éisteoir é, agus má bhí fadhb nó trioblóid agat, b'iontach an comhairle a thagach as. An tarna ghné, b'é san, céadfa-ghrinn aige pé go raibh sé féin fé cheap magaidh.

Sa lá inniú, mar a theigeann fairsinge an domhain i laighead, teigheann ár réaladh fé Hinduism, Mohamadism

agus rudaí eile i dtreise. Rugadh agus tógad Páidí mar Críostai sa creideamh Caitliceac. Pé creideamh ina tógfaí Páidí Gamble beidh sé cun tosaigh agus i mbárr mar leanúnaí. Bhí dearcadh iomlán Críostúil ag Páidí- fioras a thug chun na h-Aifrice é; sár críostai ab ea é i measc a phobail agus ina shaol príobháideach.

Sár a tháinig Pádraigh Naofa go h-Éireann in 432AD, bhí árd-réim an Fhiannaíocht sa tír-sé an rosc a chuidheadar le ná "Near in ár lámh; Glaine in ár gcroí; Is beart do réir ár mbriathar". Bhí Páidí Gamble sár cháilichte don bhFiannaíocht.

I measc na n-aingeal mar a bhfuil tú Páidí - Cogar- abair paidir ar son do bhean chéile Sue agus bhúr chlann - iad brónach is mór mórdhálach faoi thú san am chéanna.

Chomh maith Páidí, paidir ar mo shónsa agus ar do ghairm dhílis.

Ta tú imithe Paidí ar slí an fhírinne - ba bhréa linn bheith id chuideachtain.

My dear friend Paddy Gamble, a highly respected general dental practitioner, died tragically on March 8, 2004, in a road accident while on holiday in South Africa.

Paddy was born in Cork on June 4, 1942, and from an early age was recognised as a loyal and dependable friend. Paddy's righteousness and sense of propriety was attributed to his parents, and the good Christian values of

honesty, kindness, truthfulness and charity that he showed throughout his life to others existed to the day of his tragic accident. Paddy qualified as a dentist in 1966, and, like many others of that time, went to work in the National Health System in the UK. Following his stint in the UK, he moved to Northern Ireland where he worked with his brother-in-law, Eoin O'Flynn, and, as usual, developed loyal friends, many of whom travelled to Cork for his funeral service. In 1972, he emigrated to Australia where he remained until 1973 when the lure of his home town, his family and friends convinced him that his future was in Cork. Paddy joined the McCurtain Street practice of Robin Power and John Barry and, as was inevitable, immersed himself into providing the highest standard of care and treatment for his patients.

He was disciplined in his approach to his patients and expressed no interest in the crass commercialism that creeps into all professions over time. Quality of care was paramount at all times and he was his own greatest critic. Paddy's loss to his partners and nursing staff in McCurtain Street is immeasurable and a great void has been left in their personal lives and that of his patients.

Paddy was a great believer and supporter in organised dentistry and throughout his career was a great advocate and remained a loyal member of the Irish Dental Association. Paddy was part of a dedicated local committee in the 1970s who lobbied extensively and successfully for the retention of the Dental School in Cork. Later, he served on the local Munster Branch dental committee in a variety of roles.

In 1975 he was a founder member of the Irish Society of Clinical



Hypnosis in Medicine and Dentistry and this interest in clinical hypnosis continued to the time of his untimely death.

A tireless dentist, with boundless curiosity, he pursued problems fervently, passionately and logically to their ultimate conclusion, always with a concern for his patients.

Such traits of character saw him being approached by the Department of Social Welfare to act as an Examining Dentist, scrutinising the treatment care of patients and ensuring that high standards of care were adhered to.

Paddy was well known for his sense of humour, much given to telling jokes and the inevitable slagging that accompanied them, sometimes mercilessly but always in the spirit of humour and good fun.

Paddy's spirit, generosity and his warmth for his friends, reached through the barriers of age and even generation.

He was a fantastic organiser and this is where many of his friendships were established. He got a great kick out of the Thursday night tennis group in Sunday's Well where an initial group of four expanded over the years to a group of 20 or more and all were most grateful to him for bringing such a diverse group of people together. One challenge he could not overcome however was to improve the standard of tennis.

Paddy also derived great pleasure and challenge from his competitive running and his Tuesday night tour of the Lee Road, Anglers Rest and Carrigrohane Straight in the company of his great friends, Dave Murray and Denis McSweeney, even in the most inclement of weather was a feature of his life for many years. His competitive nature ensured that he always had something in reserve for the final home stretch which he ran with the fervour of the last lap of an Olympic 1500 metre final.

Some time ago, Paddy went through what one might describe as a kind of personal reassessment of where he saw his future, and decided to retire. No doubt, retirement will be different for all of us. For

Paddy, it was to be a new phase in life to share with his wife Sue and his family - yet another opportunity to seize, anticipate and enjoy. Paddy liked the simple things in life and was most content with what he had, whether it was playing tennis or going swimming with his family. In recent years, going to Munster matches with his son, Eoin, or merely enjoying a glass of wine with his wife, Sue, while contemplating the arrival of their first grandchild.

He had also decided to lend his skills and expertise to a dental volunteer programme in Kenya where he was accompanied by his lifelong friend Des Casey and his own son, Eugene, a period from which he derived great pleasure. Again he did not want any recognition or ceremony associated with what was a further example of his charitable Christian outlook.

Paddy was a loving and devoted husband to Sue and loved his family with the passion and devotion that encompassed his life. His integrity, honesty and the manner in which he influenced people to believe in themselves, to stand up for themselves and to accept responsibility is reflected in the way Sue, his children and extended family have coped with his tragic death.

To his brother, Richard; sisters, Anne, Jean, Honor and Noelle; and the extended family, Paddy's death has stunned, bewildered and agonised them. Throughout his life he was their rock, their great listener and advisor and was inordinately generous with his time. He had a great sense of family and will be remembered by all for his lasting impact in their lives.

On a personal note, I will treasure, like many others, the particular warmth and quality of Paddy's friendship, which he so generously gave me over the past 22 years. I still value and recall his roughish smile, his generosity and loyalty, his sense of humour, his advice and personal help, his ability to listen and impart solid, sound advice and the ethical and principled way he approached his professional life. It was because of all these traits that Paddy's friends and colleagues here in Cork and further afield attended his funeral service to support his family and above all to celebrate his wonderful contributions to life. Remember his wife Sue, his daughter Ruth and his sons Liam, Eoin, Eugene and Patrick and his extended family in your prayers as we extend the sincere condolences of the profession on the sad passing of a distinguished colleague.

I count myself privileged to have known Paddy, he was a charitable and wonderful person.

I ask those who knew him to never forget Pat Gamble, who he was what he believed in and what he achieved in life.

The following words express the qualities of Pat Gamble:

Because I see at the end of the road
That I was the architect of my own destiny,
When I planted roses, I always gathered roses,
I loved and was loved, the sun caressed my face
Life you owe me nothing! Life we are at peace
(Dalai Lama)

Go ndéana Dia trócaire ar a anam dílis.

Martin Holohan

Dr Barry Harrington retires



Dr Barry Harrington, Senior Lecturer/Consultant in the Dental School and Hospital recently retired. When asked why he was retiring, he said: "I was born two days after the declaration of World War II, and I am going to retire before there is another world war." Since 1939, Barry has made an enormous contribution to dentistry in Ireland. He attended Oatlands Secondary School in Mount Merrion and completed his Leaving Certificate in 1958. He then followed his father's footsteps, studied dentistry at the RCSI and graduated in 1964. He worked in Northern Ireland for two years and then joined his father and Dr Gerry Berney as a partner in their practice in North Frederick Street in Dublin. He also held a part-time appointment in the Dental Hospital from 1967 to 1971. He obtained an MGDS from the Royal College in 1981. He was appointed as Senior Lecturer/Consultant in General Dental Practice in the Dental School and Hospital in Trinity College in 1985. During his time in practice and in academic life, Barry was very active in the affairs of the Irish Dental Association. He was Honorary Secretary and Treasurer of the Metropolitan Branch and its President in 1981. He was elected to Council of the IDA in 1974 and 1987 and also served as Honorary Treasurer in 1987. In 1997/98, he became President of the Association. Barry has also served on the Dental Council of Ireland.

During his time in the Dental Hospital, Barry developed a special interest in the care of haemophiliacs and provided treatment to special needs patients at the Oncology/Haematology Department in St. James's Hospital. He was also an active member of the Irish Haemophilic Society for 14 years.

Students of the Dental School and Hospital will always have fond memories of Barry. He was their first point of contact in their early years of exposure to clinical dentistry. As students needed advice or counselling, Barry was always available to them. Many final year students availed of Barry's experience to decide on their future career and he put them on the right track.

Barry and his wife, Laura, have always been part of the voluntary and social activities surrounding dentistry in Ireland and never missed an event. The IDA thanks them for their involvement and contribution to the profession and we wish both of them health and happiness over many years to come.

Professional fee increases applied in DTBS

Professional fees in the Dental Treatment Benefit Scheme were increased again in July 2004 by 3.5 per cent. The increase reflects annual movements in the Consumer Price Index (CPI) and the increase due under social partnership agreements (i.e., Sustaining Progress).

Under the traditional formula applied for calculating annual professional fee increases, the CPI element applies to 46 per cent of the fee, while the national agreement element applies to 54 per cent and reflects increases in remuneration.

On this basis, the fees were increased by reference to the CPI increase of 1.7 per cent at mid-May 2004, and the wage agreement 2004 increase of three per cent from one in January 2004 and two per cent from July 2004.

The value of the increase payable from July 2004 is 3.5 per cent which has been calculated as follows:

$$1.7\% \times 46\% + 5\% \times 54\% = 3.5\%$$

Details of the new fees payable from July 1, 2004, have been circulated to all members. It is important to note that the application of this increase will not prejudice any agreement that may arise from the Review of the Dental Treatment Benefit Scheme.

Vocational training



Following the establishment of a pilot scheme for vocational training in dentistry in 1999, it has been confirmed that the next intake of students will take place this month (August).

The aim of the 12-month vocational training is to provide a transitional year for recently qualified dental graduates to prepare them for work in general practice or public dental service clinics.

Each trainee is placed alternately in a private practice and in a health board dental service for two days per week in each location. Trainees also attend weekly academic sessions.

Clarification

The Journal of the Irish Dental Association would like to clarify that page 64 Vol 50, 2, Summer 2004, was a commercial advertisement. The publisher apologises for any confusion that may have arisen.

LETTER TO THE EDITOR

Unconscious patients and the supine position

Dear Madam,

In congratulating Dr John Keogh on his excellent paper 'Coping with the Unexpected' (JIDA 2004 Vol 50, 2: 68-72), I was surprised that, although in the section 'Fainting', he recommends placing the patient in the supine position, he gives no indication of how this could best be achieved. Yes, modern dental operating chairs may be quickly reclined, but the patient cannot be laid completely flat; the chairs are designed to support both the head and the back, even on the supine patient. Therefore, for the ideal application of CPR in a fainting or cardiac arrest situation, the patient should lie completely flat on his/her back. The floor is the ideal surface for resuscitation to be performed.

The safe movement of a patient, especially if obese, from chair to floor presents difficulties. If only two slightly built people are present, lifting the patient on to the floor will be difficult and potentially dangerous for all three people involved. The safest way is to slide the patient over the foot rest and gently on to the floor, where good access to the face and from the side of the body allows efficient CPR to be immediately instituted.

This is illustrated in the paper Allwright, Walter C. and Cheorg, Eugene in Cardiac Resuscitation in the Dental Surgery. Brit Den J 1960. 260-262.

Yours faithfully,




Walter C. Allwright

Effective Practice Management

October 16, 2004

Dr P.G. Heavey

One-day course for dentists covering all important aspects of practice management

-  financial
-  staff
-  legal obligations, etc.

For more information contact
Tara on 01-280 1684

The Dental Council and complaints against dentists

Following publication of the list of complaints against dentists received by the Dental Council in 2003, DANIEL ATTWOOD discusses the issue of complaints with the Council's Registrar, Mr Tom Farren, and hears how many complaints could be avoided and resolved through improved dentist-to-patient communication.

In 2003, there were 61 formal complaints received by the Dental Council. Of these, the greatest number (almost 40 per cent) was for alleged unsatisfactory treatment, although dissatisfaction with dental fees, at almost 18 per cent, also featured highly.

However, it is the single case of alleged substance abuse that gives a clear insight into the role of the Dental Council in dealing with complaints. Substance abuse, whether it is the abuse of prescription or so-called recreational drugs by dentists, or the abuse of alcohol to the extent that it affects a dentist's work is considered one of the more serious offences that the Council must deal with. The number of such complaints has always been extremely low.

Safeguarding standards and public health

The Council's primary role when dealing with complaints is to safeguard the public's health and protect the public's interest. In addition, it is also charged with promoting and upholding the high standing of the dental profession.

Any charge of professional misconduct is subject to the same standard of proof as that in a criminal case, i.e., that the charge must be proven beyond all reasonable doubt.

If a charge is upheld it can result in one of three disciplinary actions: suspension from the Register of Dentists; removal from the Register; or, to remain on the Register with conditions attached, all of which must be approved by the High Court.

To date, no dentist has been struck off or indeed suspended from the register, but a number of dentists have had conditions attached to their continued registration.

But, as Tom Farren explains, the road to suspension or removal from the register is rarely travelled as it requires an act of serious professional misconduct or the dentists must be unfit to practice by reason of physical or mental disability. More common, as confirmed by the 2003 complaints, are cases where patients are unhappy with the standard of treatment they have received; the fees they have been charged; or with the ethical conduct or behaviour of their dentist, e.g., refusal to attend, arrogance on the part of the dentists, hostility and failure in his duty of care.

The need for independent arbitration

In dealing with some complaints, the Dental Council believes there is a greater role for the Irish Dental Association. "When a patient receives what he believes to be unsatisfactory treatment, he turns to us, the Dental Council," explains Tom. "But ideally we would like to see the establishment of an independent arbitration system that patients could go to if they have such a grievance. This is a role the Association could take on board and is something we would support all the way." Indeed, acting to resolve this situation, the Council of the IDA recently accepted a sub committee report on the introduction of an Alternative Dispute Resolution Scheme, and plans to implement the report's recommendations are well advanced.

However, until such an arbitration service is operational, the task of finding a resolution often falls at the Council's door. And, because dental procedures may sometimes fail to meet patient's expectations, there will always be complaints of unsatisfactory treatment. In such cases, the Council after it has investigated the matter, sometimes advises the dentist concerned to offer a refund and/or advises that

The complaints procedure

How complaints are received

The Dental Council will discuss complaints over the telephone, but complaints will not be processed unless they have been submitted in writing.

Cost

There are no cost implications for either complainant or defendant.

