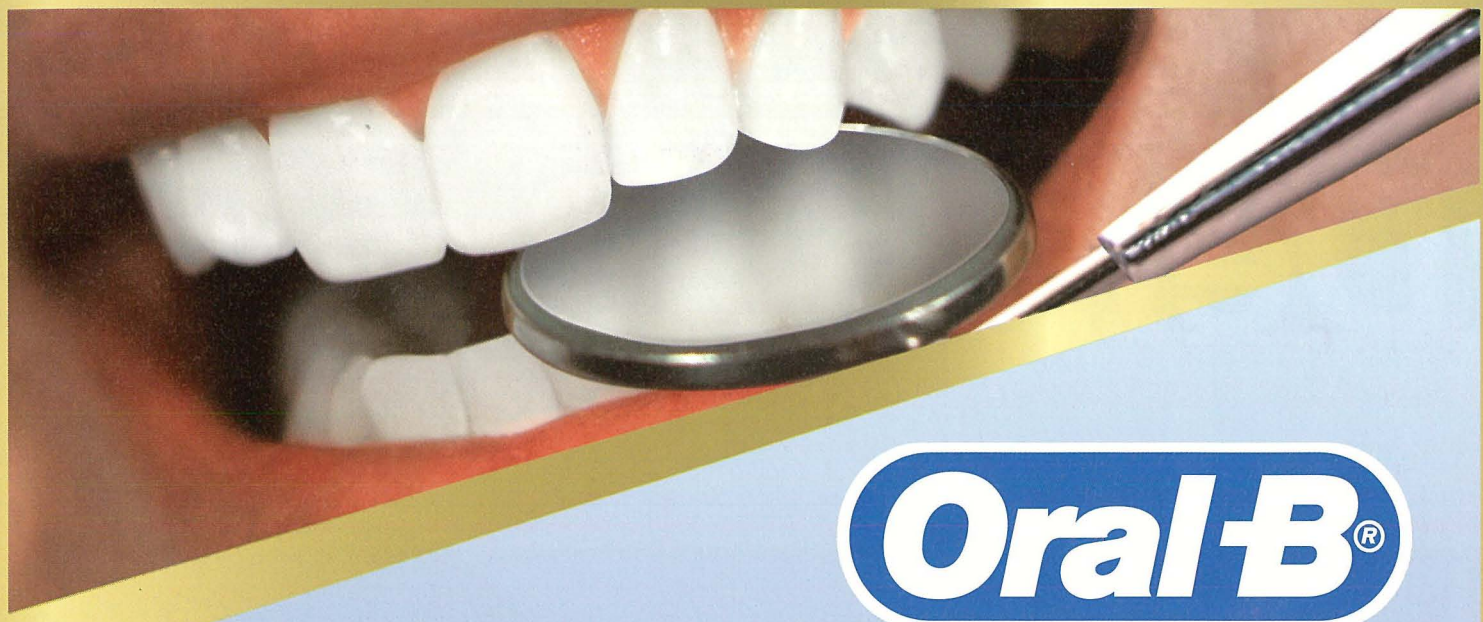
ISSUE
34
MAR10

The Dental Probe

The Maltese Dental Journal



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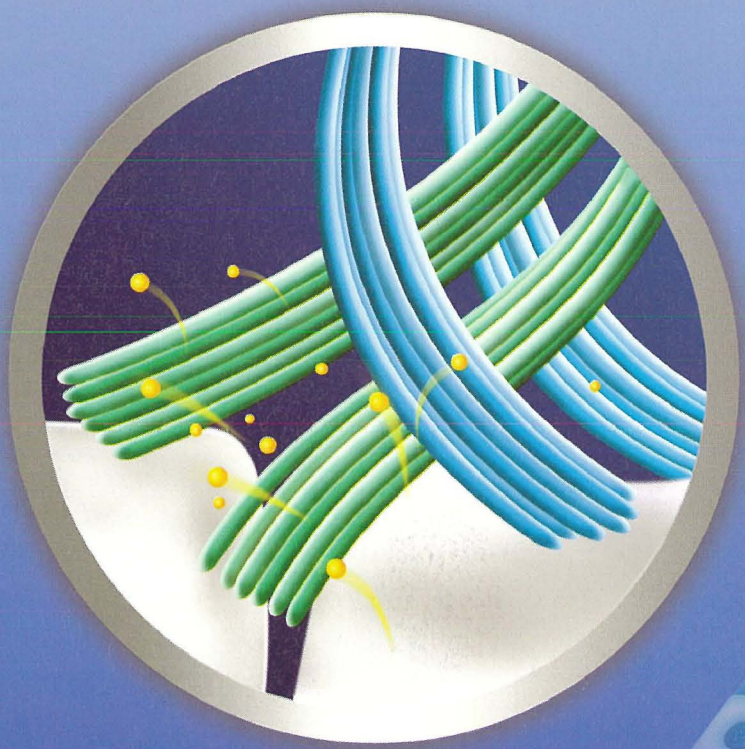