Receipt of complaint

Following receipt of a formal complaint, the Council forwards a copy of the letter to the dentist concerned for his/her comments and observations. When the dentist replies, the case is referred for examination to the Council's Fitness to Practise or Ethics Committee for consideration.

In cases of alleged professional misconduct:

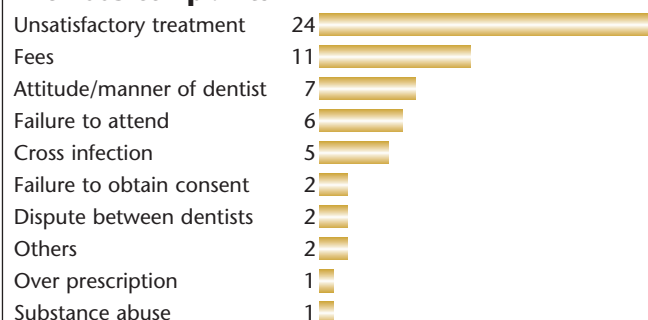
in such cases the Fitness to Practise Committee has the option of holding a formal inquiry into the dentist's conduct.

Conclusion

Following a determination by the Committee, its decision and recommendation is communicated to both the complainant and the dentist. In the most serious cases where a complaint is upheld, the Council may decide that a dentist should be struck off the register, be suspended or have conditions attached. Such conditions are subject to a High Court approval.

Further action

In the most serious cases, where the complaint is upheld and proven, an application may be submitted to the High Court for a dentist to be struck off, to be suspended or to have conditions attached to his/her right to practice.

The 2003 complaints

he/she should arrange for a colleague to complete the procedure free of charge. "We would always look for a resolution that is acceptable to both parties. But we can only advise as we have no powers to compel," explains Tom.

Communication is the key

But the Dental Council believes that it is unnecessary to bring unsatisfactory treatment and fees complaints to the attention of the Council. "These issues are often related to the failure of dentists to communicate with their patients," says the Council's Registrar. "The conclusion we can draw from these complaints is that patients often feel their expectations have not been met. Good communication beforehand could solve a lot of these problems. A dentist must explain, in layman's terms, what a procedure involves, what it will cost and what the probable outcome will be. Patients must be given all the facts at the outset so that they can make an informed decision, and, when they do, should be recorded. Patient consent to treatment is an absolute essential."

Although the Council tries not get involved in disputes regarding fees, it still receives complaints, many of which stem from a lack of communication. "It is imperative that dentists tell their patients what procedures they require and what it will cost, before they start work."

Dental surgeries should be more proactive in resolving complaints before they go to the Council. "In the UK, surgeries must have an in-house dispute resolution procedure," explains Tom. "It would be very useful if dentists were doing the same thing here as a matter of course. They should get a procedure in place and show that they care and that they are willing to listen to their patients' grievances. Sometimes all that is needed is an explanation."

The right to enter and inspect

Looking to the future, it is clear that certain trends are emerging. "People are more empowered, are better educated, have higher expectations and are more aware of their rights. Dentists must wake up to this. It is not acceptable to say that the patient did not ask the questions, the dentist must take the initiative."

Another serious concern is the number of complaints related to poor infection control measures. "Patients are very aware now of the risk of poor infection control measures and, unfortunately, there are still

a very few dentists whose attitude to this is seriously deficient." Indeed, so concerned is the Dental Council about poor infection control measures within some practices that it continues to seek the right to enter and inspect dental surgeries. "We are continuing to press for this," explains Tom. "And we hope that the amendments to the Medical Practitioners Act published last week will precipitate amendments to the Dentists Act that will eventually pave the way for us to achieve this."

However, despite what Tom refers to as a few laggards, professional dental standards are extremely high in Ireland. "The quality of treatment and the commitment to continuing professional development here is very encouraging," he says, although, along with the IDA, the Council would prefer to have compulsory continuing education "to keep all of the profession up to date on all best practice procedures".



CAREERS IN HEALTHCARE

WORKING TOGETHER FOR LIFE

The Health Boards work together to provide progressive healthcare. As part of our ongoing development we currently have the following opportunities:

SOUTHERN HEALTH BOARD

SERVING CORK & KERRY

General Dental Surgeons

North Lee Community Services
North Cork Community Services
West Cork Community Services

Ref: PM13804

WESTERN HEALTH BOARD

SERVING GALWAY, MAYO & ROSCOMMON

General Dental Surgeon – Permanent

Galway Community Services, Galway City/Ballinasloe

Ref: 10J/18104

SHORTLISTING MAY APPLY AND PANELS MAY BE FORMED FROM WHICH FUTURE VACANCIES WITHIN THE BOARD MAY BE FILLED AT BOARD'S DISCRETION. WE ARE EQUAL OPPORTUNITIES EMPLOYERS AND SUPPORT A NON-SMOKING POLICY. CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ARE ACTIVELY ENCOURAGED. FAMILY FRIENDLY WORKING ARRANGEMENTS MAY APPLY.

FOR FURTHER INFORMATION AND JOB DESCRIPTIONS, PLEASE VISIT OUR WEBSITE OR CALL OUR INFORMATION LINE.

FREEPHONE 1800 400 350

www.careersinhealthcare.ie

The Ceka Project - Irish volunteer dentistry in Kenya



Registrars, JONATHAN BUTLER and DERMOT MURNANE, report on the involvement of a group of Irish dentists working at a voluntary dental service in an impoverished village in Kenya.

The village of Embul-bul lies 20km southwest of Nairobi in the sub-Saharan country of Kenya and suffers from significant socio-economic problems. Unemployment runs at 23 per cent, the average annual income is just €2,000 per household and yet the cost of living is similar to Ireland. The prevalence of HIV/AIDS in urban Kenya is 16.5 per cent according to the National AIDS/STI Control Programme Economic Survey, 2003, although many believe it to be considerably greater. This has resulted in increased numbers of children orphaned by the disease being raised by elderly relatives or forced to live on the streets.

Authors

Jonathan Butler B.Dent.Sc., MFDRCSI

Dermot Murnane B.Dent.Sc., FDSRCSI

Specialist Registrar, Dublin Dental School & Hospital

Address for correspondence

Jonathan Butler

Dublin Dental School and Hospital

Lincoln Place

Dublin 2

Tel: 01-6127200

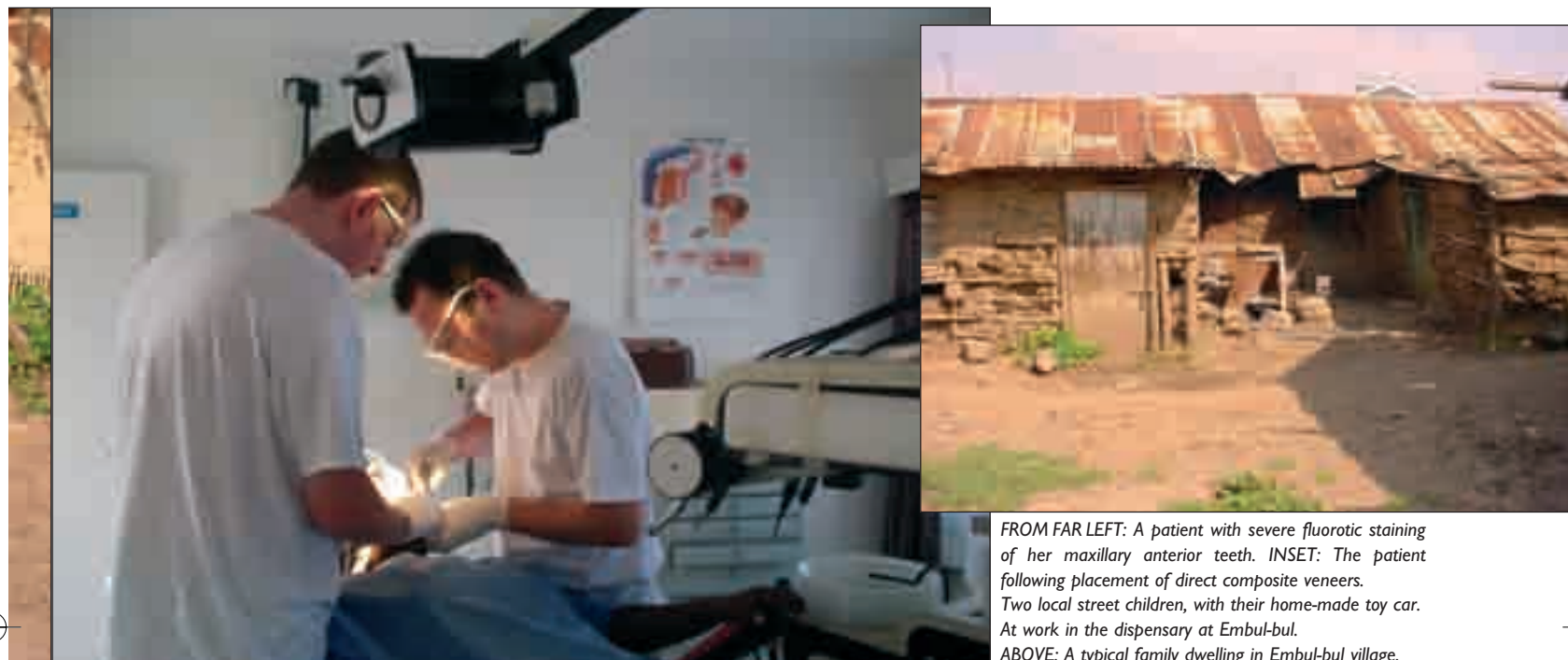
e-mail: jonathan.butler@dental.tcd.ie

Father Kevin McGarry, a Belfast-born SMA missionary priest, has lived in Embul-bul for seven years, and has worked to build a church community to provide education and healthcare for the local people.

In November 1999, with the help of Sister Liliana Cremona, a Capuchin Sister from Milan, Italy, he opened a dispensary to provide affordable medical care for the local people. Initially, this was a mobile service that provided vaccinations, simple medications, and care and support for those affected by HIV/AIDS. In April 2001, a purpose-built healthcare facility was opened in the church compound. It employed three local staff and in the first year in excess of 7,500 patients were treated by visiting doctors and opticians.

Sister Liliana, a trained dental hygienist and nurse practitioner, quickly noted a considerable need for dental treatment. Many patients presented with chronic dental pain (often months or years in duration), and were unable to afford dental care. In addition, she noticed a high prevalence of severe dental fluorosis, particularly among the children and young adults. The staining was a source of social stigma, and many of the affected children avoided smiling and covered their mouths when speaking. Several girls also expressed concern that the appearance of their teeth would affect their prospects of marriage.

Sr Liliana, with help from a colleague Dr Dino Azzalin, a dentist from Milan, set up a dental surgery in the clinic through donations of unwanted equipment. The clinic opened in January 2002, when a group of Italian dentists and a hygienist spent eight days treating over 200 patients, although many others had to be turned away.



FROM FAR LEFT: A patient with severe fluorotic staining of her maxillary anterior teeth. INSET: The patient following placement of direct composite veneers. Two local street children, with their home-made toy car. At work in the dispensary at Embul-bul. ABOVE: A typical family dwelling in Embul-bul village.

A second group of Italian volunteers was hastily assembled and travelled to Kenya in April of that year to find that yet again the demand for treatment greatly exceeded the available resources.

In late 2002, during a visit to Kenya by President Mary McAleese, Fr Kevin met Dr Martin McAleese, and told him about the dental project at Embul-bul. Dr McAleese, on his return to Ireland, enlisted the help of some dental colleagues and a group of Irish volunteers, including Professor Noel Claffey from the Dublin Dental School and Hospital and two general practitioners, Dr Gary McMahon and Dr Paul Sullivan, who travelled to Kenya in February 2003. Overwhelmed by the level of need for urgent dental care, they were frustrated by having only one dental unit. Before returning to Ireland they arranged and funded the purchase and installation of a second dental unit from a supplier in Nairobi.

Following the success of the first Irish expedition, Dr Dermot Murnane and Dr Jonathan Butler made the nine-hour journey to Nairobi where they were met by Fr Kevin who drove them the 20km on to Embul-bul.

Accommodation was provided within the church complex in a comfortable chalet, and all meals were provided.

Work at the dispensary begins daily at 8:30am, although patients often begin to arrive before 7:00am. Up to 30 patients may be present in the waiting room when the dispensary opens, and are happy to wait for several hours to be seen.

A brief history and medical history is obtained from each patient with the assistance of local staff who work to help translate the local Kiswahili language. Extractions are the most frequently required treatment, and some simple restorations and scaling are also

provided. A significant number of patients, mainly children, present requesting treatment of their severe dental fluorosis. This is achieved using minimal preparation of the labial surfaces and placement of direct composite veneers. Despite the poor quality of the fluorotic enamel (1), bonding appears adequate and only one patient to date has presented with a debonded restoration.

With two surgeries running, and Sister Liliana providing chair-side assistance where possible, up to 40 patients per day are seen. So, in a two-week trip, a substantial number of people received treatment.

However, on the day we left Embul-bul it was heartbreaking to see over 20 patients arrive in the morning only to be told that they would have to wait six weeks until the next group of Italian volunteers were due to arrive.

It is hoped that groups of Irish dental volunteers will continue to travel to Kenya and help to provide this much needed service. Any interested parties should contact Dr Gary McMahon at ceka@eircom.net for further information.

Acknowledgments

The authors thank Dublin Dental School and Hospital, ProDent and Glaxo SmithKline for their ongoing support of this project.

Reference

1. Opinya GN, Pameijer CH. Tensile bond strength of fluorosed Kenyan teeth using the acid etch technique. *Int Dent J* 1986 Dec; 36 (4):225-229.

Oral health month targets mothers and children

Colgate Palmolive, in association with the Irish Dental Association, has announced that it will run the successful Colgate Oral Health Month initiative again this September.

Oral Health Month aims to establish and promote better oral health habits.

This year, Colgate promises an exciting national campaign, which will be aimed principally at children and their mothers. The campaign will use three distinct conduits to promote good oral health: an in-store programme; an in-practice programme; and, an outreach programme. Also included will be an extensive educational programme supporting the promotional activities, designed to help consumers understand the factors affecting tooth decay and how to prevent it, as well as an easy step guide to achieve better oral hygiene.

Colgate, along with participating dental practices, will distribute dental kits in areas of the country with high levels of decay. Dental professionals are crucial to this campaign and Colgate has developed materials to help them raise awareness of a number of key messages with their patients.

"Our campaign for September has been in planning for some months now and we anticipate that it will have a strong effect on people's oral health hygiene and habits," said Valerie Kiernan of Colgate Palmolive.

Colgate also plans to team up with retailers to promote good oral hygiene with strong in-store theatre in September. This activity will be in addition to the various promotions that the company will run. The company will also co-ordinate an in-practice campaign whereby dentists will distribute dental as well as educational kits and generally promote good health care.

In addition, an outreach educational programme will be initiated that will promote good oral hygiene in schools, community and health centres.

In order to make this information widely available, Oral Health Month will be promoted using strong advertising and an active PR programme to encourage access to all information on the website and through dedicated customer care telephone lines.



Essential essay proves a winner



Tom Sheehan, Territory Manager Pfizer Consumer Healthcare (left); presents their awards to Michael McAulliffe and Orla Shanahan, both fourth year students at National University of Ireland, Cork; for their winning essays in the 2004 Listerine Teeth and Gum Defence essay competition; also pictured is Dr Hassan Ziada also from the National University of Ireland, Cork.

Michael McAulliffe, a fourth year student at the National University of Ireland, Cork, has been named the winner of the 2004 Listerine Teeth and Gum Defence essay competition. Michael received a €1,500 travel bursary for his winning essay on 'Essential Oils in Oral Health Management.'

Runners-up in the competition, Orla Shanahan, National University of Ireland, Cork, and Seung-Min Cha, Dublin Dental School, were highly commended for their essays and each received a €500 travel bursary. The essay competition was open to all undergraduate dental students and is part of Listerine's continuing commitment to oral health education.

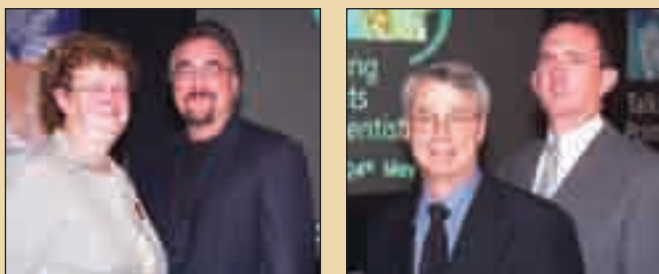
"We were delighted with the response to this year's competition. The quality of entries demonstrates the wealth of young talent out there and makes the future look bright for Irish dentistry," said Roseanne Dunne, Marketing Development Manager, Pfizer Consumer Healthcare.

Promoting Sensodyne

Sensodyne has launched a new TV advertising campaign featuring interviews with Irish dentists in their practices in which they discuss dentine hypersensitivity. The dentists were unscripted, unprompted and unpaid.

The advertisements reflect the fact that the incidence of dental sensitivity is high, with one-in-three Irish people experiencing the problem. As such, the campaign takes on an educational tone, whilst also providing the solution — namely Sensodyne — which is recommended by the majority of Irish dentists. The ads also serve as a positive endorsement for the dental community and reminder to visit the dentist regularly for care and advice.

Talking points in dentistry



Talking about dentistry were (from left): speakers, Mabel Slater, President of the British Dental Hygienist Association; Bruce Christopher, Psychologist; and Ron Jackson, American Academy of Cosmetic Dentistry; with Dave Barrett, Pharmacy Business Manager, GSK.

The Talking Points in Dentistry seminar series, sponsored by GlaxoSmithKline Consumer Healthcare, visited Dublin and Belfast recently. During the event, Mabel Slater, President of the British Dental Hygienist Association, spoke about 'Professionals Complementary to Dentistry'. As a former nurse, her talk was of particular interest to dental nurses. In addition, she examined how dentists can better use their staff to benefit the practice as a whole, plus enhance their own career development.

Leading American restorative dentist, Ron Jackson, was the second speaker with the topic: 'Direct use composite resins in contemporary practice'. His talk proved particularly relevant in light of current dental trends where patients' demands are for less invasive and more aesthetic dentistry and, subsequently, the use of direct composite resins has increased.

Ron outlined that these materials have undergone significant evolution in recent years and dentists are challenged to remain abreast of these developments.

Completing the session, Illinois psychologist, Bruce Christopher, took a look at the differences between the sexes in terms of how men and women think, speak and make decisions.

Through understanding the differences between the sexes and increasing practice communication skills, Bruce assured the audience that decreased tension and conflict will immediately result, increasing energy and morale and generating greater patient service and satisfaction.

Now in its nineteenth successful year touring venues across the UK and Ireland, Talking Points is fast becoming a must in the calendar of ongoing dental education for all surgery staff.

The programme's valuable educational benefit has been recognised and is accredited for CDE points in Ireland.

European conference visits Dublin

Former speaker of the US Congress, Newt Gingrich, was among an impressive line-up of speakers at a major international conference in Dublin recently. The three-day conference – Transforming Healthcare in the New Europe – investigated and highlighted the challenges and opportunities facing the healthcare sector in Europe after the accession of the 10 new countries in May.


Ministers of Health from the accession countries participated in the conference along with Michael Kelly, Ireland's Secretary General at the Department of Health and Children, who informed delegates of Ireland's Health Reform Programme.

PracticeWorks arrives in Ireland

PracticeWorks, a dental practice management software system, is now available in Ireland. Being part of the Kodak family, PracticeWorks has unprecedented experience integrating practice management software and dental imaging products from market leaders such as Trophy and Kodak itself. It is distributed by McCormack Horner.

Mouth Kote

According to a clinical trial, 83 per cent of patients preferred Mouth Kote, a natural long lasting relief of dry mouth and throat to other products. Containing the herbal remedy, Yerba Santa, Mouth Kote, which is available over the counter, contains mucopolysaccharides that mimic the glycoproteins in saliva by holding the aqueous component in contact with the epithelial cells. This adhering action resists moisture dissipation and is clinically proven to relieve dry mouth up to four times longer than traditional saliva substitutes.



**CAREERS IN
HEALTHCARE**

WORKING TOGETHER FOR LIFE

The Health Boards work together to provide progressive healthcare.
As part of our ongoing development we currently have the following opportunities:

NORTH WESTERN HEALTH BOARD

SERVING DONEGAL, SLIGO, LEITRIM & WEST CAVAN

Specialist in Orthodontics

Fixed Term Contract
Letterkenny General Hospital Ref: IDJ/4090

SHORTLISTING MAY APPLY AND PANELS MAY BE FORMED FROM WHICH FUTURE VACANCIES WITHIN THE BOARD MAY BE FILLED AT BOARD'S DISCRETION. WE ARE AN EQUAL OPPORTUNITIES EMPLOYER AND SUPPORT A NON-SMOKING POLICY. CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ARE ACTIVELY ENCOURAGED. FAMILY FRIENDLY WORKING ARRANGEMENTS MAY APPLY.

APPLICATIONS BY CURRICULUM VITAE ONLY, PLEASE INDICATE CLEARLY WHICH POST YOU ARE APPLYING FOR.

BY EMAIL: RECRUIT.LGH@NWHB.IE

BY POST: LETTERKENNY GENERAL HOSPITAL, NWHB,
PERSONNEL DEPARTMENT, LETTERKENNY, CO. DONEGAL,

TEL: 074 91 23584 FAX: 074 91 23213



Website on air

Dentalair, the compressed air systems supplier, has launched a new website - www.dentalair.co.uk - which contains information on this important, but frequently overlooked aspect of dentistry.

Detailing relevant technical data, the site helps dentists make decisions about the air quality required within a practice. Legal responsibilities are also outlined.

Gutta-percha alternative

Trycare has launched Resilon, a thermoplastic synthetic polymer-based root canal filling material containing bioactive glass and

radiopaque fillers. It performs like gutta-percha, has the same handling properties, and, for treatment purposes, may be softened with heat or dissolved with solvents like chloroform.

Similar to gutta-percha, there are master cones in all ISO sizes and accessory cones in different sizes. They can be used in the lateral condensation, vertical condensation or single cone techniques. In addition, Resilon pellets can be used to backfill in warm thermoplasticised techniques employing Obtura guns, etc.

Catalogue launch

Promed has launched its new dental catalogue. The biggest catalogue to date, it contains a selection of over 1,070 product groups.

The new catalogue offers a comprehensive selection of equipment and consumables, and offers a tailor-made solution for surgery requirements. Copies can be requested by calling 1800-619619.



New A-dec 500 launched

Representatives from McCormack Homer introduce the new A-dec 500 suite to dentists in Dublin recently.



A new suite of equipment that includes a dental chair; two styles of delivery, a choice of assistant's instrumentation modules, cuspidor, integrated dental light and monitor mount options has been launched. The A-dec 500 aims, says the manufacturer, to provide unprecedented patient comfort, operator access and overall equipment reliability. For example, the A-dec 500 chair features an ultra-thin backrest designed using pressure-mapping technology. The resulting chair optimises patient comfort while allowing exceptional operator access

with more legroom under the chair. Other innovations include chair articulation points that match patients' natural motion and a unique gliding headrest designed to move with the patient, making chair adjustments comfortable and quick.

Aidan McCormack, Chief Executive of McCormack Horner introduced the new equipment into Ireland, saying: "We have represented A-dec in Ireland for over 24 years and the launch of A-dec 500 marks a new departure in Dental Equipment design and manufacturing as the development

process involved worldwide consultation with all members of the dental team... The result is a new range of dental surgery equipment that meets the present and future needs of both our customers, and our design and installation staff, enabling them to design and install modern and functional Dental surgeries."

Retirement



After 25 years with E Horner & Sons (now McCormack Horner), David Woods retired from the company. Pictured at the retirement party are (from left) Alan Horner, David Woods and Aidan McCormack.

Protecting your income

IRVINE GREY from Medimoneycare, specialist financial advisers to dentists and doctors, advises on the importance of protecting your income.

Many qualified dentists take their income for granted and believe that it will continue to increase over the years. That is generally true. However, for some that it is not the case. Long-term illness or disability has often cut short what was otherwise a promising career.

Most dentists put in place a plan that will protect their income, others fail to realise the importance of such a plan. What is an income protection plan? It is simply a plan to protect your income in the event of illness or disability, sometimes known as an income replacement plan or by the generic term – permanent health insurance.

Sometimes these plans are confused with mortgage payment protection plans or serious illness plans. There is an important difference. A mortgage payment protection plan will pay a set sum, usually in the event of accident, sickness or unemployment, after a waiting period of one month and then, say, for up to 12 months when benefits cease. Income protection will pay benefits in the event of illness or disability until age 60 or 65 or until you return to work.

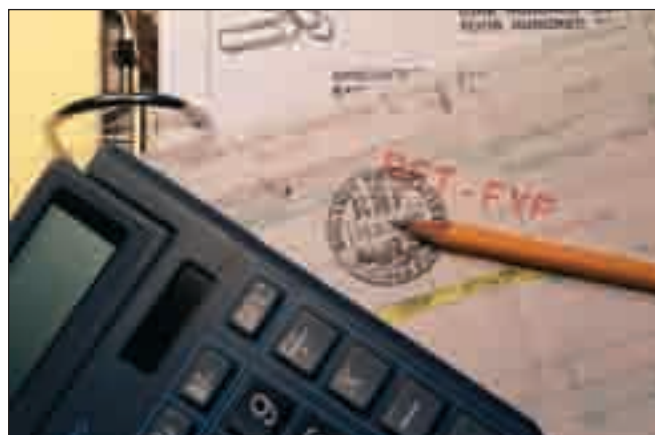
A serious illness plan will pay a lump sum on the diagnosis of a specified serious illness such as cancer, benign brain tumour, heart attack, multiple sclerosis and many others. The important difference is that the payment is made on the diagnosis and is not dependent on whether you will work in the future. When these plans were introduced in the early nineties, the definition of what constituted the diagnosis of a serious illness was sometimes vague but now the definitions are fairly standard between the various plan providers.

One feature of serious illness plans that must be examined carefully is what is known as total and permanent disability otherwise known as TPD. There is a possibility that you may become disabled due to some illness or condition that is not included as a specified serious illness. Because of the dexterity required, a serious accidental injury to a hand or arm could leave you unable to work as a dentist. The definitions of TPD vary greatly between providers. Very few provide dentists with what is known as an own-occupation definition. Most provide a definition of any occupation or any suited occupation and obviously such a plan is unsuitable for a dentist.

Serious illness cover or income protection?

Should you decide to have serious illness cover in preference to income protection? Both are different products to meet different needs. It is usual to have serious illness cover to provide a lump sum to repay an outstanding liability such as a mortgage plus income protection to provide an on-going income.

The purpose of income protection is to replace your income when this ceases because of illness or disability. This differs depending on your job. A principal, partner or an associate's income may cease immediately so the need to provide benefits from day one is usually essential. For those working in health boards or hospitals, depending



on the length of service, full pay may continue for six months followed by half pay for six months.

There are no providers of immediate benefit plans in Ireland but there are specialist providers of these plans who are based in the UK and provide benefits for dentists in Ireland. Two of these providers are Dentist Provident Society and Dentist & General.

A practitioner who needs immediate benefits could select one of the UK plans that would pay benefits from day one. Benefits would reduce to 50 per cent after payment for six months and a further reduction to 30 per cent when benefits have been in payment for one year. To keep costs down, the level of benefits selected should be sufficient to provide day-to-day living costs and outgoings.

These benefits could be topped up with benefits from an Irish provider, with a combination of benefits paid after waiting periods of six and 12 months. Benefits should be payable on an increasing basis to age 60 or 65. Maximum benefits are restricted to 75 per cent of your taxable income, less state disability of €7,009.60. It is important that benefits are payable in the event of you being unable to work as a dentist because of illness or disability.

For the more recently qualified dentist, it is quite common to choose immediate benefits where these do not decrease and then when the income flow has levelled out to change this to a reducing cover plan and put the top up plan in place. Tax relief is not available on income protection plans from UK providers but is available on an Irish provider plan.

Thankfully, in my 20 years of providing financial advice to dentists, I have seen very few long-term claims but lots of short-term claims. For example, there have been broken wrists during football; broken legs while skiing and some long-term injuries as a result of road traffic accidents. To each of these claimants whether they were unable to work for four weeks, three months or six months, income protection benefits made a significant difference.

Practical crown and bridge for predictable aesthetics

GERARD CHICHE, Chairman of the Department of Prosthodontics at Louisiana State University School of Dentistry, gave an excellent in depth review and analysis of aesthetics at the annual conference of the IDA in Limerick. Dr Chiche, in an interview by the editor, gives his formula for predicable aesthetics and discusses all ceramic restorations.



Dr Chiche, you talk about having a system to help analyse and develop an aesthetic smile for patients. Can you explain?

Yes, aesthetics was always considered to be a 'feeling', that it was something that you felt and knew when you saw the right thing. However, over many years of teaching and clinical practice, I have developed a system that is useful in evaluating the existing dentition, helps diagnose problems and helps develop a more aesthetic smile. I have simply it called an aesthetic checklist.

What exactly is the aesthetic checklist?

There are six primary goals for a pleasing smile. They help us, as clinicians, to determine optimal tooth display, tooth size, tooth position and orientation in harmony with the patient's face. This should always begin with an analysis of the incisal plane.

1. Analyse and record the shape of the incise plane (also called smile line)

- Is it flat, concave, convex or too convex?
- Does it follow the lower lip?
- Is the lower lip convex, flat or asymmetric?
- Is there a negative space between the incisors and the lip?
- Is there a negative space between the canines and the lip?