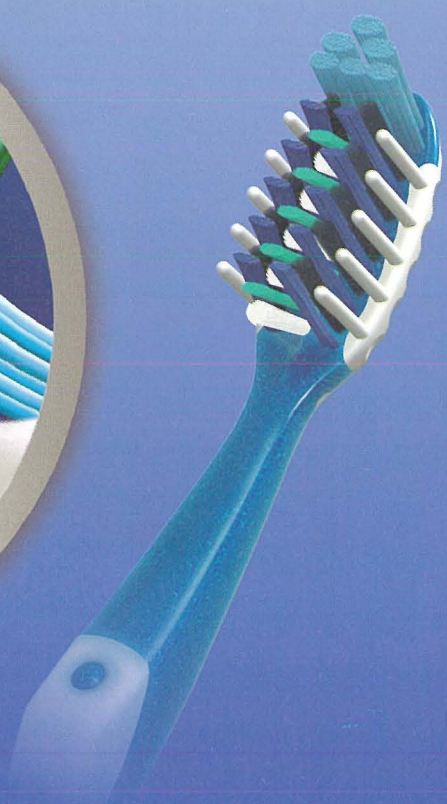

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ISSN 2076-6181

Editorial

DENTAL ASSOCIATION OF MALTA
The Professional Centre,
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Fax: 21 343002
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By Dr David Muscat

Dear all,

The Dental Probe is now indexed with MEDLINE in Paris and Washington. Our index number is ISSN 2076-6181. A first step towards international recognition.

The DAM has again been very active in the past few months and I have listed the most recent events on the right.

The DAM leads – others follow.

The opinions in the articles do not necessarily reflect the opinions of the editor or the DAM.

Advertisers are responsible for the contents of their adverts.

David

Dr David Muscat B.D.S. (LON)
Editor, Vice President and P.R.O. D.A.M.

LATEST/PLANNED EVENTS

27 DECEMBER
Meeting with Archbishop Cremona.
6 JANUARY
AGM
13 JANUARY
'New Antibiotic guidelines For Endocarditis.' by Dr Robert Xuereb Cardiologist. Sponsor Abbott
20 JANUARY
3D DENTAL RADIOGRAPHY and Oral Manifestations Of Aids by Prof Mel Muppurapu from New Jersey. Sponsor GSK.
22 JANUARY
Presentation of Dental Probe to American Ambasssador on occasion of dinner at Ambassadors residence in honour of Prof Muppurapu Fulbright professor.
12 FEBRUARY
'Head And Neck Cancer' By Dr Darryl Coombes. Sponsor Serolf. Arranged by Dr James Galea.
17 FEBRUARY
'Managing the Open apex' by Dr Dan Keir sponsor Actavis.
25 FEBRUARY
Cultural event at Vinum. Lecture by Liam Gauci 'The Secret Life Of Rosa'. Sponsor Noprilam-Associated Drug Co.
3 MARCH
'Stem Cells From Deciduous Teeth' By James Curtis FROM BioEden.
11 MARCH
SEPTODONT lecture Bart Enterprises
19 MARCH
DAM visit to Carmelite Monastery Mdina.
15 APRIL
Mfpb – Lecture Dr Adam Bartolo 'Dental Recalls' in conjunction with Dr Wilfred Galea of 'SMS for Health' sponsored by Pro Health obo Laboratorios KIN at 8pm.
23 APRIL
At the Red Fort in Mellieha 'The Red Fort Comes Alive' by Mr Liam Gauci at 8pm – a cultural evening with a reception and re enactment and firing of cannon from the ramparts.Sponsored by Pro Health obo Laboratorios Kin
5 MAY
Vivian Commercial Mfpb. 'The Perfect Smile' at 8pm
19 MAY
Bart Enterprises 25 Anniversary -Cerec Launch . (Venue to be announced)

DAM Secretary's Report

11 committe meetings were held in 2009 together with 1 AGM and 1 EGM in July to discuss the language issue. We also had a meeting with Dr Ray Busuttil, Director General Health in August to discuss the disposal of hazardous waste.