The incisal plane should follow the shape of the lower lip. Analyse the shape of the incisal plane in relation to the lower lip by recording the shape of the lower lip and the shape of the incisal plane. The incisal shape should be convex with the edges of the centrals at the most incisal point and canines raised slightly giving the convex profile that follows the lower lip. It sounds quite simple, but, as was

explained in my presentation, you can get caught with the wrong smile line in the final restorations if you do not plan the provisional restorations sufficiently.

2. Evaluate the incisal profile

Use the fricative (f and v sounds) sounds to check the position of the incisal edges relative to the lower lip. Ideally, the incisal edges should touch the wet part of the lower lip, just inside the wet/dry line of the lower lip. This is good for diagnosing gross exaggerations of tooth malpositions.

Check the angle/relation of the incisal third of the central incisors to the occlusal plane. This rule was originally formulated by Frank Spear and I implement it simply by running a mirror handle along the occlusal plane in an anteroposterior direction and I ask myself if the incisal third of the tooth lies perpendicular, obtuse, or acute to this plane. The incisal third off the central incisors should run in the region of a 90-degree angle to the occlusal plane.

3. Establish incisal length

The incisors should be the correct length and the patient should have a pleasing display of incisors at rest.

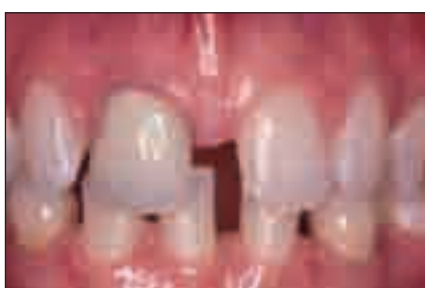
In dental school, we learned that the pleasing display at rest was 1mm. Because it worked as a good average for complete denture patients. However, in fact, more recently it has been determined on patients with intact dentition that the pleasing display at rest for females is usually 3.5-4.5mm and for males 1-3mm at rest.

Is the display at rest sufficient, insufficient or excessive?

The pleasing length of a central incisor is 10-11mm, 10.5mm being the average.



LEFT: Preoperative radiograph of patient unsatisfied with maxillary right central incisor crown. Analysis: Patient lacks symmetry of the central incisors, gingival margin height of right central incisor is more apical, the left central incisor crown is wider than the left, the central incisor crown is too high in value (bright) and lacks incisal translucency. RIGHT: Patient restored with a single central incisor crown following crown lengthening and orthodontic realignment. The patient's anterior teeth are now symmetrical, the central incisors have an aesthetic width-length ratio and the colour match is excellent.



LEFT: Patient presents unhappy with existing dentition and wants to achieve the 'perfect smile'. Patient has diastemas in both arches, is missing the mandibular left lateral incisor. The gingival margin height of the lateral incisor is at a higher (more apical) level than the central incisors. RIGHT: Patient following orthodontic treatment, crown lengthening and veneers. Note the symmetry, the incisal edge levels, the gingival margin heights with the central and the canines at the same level and the laterals one millimetre lower (more incisal).



To increase length to ideal add composite trials.

To reduce length use a black felt pen to test a reduction in length.

Check horizontal and vertical overlap.

4. Review tooth proportion

Central incisors proportion: central incisors are more aesthetic if longer incisogingivally than wider mesiodistally. Measure the width of the incisors and the length of the incisors and evaluate the width length ratio.

The pleasing width-to-length ratio of a central incisor lies in a range of 75-82 per cent, i.e., the width should ideally be no less than 75 per cent of the length or greater than 82 per cent of the length. A width length ratio of less than 65 per cent or greater than 85 per cent is not pleasing to the eye.

If the incisors are not the correct length when measured, it is possible to preview a change in length by adding light-cured unbonded composite at chairside and evaluate the change. This can be done in minutes and gives the patient a real sense of possible changes.

Always check if the changes blend with the face. Do you need to involve the lateral incisors when making changes? For example, if closing a diastema makes the centrals too wide, then involve the laterals, and possibly the canines and do so by narrowing the distal of the centrals and of the laterals as needed. Do not have too wide and short central incisors.

5. Analyse the tooth-to-tooth proportion

Smile design involves analysing:

- Proportion;
- Display (1-3mm male; 3.5-4.5mm female); and,
- Length (10-11mm).

With respect to proportion and tooth-to-tooth progression, the lateral incisor should appear 'delicate' and not 'dominant'. The lateral incisor should never compete for attention. Some special affects can be used to reduce the width of a lateral incisor, e.g., by moving the mesial and distal line angles to the centre of the tooth, and rounding the facial surface.

6. Progression and symmetry

Symmetry is the most important. The gingival plane between the central incisors should parallel the interpupillary line. The reference line is set by the central incisors.

- Establish the length and position of the central incisors. This will dictate all others.
- Avoid fat central incisors – get a good proportion.
- Avoid having the lateral as the dominant tooth. The lateral should be smaller than the central
- Avoid asymmetric central incisors.
- Look at the gingival margins positions, this is also involved in aesthetics.

Do you have a form you use in your practice – can we include the aesthetic analysis form?

In practice, I just write the six points above as I see them. It is much quicker and you are done in about two minutes.

Any other tips for elective aesthetics?

Increase brightness – patients rarely complain of teeth that are too white!

Increase length of the incisors – it gives a more youthful appearance
Give the patient a fuller smile after careful analysis of the incisal edge position and detection of any retrusion.

There is an increasing number of all-ceramic restorations. How can we distinguish one from another?

I classify all ceramic restorations into two families Family A and Family B, both of which have very different philosophies, different handling characteristics and applications.

Family A

This is the alumina and zirconia family and includes such porcelains as Inceram, Procera, and all zirconia systems.



LEFT: Patient presents unhappy with the appearance of the anterior teeth. The composite incisal edges on the centrals incisors are discoloured. The gingival margin heights of the two central incisors are uneven and asymmetrical. The left lateral incisor crown is shorter and wider than the right lateral incisor



RIGHT: Patient restored with four anterior veneers. Crown lengthening procedures have optimised the gingival margin heights. The central incisors are now symmetrical (same shape and size and gingival architecture), the lateral incisors are the same width and height

- These are non-etch porcelains.
- They cannot be bonded.
- The strength of the restoration lies in the strength of the core.

The crowns are cemented and not bonded to place. Research has shown less leakage if these are cemented with resin modified glass ionomers, as compared with zinc phosphate cement. Success rates of 99.1 per cent over 1-6 years have been very accurately reported by Barry Segal in the Journal of Prosthetic Dentistry.

Family A is excellent for discoloured teeth, where adequate reduction is possible. I will mention a few precautions in relation to them:

1. Maintain core integrity: there should sufficient total reduction in order to maximise porcelain-core fracture strength (Research by Worthington has shown that a 2mm reduction will yield a fracture resistance of the Procera core-porcelain assembly 1297 N approx, 1.5mm 1142N, and 1mm 732N.
2. In short preparations, make sure that the incisal porcelain veneered on top of the core is no greater than 2mm in length. This can be compensated by having the laboratory fabricate ideal core dimensions with the alumina coping regardless of how short the preparation may be.
3. Watch marginal ridge support, once again the laboratory needs to ensure that the porcelain veneered onto the alumina coping stretches no more than 1.5mm in the area of the marginal ridge, beyond which it may be safer to provide lateral extensions on the core. John McLean established this principle.
4. Avoid short molars.

The ideal crown preparation is:

1. 2mm occlusal reduction on molar/premolar preparations.
2. 1.25mm reduction on the lingual of the incisors.
3. Round the internal line angles.

Family B

These are the pressable/feldspathic porcelains, e.g., Empress 1, Authentic, Empress 2, Finesse Pressable, Fortress, Colorlogic, etc.

- These are etchable crowns and can be etched using hydrofluoric acid followed by silane application. In addition, the crowns can be sandblasted for increased bond strength prior to hydrofluoric application.
- The preparation may be thinner on the facial aspect if needed.
- The preparation should be tooth coloured for best translucency results.
- The strength owes a great deal to the quality of the dentin and ceramic bond.

How do you decide between family A and Family B?

Well, for anterior teeth, you can use family A or B.

For premolar crowns you can use all systems (family A and B).

For molars crowns, the porcelain fused to metal is the most reliable, Pressable ceramics crowns give variable for some clinicians but definitely good results overall. Alumina crowns (Family A) can be suitable using the precautions identified above. Zirconia is very promising and may become the all-ceramic molar crown of choice. Occlusion is also very important and the following occlusal considerations should be followed:

- Harmonise posterior contacts in maximum intercuspation position.
- Have lighter anterior contacts in maximum intercuspation position.
- Need anterior disclusion of posterior teeth.
- Need harmonious anterior guidance.
- Recheck occlusion six-months post-operative once final stability is achieved.
- Best check is using shimstock.

Any other deciding factors between Family A and Family B?

- If the tooth is discoloured, Family A is a very good option
- If the thickness of the crown at the mid-facial is less than 1.3mm, Family B is a very good option. If it is greater than 1.3mm, then use Family A or Family B.
- If the tooth is bony/opaque (dense-looking), which is often the case for males, then use Family A.
- If the tooth is translucent, which is often the case for females, then use Family B.
- Also, use what your ceramist has the most expertise in.

The decision of which all-ceramic crown to use is not an exact science and is based on all the factors discussed so far.

Finally, any tips on cementing all ceramic restorations?

I use retraction cord 000 string width, which is inserted before and removed at the end of cementation.

With all-ceramic crowns, use a dual-cured cement such as Variolink II or Rely ARC, whereas with veneers a light-cured cement is adequate provided sufficient light energy reaches the cement through the veneer.

Finally, bond no more than two crowns at a time.

Overview of TMD and orofacial pain

In the first of a three-part series, DR DERMOT CANAVAN looks at temporomandibular disorders (TMD). In the following two parts, which will be published in the Winter 2004 and Spring 2005 issues of the *Journal of the Irish Dental Association*, he will look at headaches that present as facial pain, neuralgia, dental pain and atypical facial/dental pain.

Introduction

Orofacial pain is an important issue for both patients and clinicians alike. Pain within the oral cavity is most frequently dental in origin (odontogenic) and extra-orally the most common source of pain is musculoskeletal (TMD). Once these conditions have been excluded, the diagnostic process becomes more difficult. The differential diagnosis for non-odontogenic pain is extensive. Possible causes of orofacial pain range from intracranial disease to a variety of benign facial pain syndromes. This article briefly reviews some of the more common disorders associated with persistent orofacial pain, while the implications for general practice dentistry are also noted.

Temporomandibular disorders

Terminology

Epidemiological studies have attempted to describe the extent to which TMD symptoms exist within different population groups. The resultant data is compromised by poor study design and lack of clarity in the terminology used to define the disorder. Symptoms of headache pain are frequently not separated from jaw joint discomfort, while some studies are based on biased population samples. For the purpose of this review we use the term temporomandibular disorders (TMD).

TMD is defined as a collective term embracing a number of clinical problems that involve the masticatory musculature, the TMJ and associated structures, or both¹. Originally described by Costen, an ENT surgeon, in 1934, clinical management of pain in the jaw joint and masticatory muscles has since been placed within the realm of dentistry.

Other terms less commonly used include craniomandibular disorders, oromandibular dysfunction³, temporomandibular joint syndrome, and facial arthromyalgia².

Olesen, working through the International Headache Society, has described the following diagnostic criteria. He suggests three or more of the following should be present:

- temporomandibular joint noise (clicking or crepitation);
- limited or jerky jaw movements;
- pain on function;
- locking of jaw on opening;
- clenching of teeth;
- gnashing of teeth (bruxism); and,
- other parafunctional habits (biting of tongue, lips or cheek, etc).

Clinical approach

Diagnostic criteria like the above help to standardise research and promote clarity in

comparative studies. Unfortunately, the limitations of diagnostic (research) criteria as outlined above are obvious from a clinical perspective. Between 50- 70 per cent of all patients experience joint noise at some time. Likewise, bruxism while classified as an oral motor disorder, is not a disease. A more reasonable and practical set of criteria for clinicians attempting to identify TMD would include: painful clicking, limited mouth opening, pain with mandibular function. At least two of these criteria will be present in patients requiring treatment.

Assessment of temporomandibular joint status is based on the patients history (appendix A) and the results of a careful clinical examination (appendix B). The data elicited from the examination should be recorded for every new patient. This information may be useful at a later date for patients who subsequently develop signs of dysfunction.

Interpretation of the clinical findings is predicated on the clinician having an adequate knowledge of joint anatomy and physiology. This background anatomy is well described elsewhere.

Range of movement:

Range of movement data vary enormously between individuals. However, some consistency is shown in the first half of mouth opening that involves rotation of the condyle and averages 25mm interincisally. The subsequent translatory movement can provide an approximate 20 to 30mm of opening. Mandibular mobility is also influenced by age and body size. The definition of what constitutes limited mouth opening is therefore complex. Acute limitation of opening, which has a sudden onset, may leave the patient with less than 25mm of opening.

Author

Dr Dermot Canavan BDentSc,
MGDS (Edin), MS U Calif
69 Eglinton Road,
Donnybrook,
Dublin 4
Tel: 01 - 2694022
Fax: 01 - 2694004

Patients who are pain free and have a range of movement of 35mm or more will generally function well. Experienced clinicians will take careful heed of their patients' opinion of their degree of mouth opening, as it relates directly to their previous status. For example, a patient who could previously open to 50mm might consider 40mm of opening very limiting. On the other hand patients who have become accustomed to a 35mm opening will consider it normal.

Clinical examination procedure

Contrary to popular belief, the clinical assessment required for new patients does not have to be a lengthy procedure. Every patient should have a recording (with a ruler) for mandibular range of movement both in the midline and for lateral movement. The presence or absence of joint noise associated with movement should also be recorded. Patients must be asked about joint noise as it may only become apparent during chewing movements. Clicking noises with joint movement are common, while crepitation associated with joint function is less common. Mandibular movements should be smooth and well coordinated. The clinician should record any hesitation or deviation with movement. The presence or absence of pain with movement should also be recorded on the patient's chart. Tenderness of the joint capsule may be difficult to elicit accurately as it is dependent on the degree of pressure applied, and the innate sensitivity of the patient. In an acutely inflamed joint, the response to pressure on the joint will be immediately apparent. The masticatory muscles should be routinely assessed. Tenderness is again relative to the pressure applied but experienced clinicians should be able to judge whether or not the level of tenderness is within a range of normality. Muscle hypertrophy (particularly the masseter muscles) will sometimes be apparent in patients who have significant parafunctional habits (e.g., bruxism). The occlusal status should also be examined and recorded as part of this assessment. The relative importance of occlusal factors is discussed below.

Common complaints

Temporomandibular joint disorders are generally divided into those that are joint related (arthrogenous) and muscular (myogenous). Clinically, the two frequently occur together but this arbitrary separation facilitates research and discussion. Patients are frequently concerned about pain with function, painful or loud clicking and limitation of opening. From a treatment perspective, it is almost impossible to eliminate joint noise, but restoration of mouth opening and control of pain are reasonable goals. Pain is usually localised to the masticatory muscles, the temporomandibular joint or both, and aggravated by movement of the mandible. Pain referral to the ear, temple, midface and lateral aspect of the neck is common. The differential diagnosis of limitation of mouth opening with abrupt onset is extensive but is commonly associated with acute disc displacement. Disc displacement without reduction (permanent closed lock) presents most frequently, although not exclusively, in young female patients. Early and accurate diagnosis is important in the management of this disorder (see **Table 1**).

TABLE 1: Permanent closed lock (disc displacement without reduction)

- 1 NSAIDs and other analgesics to control pain as required. Muscle relaxants (prescribed for four to five days) like diazepam or lioresal may be helpful. Side effects will limit their usefulness.
- 2 Mandibular movement exercises aimed at restoring full mobility. Patient is shown stretching exercises, i.e., vigorous lateral movement followed by midline stretching with fingers and thumbs or with use of wooden bite sticks. Exercise programme must be carried out at least six times per day for approximately ten minutes in each session.
- 3 If no improvement after one week, then more invasive measures may be considered. Intra-articular injection with local anaesthetic injection may be sufficient to unlock the joint and restore mobility. Where injection is successful patients should be encouraged to wear a repositioning appliance on a full time basis for at least two weeks. This has practical implications for the patient and cooperation is not always forthcoming.
- 4 Joint injection with Hyalgan (a soft tissue lubricant) is also an option but few studies are available on its effectiveness.
- 5 Referral for surgical assessment is necessary for a number of these patients. Current surgical options include arthrocentesis, arthrography and eminectomy. Comparative studies on outcome are lacking at this time.
- 6 Adequately controlled, long-term studies are lacking for disc displacement without reduction. There are some suggestions that patients may recover spontaneously without treatment following five-year review.

However, the desire to control pain and restore an adequate range of mouth opening to allow proper ingestion of food, encourages a proactive treatment approach.

It is often characterised by a previous history of joint clicking, which stops abruptly once mandibular movement is limited. It may occur spontaneously in susceptible individuals or it may be associated with facial trauma, prolonged mouth opening (e.g., lengthy dental appointments, etc), yawning or biting into very hard foodstuffs. The use of NSAIDs, soft diet and an exercise programme may be adequate to restore full mobility of the joint. More invasive procedures like joint injection with local anaesthetic or surgery are also helpful. Surgical options including arthrocentesis and arthroscopy provide a minimally invasive approach. Open joint surgery (e.g., eminectomy) is less frequently required.

Occlusal appliances (bite splints) also have a role to play in stabilising or repositioning the joint. Unfortunately, the use of appliances in the treatment of joint disorders is not without some risk for the patient. For example, a stabilisation, or flat plane, appliance used in a patient with intermittent clicking or locking may precipitate permanent disc displacement (closed lock). Unwanted occlusal changes may occur in patients who overuse their appliances, or in situations where the appliance is poorly adjusted.

TABLE 2: Strategies for managing localised muscle pain

- 1 Elimination of parafunctional habits, e.g., daytime clenching, cheek biting, chewing tops of pens/pencils, finger nail biting. Nervous habits include 'tooth tapping' and repetitive non functional movement of the mandible.
- 2 Home exercise programme (HEP) carried out two or three times per day. Includes application of heat or cold to symptomatic region to alleviate pain. Followed by a programme of controlled mandible movements (in midline and laterally) to stretch masticatory muscles. Use of a vapocoolant spray on the affected muscles will facilitate stretching.
- 3 Pain control with NSAIDS prescribed on time contingent basis for five to seven days.
- 4 Occlusal appliance (stabilisation device) used at night time only where bruxism appears to be contributing factor. Daytime use of the appliance may induce occlusal changes.
- 5 Relaxation training, e.g., biofeedback has been shown to be effective in management of muscle pain
- 6 Muscle trigger point injections with local anaesthetic alone or with steroid may have limited role in treatment. Neuromuscular blockade with Botox or Neurobloc does not have convincing evidence for its use. Complementary therapies like acupuncture have an unproven role in management of facial muscle pain.
- 7 Centrally acting medications like tricyclics (e.g., amitriptyline) or anticonvulsants (e.g., neurontin) can be used in resistant cases.

Pain emanating from the masticatory muscles may originate within the masticatory system or it may be part of a regional disorder in the head and neck area. A localised muscle disorder can be well managed within a dental setting. In contrast, regional musculoskeletal pain may involve dysfunction of the cervical spine and warrants multidisciplinary assessment. Referring the patient to a physiotherapist will provide

valuable insight in the mechanics and functional characteristics of the whole upper quarter (head, neck and shoulders).

Table 2 highlights the broad range of treatment options available for the management of musculoskeletal pain in the orofacial region. Cooperation between different health professionals is essential for adequate patient management and resolution of the symptoms.

Advertorial

REACH[®] ACCESS[™] Daily Flosser is launched, making Flossing Easier for Patients

Despite the many health benefits of flossing, some 87% of dental patients still floss infrequently, or not at all. Johnson & Johnson has just introduced a new revolutionary easy-to-use flosser - the REACH[®] ACCESS[™] Daily Flosser - a new dental hygiene tool that will encourage patients to floss. The REACH[®] ACCESS[™] Daily Flosser has been adapted by Johnson & Johnson from the original Interfloss product.

REACH[®] ACCESS[™] Daily Flosser has a unique ergonomic design making flossing as easy and convenient as brushing, encouraging patients to floss more frequently and adopt a flossing habit.

In addition, the convenient disposable, snap-on heads are equipped with Johnson & Johnson shred resistant floss, a toothbrush style handle with angled neck which reaches the back of the teeth where most hygiene trouble begins. The REACH[®] ACCESS[™] Daily Flosser is designed to fit neatly into a patient's toothbrush holder serving as a daily reminder to floss.

REACH[®] ACCESS[™] Daily Flosser will be available at pharmacies and supermarkets nationwide from August 2004. The Starter Pack (handle and 8 heads) will retail at €3.99 and the Reach Refill Pack (28 heads) €4.49.



Aetiology of temporomandibular joint disorders and masticatory muscle pain

Numerous factors have been reviewed but the aetiology of TMD is still unclear. Parafunctional habits have been implicated in TMD^{4,5}.

Common etiologic factors associated with TMD include bruxism, trauma, occlusal interferences and emotional stressors^{4,6,7,8}. The association between sleep disturbance and chronic pain syndromes has been extensively reviewed. Moldofsky has shown that fibromyalgia and rheumatoid arthritis are associated with significant sleep disturbance. Bruxism has been proposed as a cause of facial muscle pain, and tooth clenching or grinding has been suggested to increase with elevated levels of sleep disturbance⁹.

Nocturnal bruxism seems to occur during rapid eye movement (REM) and stage 2 sleep irrespective of occlusal status¹⁰. However, theories linking emotional stress with muscle hyperactivity and facial pain have not been validated by EMG studies. Berlin and colleagues reported a reduction in the incidence of headache in a group of patients with bruxism.

Occlusal interferences are by far the most controversial factor associated with TMD. Mock equilibration of the occlusion have been shown to be equally effective as real treatment suggesting a strong placebo effect¹¹. Given that over 90 per cent of the population have some type of malocclusion, it is reasonable to assume that this a normal state¹².

In a review based on a series of studies, Seligman and Pullinger described only a minor association between occlusal factors and TMD^{13,14}. In contrast to historical beliefs, it would appear the role of occlusion is diminished as an aetiological factor for TMD, but it plays some part in the development of these disorders under limited circumstances.

Prognosis

Most epidemiological studies confirm a decreasing prevalence of TMD in aging populations. The widely held belief is that temporomandibular disorders are self limiting, and symptom reduction is generally achievable with conservation methods. Patient suitability for irreversible therapies must be carefully assessed. Patients who are unresponsive to treatment should initially be screened for a behavioural disorder¹⁵.

Appendix A - Screening Questionnaire for TMD

- 1 Do you have clicking or crunching noises in your jaw joints?
- 2 Does movement of your jaw for chewing, talking, yawning etc cause pain?
- 3 Do you feel you can open your mouth adequately?
- 4 Have you ever experienced trauma/injury to your face or mouth?
- 5 Does your bite feel comfortable?
- 6 Have you noticed any change in your bite in the last 6 - 12 months?
- 7 Do you experience any type in your face, head, neck or shoulders?

Appendix B - Simple Assessment for TMD

- 1 Measure range of mandibular movement in midline and laterally.

Note whether movement is painful or not.

- 2 Does mandible deviates to the right or left on opening?
- 3 Document presence or absence of joint noise. Note whether joint noise is painful or not.
- 4 Note tenderness to palpation in joint, both laterally and dorsally.
- 5 Document results of simple muscle examination in orofacial area. Ask patient to verify presence or absence of pain on palpation.

References

- 1 Orofacial Pain: Guidelines for assessment, Diagnosis and Management. 3rd Ed. Jeffrey Okeson Quintessence 1996.
- 2 Harris M. Medical versus surgical management of temporomandibular joint pain and dysfunction. *Br J Oral Maxfac Surg* 1987; 25: 113-120.
- 3 Olesen J. Classification and diagnostic criteria for headache disorders, cranial neuralgias, and facial pain. *Cephalgia* 1988; 8: suppl 7.
- 4 Magnusson T, Carlsson GE. Changes in recurrent headache and mandibular dysfunction after various types of dental treatment. *Acta Odontol Scand* 1980; 38: 311-320.
- 5 Sessel BJ, Hu JW. Mechanisms of pain arising from articular tissues. *Can J Physiol Pharmacol* 1991; 69: 617-626.
- 6 Classification and Diagnostic Criteria for headache disorders, cranial neuralgias and facial pain. Headache classification committee of the International Headache Society. *Cephalgia* 1988; 8(Suppl 7): 1-96.
- 7 Forssell H, Kirveskari P, Kangasniemi P. Distinguishing between headaches responsive and irresponsive to treatment of mandibular dysfunction. *Proceedings of the Finnish Dental Society* 1986; 82: 219-222.
- 8 Schiffman E, Friction JR, Haley D, Shapiro BL. The prevalence and treatment needs of subjects with temporomandibular disorders. *J Am Dent Assoc* 1989; 120: 295-304.
- 9 Moldofsky H. The contribution of sleep wake physiology to fibromyalgia. Ch 13. *Advances in Pain Research and Therapy. Vol 17: Myofascial Pain and Fibromyalgia.* Ed by Friction JR, Awad EA. Raven Press, New York, 1990 pp. 227-240.
- 10 Dahlstrom L. Electromyographic studies of craniomandibular disorders: A review of the literature. *J Oral Rehab* 1989; 16: 1-20.
- 11 Goodman P, Green CS, Laskin DM. Response of patients with myofascial pain dysfunction to mock equilibration. *J Am Dent Assoc* 1976; 92: 755-758.
- 12 Greider A. *An applied Psychology in Dentistry.* In; Cinotti WR, Greider A. Springbob HK (Eds) The Mosby Company, St Louis, MO 2nd ed, 1972.
- 13 Seligman DA, Pullinger AG. The role of functional occlusal relationships in temporomandibular disorders. *J Craniomandib Disord* 1991; 5: 231-238.
- 14 Seligman DA, Pullinger AG. The role of intercuspal occlusal relationships in temporomandibular disorders: a review. *J Craniomandib Disord* 1991; 5: 96-106.
- 15 Whitney CW, Von Korff M. Regression to the mean in treated versus untreated chronic pain. *Pain.* 1992; 50: 281-285.

Statistical and clinical significance: alternative methods for understanding the importance of research findings

Precis

Statistical significance provides useful but incomplete information. Measures of effect size are a valuable tool for understanding a study's results.

Abstract

Statistical significance is an important tool for interpreting a study's results, but statistical significance provides an incomplete picture of results. The likelihood of obtaining statistically significant results can be manipulated by a researcher who uses large sample sizes or who compares treatments that are expected to differ greatly in outcome. Measures of effect size provide an additional tool for understanding the results of a study and evaluating the importance of the results. Meta-analyses and estimates of clinical significance can also help clinicians properly evaluate research findings.

Introduction

There is a strong bias in favour of studies that contain large numbers of subjects¹. A large number of subjects shows that the investigators have put in a great deal of effort. Large sample sizes may make the results more believable or acceptable to readers. Of course, large sample sizes by themselves do not guarantee publication in a peer-reviewed professional journal. The use of excellent research design increases the likelihood of publication, as does the presence of statistically significant effects. Indeed, there is a well-documented bias against publication of studies that do not report statistical significance²⁻⁵.

In this article, I make the case that statistical significance is a crucial but incomplete source of information regarding the importance of research findings. I show that researchers can include additional information in their reports that can make it easier for readers to more accurately evaluate the importance of research findings.

The meaning of statistical significance

When a study reports statistical significance, the authors are claiming that the differences between groups are unlikely to have occurred by chance. If the experiment was repeated again and again, the differences would probably still exist. As suggested by the terms 'unlikely' and 'probably', there is some possibility that the numbers could have occurred by chance alone. Conventionally, the level of chance is one in

20 ($p \leq 0.05$) or lower. In statistical terms, this is the alpha or Type 1 error: the probability that we claim differences when they are not truly present.

Researchers have a number of techniques at their disposal to increase the likelihood of obtaining statistically significant results from their research studies and limiting the occurrence of Type 1 errors. One simple technique is to increase sample size. Other techniques are to decrease variability within groups (make the groups more homogeneous and/or use very stringent experimental techniques that limit variability) and increase differences between groups (select treatments that differ considerably in their efficacy).

To illustrate these points, let us assume that we have carried out a two-group study comparing the efficacy of two different sealants used in children. We will label the two treatment groups A and B. We will denote the mean ('average') of A as X_A and the mean score of B as X_B . Let us further assume that we have carried out two studies on the efficacy of sealants. In one study, we used a small sample size ($N=10$ per group) and in the other study we used a large sample size ($N=100$ per group). Finally, let us assume that the mean number of caries at the end of treatment was the same for Treatment A in both studies, that the number of caries was the same for Treatment B in both studies, and that Treatment A was better than Treatment B in both studies. Specific values that illustrate these assumptions can be found in **Table 1**^a.

Alan G. Glaros, Ph.D.

Department of Dental Public Health
and Behavioural Science
School of Dentistry
University of Missouri-Kansas City
650 East 25th Street
Kansas City, MO 64108
USA
Tel: 1-816-235-2074
Fax: 1-816-235-2157
Email: glarosa@umkc.edu

TABLE 1: Hypothetical study using small and large sample sizes: means are number of carious lesions

	Small sample study		Large sample study	
	N	Mean	N	Mean
Treatment A	10	2.2	100	2.2
Treatment B	10	2.7	100	2.7

For a simple two-group design such as this, we could use several inferential tests, including Student's t-test^b or an analysis of variance (ANOVA - F-test), to determine whether the two groups differed statistically. For ease of presentation, we will rely on Student's t-test, although the principles involved are applicable to most statistical tests. A t-test is calculated using the following formula:

$$t = \frac{(X_a - X_b)}{s_{\bar{x}}}$$

In words, this equation determines the difference in means between Treatments A and B and divides them by a figure known as the estimated standard error of the mean. The resulting t value can be compared to statistical tables to determine if it is large enough to be called statistically significant. As the difference between Treatments A and B increases, the value of t will increase (i.e., be more likely to be statistically significant). This explains why selecting groups (or treatments) that produce very different outcomes increases the likelihood of having statistically significant results. If you want to increase your odds of having a statistically significant result at the end of a treatment study, select one treatment that will produce poor results and compare it to a treatment that will produce excellent results.

The bottom portion of the equation, the standard error of the mean, also contributes to the value of t. As this value decreases, the value of t will increase. The estimated standard error of the mean is calculated as

$$\frac{s}{\sqrt{n}}$$

where s is the estimated population standard deviation, and n is the sample size. Without going into technicalities, the value of s is about the same whether the sample size is large or small. However, as sample size (n) increases, the square root of n will increase as well. This reduces the value of and increases the value of t. This is why large sample sizes increase the likelihood of labelling a difference between two groups as "statistically significant."

Figure 1 shows how increases in sample size affect the estimated standard error of the mean. This figure contains hypothetical data for small and large sample sizes. As you can see, the means for Treatment A and Treatment B do not change. However, when the sample size is large, the distributions are 'tighter' than when the sample size is smaller. It is not surprising, therefore, that increases in sample size and improved experimental techniques, both of which result in less estimated variability, increase the likelihood that differences between groups will be called significant.

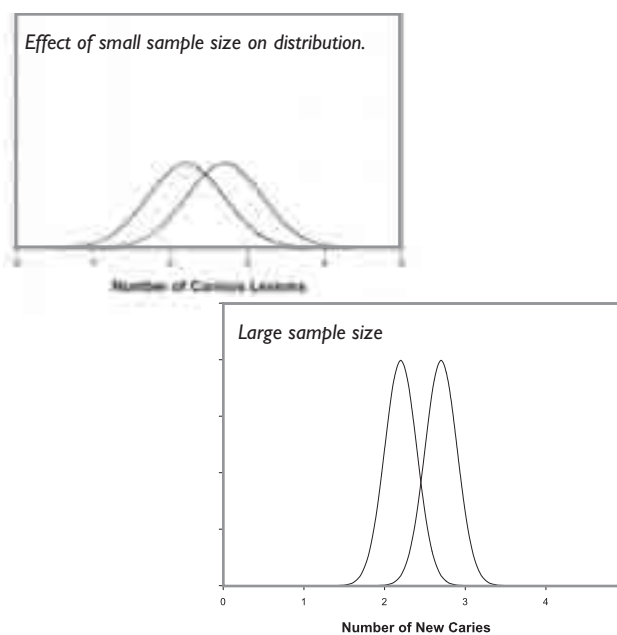


FIGURE 1: Effect of sample size on distributions.

The trap of large sample sizes

The preference for large sample sizes can lead readers to some unexpected and potentially undesirable conclusions. Let's return to our two sealant treatments. This time, let us make the unreasonable assumption that the number of caries at the end of treatment is two for Treatment A and 14 for Treatment B. When we perform the statistical test, we will probably find that the groups differ significantly. Is it reasonable to conclude that Treatment A is an effective treatment? To answer this question, we should have confidence that good experimental design was used and that threats to internal validity were avoided. If we are confident that a study was carefully and thoughtfully carried out, it would then be reasonable to examine the data and the statistical tests. With everything in order in our hypothetical study, it would probably be reasonable to conclude that Treatment A was highly effective compared to Treatment B. The statistical tests would probably suggest a difference between groups, and the numbers themselves would suggest that these are clinically meaningful differences. Treatment A is clearly preferable^c. Unfortunately, differences between groups are rarely as big or as obvious in most dental reports. Instead, many dental studies report relatively small differences between groups. Perhaps the mean for Treatment A is 1.8 caries and the mean for Treatment B is 2.1 caries. In this example, Treatment A is still more effective than Treatment B. If our sample size is relatively small, we probably won't be able to say that the treatments differ statistically. On the other hand, we will be able to state that the differences are statistically significant if the sample size is large enough.

This leads to an unsettling conclusion: with large enough sample sizes, virtually any difference between groups can become statistically significant. Even trivially small differences can be statistically significant if the sample size is large enough. It is important, therefore,

that we do not confuse statistical significance (i.e., the numbers are unlikely to have occurred by chance) with clinical importance.

Clinical significance and measures of effect size

Statistical significance numbers estimate the likelihood that the values obtained in a study are truly different. Statistical significance, however, cannot tell a reader how important or meaningful the results are. Fortunately, there are a number of strategies and techniques that readers and researchers can use that can guide clinicians in better understanding results: (1) measures of effect size, (2) meta-analytic studies, and (3) determination of clinical significance.

Measures of effect size have been available in the statistical literature for many years, but progress in including them in research reports has been considerably slower. Measures of effect size provide a quantitative estimate of the degree to which the variables examined in a study 'explain' the outcome.

There are a number of such measures in general use, including adjusted R², omega-squared, and partial eta-squares. The values that these measures can take generally range from 0.00 to 1.00. Each provides an estimate of the degree to which a study accounted for overall variability. Higher values mean that the independent variables used in the study accounted for more of the overall variability.

Consider a hypothetical study in which the variables used in a study accounted for 69 per cent of the overall variability (adjusted R²=0.69)⁶. This value means that 69 per cent of the variability can be 'assigned' to the independent variables, and 31 per cent of the variability is unexplained. Contrast this study with another in which the R² value was 0.15⁷. Here, the independent variables accounted for 15 per cent of the overall variability and 85 per cent is unexplained. In both cases, the statistical tests were significant, but the variables examined in the first study were clearly better able at explaining the outcome.

The meaning of effect sizes probably depends on specific research area. Larger values are certainly preferable to smaller values, but a small value is not necessarily unimportant. In dental biomaterials, for example, it may be reasonable to expect adjusted R² values to be very high⁸. In contrast, clinical studies or studies that examine patient behaviour may have considerably lower effect sizes and still be considered meaningful. A reader's familiarity with a research area will be the best guide to determining whether a reported effect size represents an excellent result or a mediocre one.

Meta-analyses summarise the state-of-the-art in research and clinical practice. A meta-analysis critically reviews studies and statistically combines the results⁹. As conducted in the health professions, meta-analyses can provide solid evidence of the usefulness of a treatment or can debunk a favourite approach to treating a clinical condition.

A meta-analysis begins with a comprehensive identification of relevant articles and typically applies strict criteria to judge the quality of the studies. When the final group of studies has been identified, the results are combined statistically. Not surprisingly, pooling a number of studies together increases the likelihood of identifying statistically significant results, as described above. Thus, a meta-analysis may conclude that a treatment method that appeared to be modestly

effective in separate smaller studies may emerge as more powerful than first thought.

Meta-analyses may also report that treatments may not be as effective as thought. The screening criteria used in meta-analyses often eliminate studies whose results could be compromised by examiner bias, failure to randomise, and other methodological problems. When these studies are taken away, all that may remain are high quality studies that report equivocal results. In oral health, it is fairly common to find that meta-analyses do not support a popular treatment strategy. A practicing clinician cannot take the time to identify, evaluate, and summarise the treatment literature for a particular problem, much less carry out the complex statistical analyses required. Fortunately, excellent summaries of meta-analyses are readily available on the internet through the Cochran Collaboration (<http://www.cochrane.org/index0.htm>) and from the Database of Abstracts of Reviews of Effectiveness (<http://nhscrd.york.ac.uk/darehp.htm>). For those interested in examining high quality, original sources or reviews, the site maintained by the US National Centre for Biotechnology Information (<http://web.ncbi.nlm.nih.gov/entrez/query/static/clinical.shtml>) is an excellent source.

When effect sizes are not available and no meta-analyses have been carried out, practitioners must rely on estimates of clinical significance to judge a publication's importance. Clinical significance is the application of professional knowledge and experience to a study's findings. Clinical significance is an 'educated guess' about the importance of research findings. It is possible for a study to have statistical significance but not clinical significance, and it is possible for a study to have clinical significance but not statistical significance.

For example, in our sealant study we noted that Treatment A was better than Treatment B in preventing new carious lesions (Table 1). From a statistical perspective, Treatment A is better than Treatment B. However, these statistical tests cannot tell us whether the skill and time needed to place sealants for Treatment A require considerably more effort, or that the cost of Treatment A is more than B. When these factors are taken into account, it may be reasonable to conclude that Treatment B isn't all that much different from Treatment A. A reader may also conclude that a difference of 0.5 lesions per child is not large enough to warrant a change to Treatment A.

Clinical significance can also occur in the absence of statistical significance. For example, consider the case of a new treatment that is as good as an old treatment for preventing carious lesions in children (i.e., there were no statistically significant differences between the two treatments). If the new treatment were less costly or less technique-sensitive, this would be a clinically significant outcome, despite the lack of statistical significance.

Conclusion

Statistical significance is an important tool for interpreting a study's results, but statistical significance alone provides an incomplete picture of results. The addition of effect sizes in research reports will assist readers in understanding the meaningfulness of a study. Where effect sizes are not available, readers should carefully evaluate a study's results to determine whether they are applicable to their situation and to their patients.

References

1. Moore, R.A., Gavaghan, D., Tramere, M.R., Collins, S.L. and McQuary, H.J. Size is everything - Large amounts of information are needed to overcome random effects in estimating direction and magnitude of treatment effects. *Pain* 1998; 78: 209-216.
2. Dickersin, K., Chan, S., Chalmers, T.C., Sacks, H.S. and Smith, H. Jr. Publication bias and clinical trials. *Control Clin Trials* 1987; 8: 343-53.
3. Landi, G. and Ciccone, A. Publication bias via suppressed criticism. *Lancet* 1993; 341: 697-698.
4. Lau, J., Ioannidis, J.P. and Schmid, C.H. Quantitative synthesis in systematic reviews. *Ann Intern Med* 1997; 127: 820-826.
5. Sterne, J.A., Egger, M., and Smith, G.D. Systematic reviews in health care: Investigating and dealing with publication and other biases in meta-analysis. *BMJ* 2001; 323: 101-105.
6. Glaros, A.G., Williams, K.B. and Lausten, L.L. Predicting jaw pain in TMD patients and controls. *J Dent Res* 2004.
7. Glaros, A.G. and Lausten, L. Prospective assessment of pain and distress in TMD patients. *J Dent Res* 2003; 82 (Special Issue A): 1241.
8. Yourtee, D.M., Holder, A.J., Smith, R., Morrill, J.A., Kostoryz, E., et

al. Quantum mechanical QSARs to avoid mutagenicity in dental monomers. *J Biomat Sci Polymer Ed* 2001; 12: 89-105.

9. Gehlbach, S.H. *Interpreting the medical literature* (4th ed.). New York: McGraw-Hill, 2002.

Footnotes

- a These assumptions are designed to illustrate issues in the statistical interpretation of data. I assume that the authors of such a study would use excellent experimental design techniques, including randomisation of subjects to treatments, blinding of raters, and so forth. Flawed experimental designs increase the difficulty of making sound interpretations of statistical results.
- b Student's t-test is an outgrowth of work carried out in the early 1900s by William Sealy Gosset, a statistician who worked for the Guinness Brewery. Gosset used the pseudonym "Student" in his writings.
- c This discussion focuses solely on treatment outcome data. Side effects, cost, patient acceptance, and the like are important factors that must be considered when evaluating treatment efficacy. In practice, reliance on a single outcome measure would be undesirable.

NEW

NEW Advil® Liqui-gels
packs a punch in the fight
against dental pain.

- Advil® Liqui-gels can work up to 61% faster than conventional tablet forms of Ibuprofen.
- Proven efficacy in the treatment of dental pain**

Advil
STRONGER THAN PAIN

Intraosseous Mandibular Lipoma (IML): A case report and review of the literature

Abstract

Intraosseous mandibular lipoma (IML) is a rare benign tumour and is infrequently associated with unerupted teeth. This report describes an IML associated with an unerupted impacted mandibular wisdom tooth.

Introduction

The lipoma is a common benign tumour of mature adipose tissue with no cellular atypia¹, typically occurring in the subcutaneous tissues. It may occur anywhere in the body where adipose tissue is present and can be encapsulated or diffuse².

Lipomas represent approximately one per cent of all benign tumours in the oral cavity³.

The commonest site is the buccal mucosa, followed in decreasing order by the tongue, floor of mouth, buccal sulcus, palate, lips and gingivae². Adipose tissue is found in bone marrow and so the occurrence of an intraosseous lipoma could be expected; however, its occurrence in jaw bones is extremely rare.

Lipomas have been reported in bone and examples include the femur⁴, fibula⁵, humerus⁶, the skull^{7,8}, sacrum⁹, rib¹⁰, vertebrae¹¹ and calcaneus¹².

Lipomas in the jaws are rare. Our review of

the literature revealed five cases reported cases in the maxilla^{1,13,14}. Buric and Krasic¹⁵, in their comprehensive literature review, reported only 12 cases in the mandible.

Two cases of IML were associated with an impacted unerupted mandibular third molar^{16,17}. We report a third case of IML associated with an impacted unerupted mandibular third molar.

The symptoms of intraosseous lipoma vary depending upon the location and size of the tumour and may include swelling, pain and paraesthesia^{18,19}.

Expansion, external root resorption and tooth mobility may also occur but are more typical in intramandibular late presenting cases²⁰⁻²². The treatment for IML is conservative removal¹⁵.

Case report

A 56-year-old Caucasian female was referred by her general dental practitioner to the

Authors
D. McDonnell BDS, FFDRCSI,
 MSc, FRCD(C)
 Senior Lecturer/Consultant in Oral
 Radiology
 and
M. Toner MB, FRCPath
 Senior Lecturer/Consultant in
 Pathology
 Department of Oral Surgery, Oral
 Medicine, Oral Pathology and Oral
 Radiology
 School of Dental Science
 Trinity College
 Dublin 2
 Ireland

Corresponding author:
P.V. Keogh
 BA, BDentSc., MFDSRCSEd,
 specialist registrar in oral surgery
 Telephone: +353-1-6127314
 Fax: +353-1-6127296
 Email: pakeogh@dental.tcd.ie



FIGURE 1: Preoperative orthopantomograph shows radiolucency associated with unerupted impacted mandibular wisdom tooth.

Department of Oral and Maxillofacial Surgery at the Dublin Dental School and Hospital for investigation of a radiolucency associated with an unerupted impacted right mandibular wisdom tooth. This was an incidental finding on a panoramic radiograph and, in this case, there were no clinical signs or symptoms. The medical history was non-contributory and physical examination showed no abnormalities.

The panoramic radiograph (**Figure 1**) revealed an unerupted, distally inclined and apparently rotated mandibular right third molar tooth. There was evidence of a normal follicular space on the crown mesially and distally but not occlusally. Superior to the crown there was a well-defined and corticated radiolucency, which appeared to blend with the normal cortical outline of the follicle both mesially and distally. There was a break in the normal follicular outline superiorly. The radiolucency was roughly oval in shape, measured approximately 15mm by 12mm and extended from the anterior border of the ramus of the mandible to the mandibular canal, which appeared to be deviated from its usual course.

Treatment

In theatre, intravenous access was completed with an indwelling catheter and the patient was sedated with 4mg Midazolam given over 10 minutes. Local anaesthesia was attained with 4.4ml of 2% Xylocaine with 1:80,000 Adrenaline.

After reflection of a full thickness mucoperiosteal flap, the lesion was exposed and a small amount of bone was removed to reveal the lesion. Macroscopically the lesion was a yellow, jelly-like material that was friable, tenacious to the adjacent bone and lobulated. During surgery it was noted that the lipoma was completely within the mandible with no obvious, occlusal, buccal or lingual expansion.

The lesion bore a close relationship to the follicle of the impacted unerupted wisdom tooth. The tumour was removed by use of small curved haemostatic forceps and curettage. The associated wisdom tooth was left in situ. The site was closed with 3/0 black silk sutures. The sutures were removed on the seventh postoperative day. The patient had no complaints. Healing was uneventful.

Histopathological findings

The specimen was composed of lobular adipose tissue (**Figure 2**). There was no epithelial lining or follicular tissue present. The lobular nature and extent of the adipose tissue and the absence of bony trabeculae diminished the likelihood of it being fatty marrow. A diagnosis of lobulated mature adipose tissue, consistent with lipoma, was made.

Discussion

Intraosseous lipomas have been reported in many bones^{8,11,23-34} including the body of the mandible^{17,19,20,22,35}. All of the intramandibular lipomas were reported to appear as radiolucencies and few have been associated with unerupted teeth. This is the third case reported associated with an impacted unerupted mandibular wisdom tooth^{16,17}.

The pathogenesis of IML is not known. Three sources for intraosseous lipomas have been described³⁶.

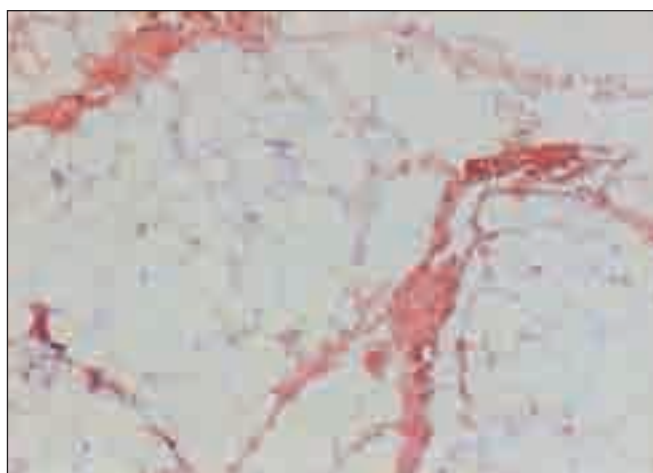


FIGURE 2: Photomicrograph shows the specimen consists of mature adipose tissue (Haematoxylin and Eosin x 100)

The first source is the fat in the medullary cavity of long bones. The mandible contains red marrow in the young population and fatty marrow in adults³⁷. The intraosseous lipoma arising from fatty marrow is named medullary lipoma³⁸. The second source is the periosteum. Lipomas from this source are termed parosteal lipoma and often show a connection with the periosteum and cause inflammatory changes in the underlying bone³⁹.

The third source is the surrounding soft tissue. A soft tissue lipoma can mimic parosteal lipoma and can secondarily invade the bone by pressure or penetration³⁶.

Several factors have been implicated in the pathogenesis of intraosseous including trauma, infarction and inflammation^{3,39}. In the reported case however no aetiological factors could be elucidated. Recurrences of IML or malignant change have not been reported in the literature.

References

1. Sakashita H., Miyata M. and Okabe K. Intraosseous lipoma of the maxilla. A case report. *Int J Oral Maxillofac Surg* 1998; 27: 63-64.
2. Cannell H., Langdon J.D., Patel M.F. and Rapidis A.D. Lipomata in oral tissues. *J Maxillofac Surg* 1976; 4: 116-119.
3. Hart J.A. Intraosseous lipoma. *J Bone Joint Surg Br* 1973; 55: 624-632.
4. Campbell R.S., Grainger A.J., Mangham D.C., Beggs I., Teh J. and Davies A.M. Intraosseous lipoma: report of 35 new cases and a review of the literature. *Skeletal Radiol* 2003; 32: 209-222.
5. Onguru O., Pabuccu Y. and Celasun B. Intraosseous lipoma of the fibula. *Clin Imaging* 2002; 26: 55-57.
6. Yamamoto T., Akisue T., Marui T., Nagira K., Yoshiya S. and Kurosaka M. Intraosseous lipoma of the humeral head: MR appearance. *Clin Imaging* 2001; 25: 428-31.
7. Gopinath SP. Intraosseous lipoma of the skull. *J Neurosurg* 1992; 77: 976-977.
8. Rosenbloom S.A. and Osborne D.R. Lipoma of the frontal bone. *AJNR*

- Am J Neuroradiol 1985; 6: 833-834.
9. Kamekura S., Nakamura K., Oda H., Inokuchi K., Iijima T. and Ishida T. Involved intraosseous lipoma of the sacrum showing high signal intensity on T1-weighted magnetic resonance imaging (MRI). J Orthop Sci 2001; 6: 183-186.
 10. Fiorentino L., Rossi G., Ruggiero C., et al. [Parosteal rib lipoma: description of a case]. Pathologica 2001; 93: 668-671.
 11. Pande K.C., Ceccherini A.F., Webb J.K. and Preston B.J. Intraosseous lipomata of adjacent vertebral bodies. Eur Spine J 1998; 7: 344-347.
 12. Yildiz H.Y., Altinok D. and Saglik Y. Bilateral calcaneal intraosseous lipoma: a case report. Foot Ankle Int 2002; 23: 60-63.
 13. Greer R.O. and Richardson J.F. The nature of lipomas and their significance in the oral cavity. A review and report of cases. Oral Surg Oral Med Oral Pathol 1973; 36: 551-557.
 14. To W.H. and Yeung K.H. Intra-osseous lipoma of the maxillary tuberosity. Br J Oral Maxillofac Surg 1992; 30: 122-124.
 15. Buric N., Krasic D., Visnjic M. and Katic V. Intraosseous mandibular lipoma: a case report and review of the literature. J Oral Maxillofac Surg 2001; 59: 1367-1371.
 16. Johnson E.C. Intraosseous lipoma: report of case. J Oral Surg 1969; 27: 868-70.
 17. Miller W.B., Ausich J.E. and McDaniel R.K., Longo J.J. Mandibular intraosseous lipoma. J Oral Maxillofac Surg 1982; 40: 594-596.
 18. Johnson E.C. Intraosseous Lipoma :report of a case. J of Oral Surgery 1969; 27: 868.
 19. Heir G.M. and Geron P.R. Mandibular intraosseous lipoma related to trigeminal neuropathy. Clin Prev Dent 1983; 5: 13-15.
 20. Barker G.R. and Sloan P. Intraosseous lipomas: clinical features of a mandibular case with possible aetiology. Br J Oral Maxillofac Surg 1986; 24: 459-463.
 21. Manganaro A.M., Hammond H.L. and Williams T.P. Intraosseous angiolipoma of the mandible: a case report and review of the literature. J Oral Maxillofac Surg 1994; 52: 767-769.
 22. Villanueva J., Martinez B. and Pantoja R. [Central lipoma of the mandible. A new case]. Rev Stomatol Chir Maxillofac 1998; 98: 333-335.
 23. Kawakami A. [Intra-osseous lipoma of the rib]. Kyobu Geka 1966; 19: 561-563.
 24. Weinfeld G.D., Yu G.V. and Good J.J. Intraosseous lipoma of the calcaneus: a review and report of four cases. J Foot Ankle Surg 2002; 41: 398-411.
 25. Genchi V., Scialpi M., Scarciolla G., Dimauro F. and Trigona A. [Intraosseous lipoma of the calcaneus. Characterization with computerized tomography and magnetic resonance in a case]. Radiol Med (Torino) 2000; 99: 86-88.
 26. Muthuphei M.N. Intra-osseous lipoma of the calcaneus. S Afr Med J 1996; 86: 1554-1555.
 27. Levin M.F., Vellet A.D., Munk P.L. and McLean C.A. Intraosseous lipoma of the distal femur: MRI appearance. Skeletal Radiol 1996; 25: 82-84.
 28. Bertram C., Popken F. and Rutt J. Intraosseous lipoma of the calcaneus. Langenbecks Arch Surg 2001; 386: 313-317.
 29. Hirata M., Kusuzaki K. and Hirasawa Y. Eleven cases of intraosseous lipoma of the calcaneus. Anticancer Res 2001; 21: 4099-4103.
 30. Rhodes R.D. and Page J.C. Intraosseous lipoma of the os calcis. J Am Podiatr Med Assoc 1993; 83: 288-292.
 31. Noble J.S. and Leeson M.C. Intraosseous lipoma of the humerus. Orthopedics 1992; 15: 51-54.
 32. Latham P.D. and Athanasou N.A. Intraosseous lipoma within the femoral head. A case report. Clin Orthop 1991: 228-232.
 33. Buckley S.L. and Burkus J.K. Intraosseous lipoma of the ilium. A case report. Clin Orthop 1988: 297-301.
 34. Trivedi S.R., Handa V. and Vaishnav V.P. Case report. Intraosseous lipoma of tibia. Indian J Pathol Microbiol 1978; 21: 255-256.
 35. Oringer M. Lipoma of the mandible. Oral Surg Oral Med Oral Pathol 1948; 1: 1134.
 36. DeLee J.C. Intra-osseous lipoma of the proximal part of the femur. Case report. J Bone Joint Surg Am 1979; 61: 601-603.
 37. Chow L.T. and Lee K.C. Intraosseous lipoma. A clinicopathologic study of nine cases. Am J Surg Pathol 1992; 16: 401-410.
 38. Polte H.W., Kolodny S.C. and Hooker S.P. Intraosseous angiolipoma of the mandible. Oral Surg Oral Med Oral Pathol 1976; 41: 637-643.
 39. Lewis D.M., Brannon R.B., Isaksson B. and Larsson A. Intraosseous angiolipoma of the mandible. Oral Surg Oral Med Oral Pathol 1980; 50: 156-159.

Flexia Online Dental

Popular computer training abroad for Irish Dental Care teams

www.flexia.se

Phone +46 31 80 67 40
 Fax +46 31 80 67 55
 Mail: info@flexia.se
 Website: www.flexia.se

FLEXIA INTERAKTIV
Association with Flexion

Classifieds

Classifieds for the winter issue of the Journal of the Irish Dental Association should be sent to the IDA by October 29, 2004.

FULL-TIME POSITIONS

Associate required for busy mid-west dental practice to work in a modern computerised surgery, assisted by a full supportive team. Surgery equipped with digital x-ray, opg and every possible mod con. The practice also has two other dentists and a hygienist. Reply to Box No: J304.001.

Associate wanted with view to partnership for busy progressive practice in east coast Co Wicklow. Well equipped, long established practice. Tel: 087-2748584.

Associate required for busy dental practice in large thriving satellite town 40 minutes from Dublin. Position would suit conscientious, experienced, young dentist. Full book/friendly staff. Expanding progressive modern surgery. Tel: 086-8244606 (evenings) or e-mail cv to eilee19561@hotmail.com.

Associate required for busy northeast practice to replace existing associate. Air-conditioned surgery. Fully computerised practice, with digital X-ray, hygienists and support of other colleagues. Tel: 087-2879858.

Associate wanted. Busy family dental practice in Ratoath, Co Meath. Fifteen miles from Dublin. Mostly RSI/private. Orthodontist, IV sedation, hygienist, OPG available. Part-time or full-time position offered. Tel: 086-8519707.

Associate wanted in busy Cavan town dental practice. Ideally mid to end summer. Tel: 049-4332488 or 087-8641990.

Associate required in north Tipperary. Busy practice. Fully computerised. Full digital radiography. Complete clinical freedom. Start immediately. Phone during office hours: 0505-23000.

Associate/partner wanted for three surgeon computerised practice. West of Ireland, large town. 5-day f/book, all surg. digital x-ray and I/O cameras,

OPG/hygienist available 4 days. Excellent staff. Phone Leo: 087-8233313/086-6001719.

Dentist required to replace departing colleague in August for fully equipped 4-surgery practice in midland town. Qualified support team available to include hygienist, orthodontist and general anaesthetist. Contact: 044-40370 business hours only.

Dentist required. Full-time associate position. Cork City. Reply: ginawalsh@unison.ie or tel: 021-4961776.

Dentist (part/full-time) required to replace departing colleague. Midlands town. Busy, modern surgery, hygienist, OPG. Tel: 044-40579 or 087-2716420.

Dentist with experience required with special interest in endodontics is required to join our five-surgery practice in north Manchester to replace a colleague who is leaving. Workload includes both internal and external referrals. We provide high calibre support staff and equipment including an operating microscope and compudent. For further information telephone Richard Noar on 0044-161-9692180 or email richard.noar@btinternet.com.

Dentists required in Prestatyn, north Wales, handy for the Holyhead ferry to Ireland. Very busy mixed NHS/private practice. Young efficient support staff, computer admin. Good remuneration, low living expenses. Close to Liverpool and Manchester. We have two dentists leaving. You will be made very welcome. Tel: 0044-7989 388136 (07989 388136 from UK) or e-mail: ardentpursuit@hotmail.com.

Dentist (full-time) and also one part-time dentist required for busy Co Donegal dental practice. 25 minutes from Derry. Full book, to start immediately. Ring Maeve or Ursula on Tel: 074-936 2666 or 074-936 2475.

Dental surgeons urgently required for an expanding group of dental practices in the UK. Good earning potential. Accommodation provided. Full training and induction into working in the UK. Full clinical freedom, opportunities for further clinical training, partnerships and management role in the group. Enthusiastic group of dental surgeons with good sports, recreational and social facilities. Contact Sangeeta, forward CVs by email or fax. Fax 0044-115-9625589, visit www.dentcare1.com or email: jobs@dentcare1.com Tel: 0044-115-9625589.

Full-time and part-time positions available in the health board dental service in the Northern Area Health Board. Excellent pay and conditions. Contact Mary Ormsby on 01-8164232 or 086-6057192.

Locum required for busy Midlands practice, one hour from Dublin. Tel: 087-2570140.

Orthodontist required to join dental team on a sessional basis in a provincial town 30 miles from Dublin. Replies to Box No: J304.003.

Orthodontist required to join existing group specialist practice (includes restorative specialist/implant specialist and periodontist). Two surgeries available. Flexible arrangements to suit individual needs. Tel: 086-2338313 or 01-8531039.

Receptionist with experience required for private, busy, friendly south Dublin practice. Reply: 087-2239743.

Dentist required for busy and well located Dublin city centre practice. Immediate start. Contact 087-2260473 or email pscannell@pmcc.ie.

PART-TIME POSITIONS

Associate position available. Southeast town, mixed general practice with OPG, Hygienist and full support staff. To replace

departing colleague. Would suit job-share. Please contact 086-8586673 after 5.30p.m.

Associate required (with potential for full-time) for well established, modern Cork city practice. Newly equipped surgeries with experienced support staff. Tel evenings: 086-8577906.

Associate required for busy modern Cork city centre practice. Tel: 021-4501801 or evenings: 087-2371893.

Dentist required for modern busy city centre practice (Galway). OPG digital radiography. Apply to Box No. J304.004.

Dentist required (initially part-time with view to full-time) for busy modern well-established practice in the Rathfarnham area. Excellent opportunity. Tel: 086-8066070.

Hygienist required for sessions in private city centre practice, Dublin 2. Reply to Box No. J304.006.

Hygienist required for Dundalk dental surgery. Tel: 087-2879858.

Locum dentist required for private city centre practice (Dublin 2). Sessions negotiable. Tel: 086-8373932.

POSITIONS SOUGHT

Associate. Irish dentist (UK-based) seeks associate position, Dublin or surrounds. Vocationally trained with hospital and Public Health Sector experience. MFDS. Enthusiastic, hardworking. Available to commence August. Telephone: 0044-797-0654061 (M), evenings: 0044-131-5574427.

Associate. Irish dentist seeks associate position in Dublin – vocationally trained – available from August 2004. Contact Dominique at: 086-3036876.

Associate. Irish graduate (TCD 2002)

returning to Ireland from UK, September 2004. 2 years' experience at busy mixed NHS/private practice. Seeking full/part-time associate position Dublin, North – Wicklow area. Contact: Jonathan – Evenings: 0044-207-3860187. After 15 August – 00353-1-2853799.

Associate/Assistant. New Zealand graduate seeks associate/assistant position within one-hour drive of Waterford from late 04. I am a 53-year-old, experienced, amalgam free dentist with good people skills and do superb work. Contact: musclereclean@hotmail.com or tel: 0044-781-4097108.

Associate/Partnership. Experienced female dentist (TCD 1994) relocating to Dublin south. Interested in partnership/expense share relationship or associate position in the south County Dublin area. Contact: reddy-mary@hotmail.com (M) 0044-7776-366555 (H) 0044-208-3130990.

Dental surgeon. Very experienced dental surgeon available immediately, flexible hours, immediate decision, east coast area. Tel: 086 807 5273.

Locum dentist available until October 04. Short and long-term positions considered. Leinster and Munster regions preferably. Tel: 086-8697438.

Orthodontist available on part-time/sessional basis. Dublin/Leinster. Replies to Box No: J304.005.

FOR SALE

ADEC chair and light for sale. Tel: 087-6487085.

Contents of dental surgery including x-ray machine, autoclave, chair, instruments, curing light and all other equipment. Tel: 087-7623961.

Equipment - Techno-Gaz CS andromeda vacuum autoclave, digital and printed readout, Full range of cycles, filtration system, etc. under warranty. Triple pack, top of range Bien-air Bora S36 fibre optic hand pieces. Recent manufacturers service. three-year warranty. All above purchased February 2004. Invoices available for inspection. Also other equipment, i.e., full range of quality hand instruments, trays plus racks; apex locator; led cordless curing light, etc. Aborted surgery start-up forces sale. Tel: 087-2763227 evenings.

House with detached unit.

Leopardstown, 21 Glenbourne Close. Superb detached four-bed house of c. 1,375 sq.ft with an additional detached unit of c.420sq.ft ideal for surgery. Excellent location adjacent to forthcoming business park and shopping centre. Convenient to LUAS, M50 and bus route. Price region: €495,000. View by appointment. Douglas Newman Good Stillorgan: 01-283 2700.

Practice for sale. Long established, very good practice for sale (midlands). Leasehold with large rooms to expand into 2-3 man surgery. Town ripe for expansion. Huge goodwill. Wide open for young, enthusiastic and energetic practitioner. Genuine reason for urgent sale. Tel: 086-8075273.

Practice for sale in Dublin city centre. Located on O'Connell Street, opposite spire with huge catchment area and great potential. Long-term lease. 1,500sqft. two floors dental, one floor residential. Current rent €1,290 per month. Contact: 01-4185827 or 086-8198887.

Premises available. Purpose built detached dental offices 950sq.ft with planning permission adjacent to German Embassy, Booterstown, Dublin. Three surgeries waiting room, reception, lab areas and office. Good parking. To let or sale. Tel: 087-9273631.

Practice for sale, busy Munster town, long-established, extremely busy, very progressive and with great potential for expansion. Tel: 01-289118 or 086-8075237, Email: niall@innovative dental.com.

www.innovativedental.com

- 25 practices sold – 25 practices for sale
- Countrywide and Dublin City centre
- Associates placed – Practice valuation
- Expense sharing relationships established
- Specialists established – Career direction advice
- All facets of help and advice available

Contact 086-807 5273 or niall@innovativedental.com.

Practices for sale. Three excellent south Dublin practices for sale, all great locations, all single-handed, leaseholds, all have ability to expand. Varying price ranges. Immediate sales/Locums required. Tel: 086-8075273.

TO LET

Consulting rooms. Galway city centre. Existing high profile ground floor medical consulting rooms suitable for easy conversion to dental surgery. 700 sq. ft. Adjacent to public car park. For long or short-term lease as owner relocating to Galway clinic. Tel: 087-2414101.

Dental clinic. Opportunity for dental clinic beside new Blackrock Hospital, Roscam, Galway. Opportunity to establish dental practice in new medical centre, ample car parking. Tel: 087-2425182.

Dental suite. Fully equipped dental suite to let. Suit dental specialist. First class rooms in top Dublin 2 location. Replies to Box No: J304.002.

Rooms. Two newly refurbished rooms in established general medical practice for let. Suitable for dental practice, physiotherapist, chiropractic or any other paramedical practice. Crumlin area, Dublin 12. Tel: Dr O'Connell at: 01-4556858.

Units. Johnstown, Navan. Great opportunity to set up new dental practice in rapidly expanding area. Units to let in newly constructed medical centre. Tel: Smith Harrington 046-9021113.

Unit to rent in specialist dental clinic. 235sq.ft. Contact: Northbrook Clinic, Northbrook Road, Ranelagh, Dublin 6. Tel: 01-4068156.

MISCELLANEOUS

Improving your image. Your practice is 21st Century, but is your image? Let us help you increase your business by improving your image! We will design a new logo and follow through in internal and external signage, business cards and interior colour scheme. Excellent rates available. Contact Jane Herson @ Flying Colours – Interior Colours and Marketing Consultants on 086-8198887 or info@fullcircleevents.ie.

Diary of events

SEPTEMBER Oral Health Month

Colgate Palmolive, in association with the Irish Dental Association, aims to establish and promote better oral health habits during this month-long campaign.

More information from the
IDA 01-283 0499

Metropolitan Branch, IDA

8pm, September 16
Berkeley Court Hotel, Dublin
Managing Tooth Surface Loss
Dr Ray McCarthy and Dr Colm Sugrue

Munster Branch Annual Scientific Meeting

September 17
Silversprings Hotel, Cork

Joint meeting of Southeastern Branch, IDA and PGM&DB

6pm September 15
Athenaeum House Hotel, Waterford
Presentation by Innovative Irish Dental Service. Followed by presentation. Meeting Sponsored by AIB

IAAGDS Meeting

September 25
Helix Theatre, Dublin

Health Board Dental Surgeons Seminar 2004

October 13 to 15
Connemara Coast Hotel, Galway
See news for further details.

Metropolitan Branch, IDA

8pm, October 21
Berkeley Court Hotel, Dublin
Identification and Management of TMD/Orofacial Problems in General Practice (Dr D Canavan). When to Reach for the Headed Notepaper (Dr S Flint).

Fifth Annual Study Day

Friday, October 22
Department of Orthodontics, Merlin Park Hospital, Galway
Class II Div I Malocclusions
Speakers: Professor Kevin O'Brien, Manchester; Dr Toby Gillgrass, Edinburgh; and, Dr Tony Gregg, Belfast

Restorative Dentistry – State of the Art 2004

October 28 to 30
The Faculty of Dentistry, Royal College of Surgeons in Ireland
The Faculty of Dentistry will present restorative dentistry as the theme for the annual conference in the year 2004. Diagnosis, conservative dentistry, endodontics, removable prosthetics, Aesthetics and prosthodontics will be covered. This will be a most comprehensive review of restorative dentistry and an absolute 'must' for all dentists and students involved in this discipline.
For further information tel: 01-4022239 or email: facdentistry/rcsi.ie.

Metropolitan Branch, IDA

November 20
Guinness Storehouse, Dublin
Metropolitan Branch Christmas Party

Metropolitan Branch, IDA

8pm, December 2
Westbury Hotel, Dublin
Open (Non Scientific) Evening
An Uncomplicated Christmas – J D'Anjou
What do you mean there is a fly in my soup – J Levin

Metropolitan Branch, IDA

9am, December 3
Westbury Hotel, Dublin
Annual Scientific Conference – Stress Busters

IDA Annual General Meeting

11am, December 4
Jurys Hotel, Ballsbridge, Dublin

IDA Annual Scientific Conference 2005

April 15 to 17, 2005
Great Southern Hotel Killarney, Co Kerry.

Autumn 2004 quiz - radiology case 3

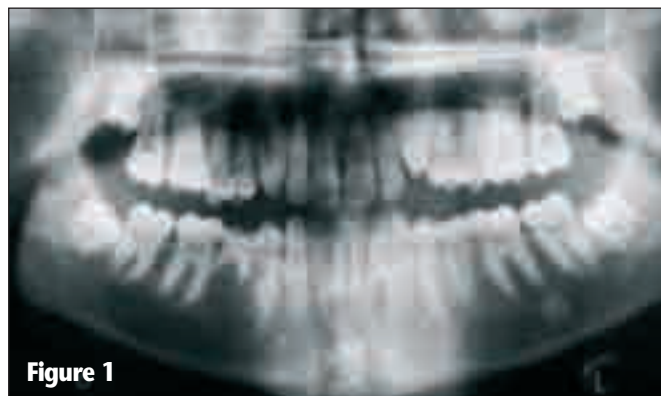


Figure 1

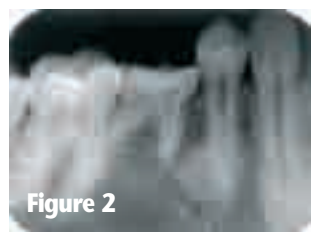


Figure 2

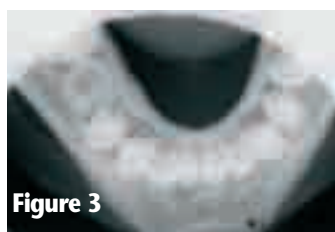


Figure 3

Figure 1 illustrates a panoramic image of a 17-year-old white male made as part of an orthodontic assessment. There are no symptoms. Tooth #85 is retained and tooth #45 is congenitally absent. An incidental finding is a well-defined circular radiopacity below and not related to tooth #36. There is no peripheral radiolucency to the opacity. There is also a well-defined circular radiopacity over the root

Brown Thomas
Gift voucher €150

Our thanks to **NobelBiocare** sponsors of the autumn 2004 quiz



Figure 4

of tooth # 44, with no peripheral radiolucency evident. A periapical radiograph (**Fig 2**) confirms the presence of the radiopacity and the lamina dura and ligament space on tooth #44 appears intact. Occlusal radiographs (**Figs 3 and 4**) show the opacities within the mandible, lingually positioned on the right side and buccally positioned on the left side, relative to the teeth. The cortical outlines of the mandible appear intact.

What is your diagnosis and how would you manage this condition?

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

John Marley BSc, BDS, PhD,
FDSRCS (OS)[Eng]
Associate Head of School (Teaching), Senior Lecturer/
Consultant in Oral Surgery,
The Queen's University of Belfast, School of Dentistry,
Grosvenor Rd, Belfast, BT12 6BP

Congratulations...

The winner of the summer quiz is:
Dr Paul O'Connell, BDS NUI, MFDS, RCSI, from Limerick.

The answer to Radiology case two was:

Radiological findings

There is a mixed radiolucent radiopaque area below the apices of teeth 42 and 41. The radiopacity is separated from the roots of the teeth and the surrounding bone by a periodontal like space and the edge of the bone is lightly corticated. There is no evidence of restorations or caries in the anterior teeth.

Clinical findings

The lower teeth were of normal colour, not tender or mobile and responded to thermal testing.

Interpretation

The appearances seen here are compatible with periapical cemental dysplasia (pcd),

type 2. This condition is also known as a cementoma and more recently as periapical cemento-osseous dysplasia. PCD is a fibrous type condition where normal bone is initially replaced by fibrous tissue and subsequently with varying amounts of mineralised tissue that resembles cementum. The condition mainly affects the mandible and the common site is the lower incisor region. PCD is common in middle-aged black females, but is not uncommon in other races. There are usually no symptoms and the condition is found on an image made for some other reason.

There are three appearances seen in this condition. Stage 1 is radiolucent at the apex of a tooth with loss of lamina dura. Stage 2 is mixed radiolucent radiopaque at the apex of a tooth with a ligament type space separating the cemental mass from the apex and also from the surrounding bone. Stage 3 is radiopaque with a peripheral radiolucency separating the cemental mass from the surrounding bone. Typically in stage 3, the

cemental mass is not separated from the tooth by a ligament type space.

Treatment

No treatment is indicated.

Differential diagnosis

It is important to differentiate Stage 1 PCD from periapical inflammatory disease, as the radiographic appearances of apical radiolucency with loss of lamina dura are the same. The stage 1 radiolucency rarely exceeds 1cm in diameter. As the lesion matures, some radiopacity begins to appear. Stage 2 with the mixed radiolucency radiopacity is reasonably characteristic. Stage 3 is opaque with a peripheral radiolucency separating the opacity from the surrounding bone and not from the teeth. The presence of a peripheral radiolucency would help differentiate stage 3 PCD from other opacities such as salivary calculus superimposed, dense bone islands, hypercementosis or florid cemento osseous dysplasia.