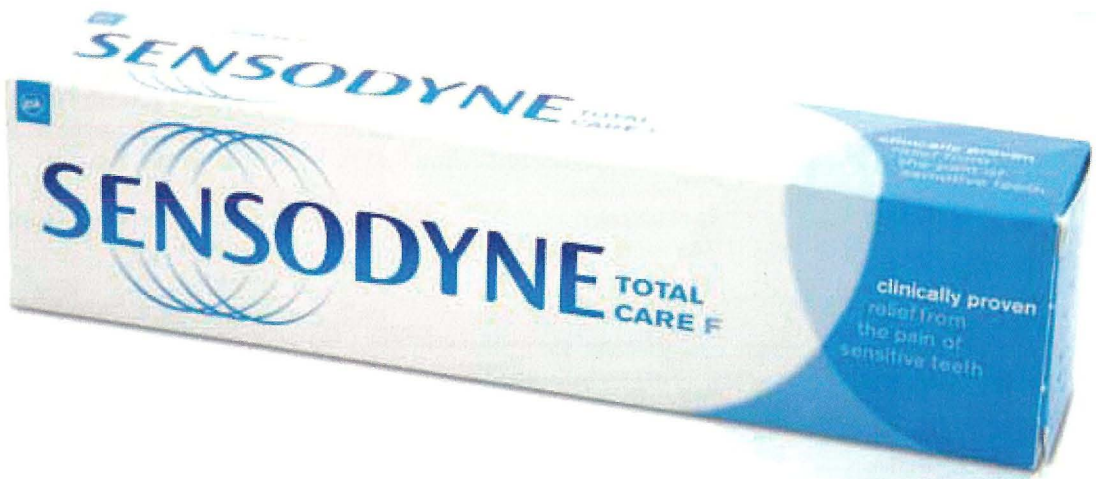
There were 16 lectures and one hands on course together with 8 social events. The DAM had also applied for membership with the European Federation of Orthodontic Specialist Association.

Dr David Muscat, Vice-President DAM and Dr Adam Bartolo, President DAM presenting the Dental Probe to the U.S. Ambassador, Dr Kmiec, at the lunch in honour of the Fulbright Professor – Dr Mel Muppurapu at the residence of the American Ambassador in Attard.

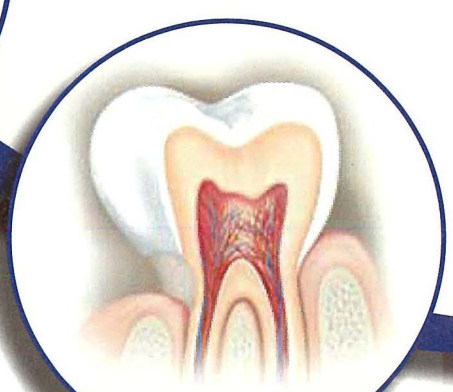
Nothing else is

✓ Established expertise in dentin hypersensitivity

- Continuous development of dentin hypersensitivity solutions since its launch as the first desensitizing toothpaste providing both sensitivity relief and caries protection[1]
- Strong scientific evidence in the field of dentin hypersensitivity[2-36]
- Extensive research and development in collaboration with leading experts



Number 1 patient preferred desensitizing toothpaste brand[42]



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Sensodyne

Treats your patients' sensitivity at the source of the pain

- Sensodyne's potassium formulations work by blocking pain signals at the nerve

Proven to provide your patients with significant relief from the pain of sensitive teeth

- Proven in publications[2-11] and confirmed by patients[2]

Specifically developed to provide the right care for your patients

- Proven to relieve the pain of dentin hypersensitivity[2-11]
- Provides ongoing and effective pain relief with continued use[2-11]
- Low abrasion[12] to minimize damage to exposed dentin[13-14]
- Protects against caries[38,39] and strengthens tooth enamel[39-41]
- Offers a range of variants to encourage patient compliance

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SENSODYNE

DAILY PROTECTION FROM THE PAIN OF SENSITIVE TEETH

President's Report
for the Year 2009

The Dental Association of Malta has been very proactive over the past year. Key to the success of the Association's endeavours is the organisation of the Committee and the great effort that each Committee member puts in fulfilling the requirements of his or her role. We currently have nine committee members and one co-opted member.

Dr David Muscat in his role as Vice-President, Public Relations Officer and Editor of *The Probe* has taken the quality of this publication to new heights and is always struggling to secure sponsorships to sustain the DAM's efforts to support the profession and its members. Dr Muscat is also working to have *The Probe* officially indexed.

Our Treasurer, Dr Matthew Cachia has optimised the way in which the DAM manages its funds and its accounts. The Association's financial and membership records are very meticulously kept up to date and with the help of Dr Robert Lautier paid up members are issued a membership card that also grants DAM members a number of benefits.

Dr Paula Vassallo, the Association's Honorary Secretary together with Dr Ethel Vento Zahra represent the DAM on the Malta Federation of Professional Associations of which we are founder members. Dr Vassallo is also the MFPA's Honorary Treasurer. The MFPA is a member of Council of European Liberal Professions (CEPLIS). Dr Vassallo and Dr Vento Zahra represented the DAM and the MFPA at a CEPLIS forum held in Malta in May 2009.

In 2009, the Dental Association of Malta has been officially recognised and registered as a voluntary organisation under the Voluntary Organisations Act. This was necessary to enable our Association to benefit from EU funds through MEUSAC. The DAM is now also represented on the MEUSAC Employment, Social Policy and Health Sectoral Committee.

Information, communication and technology matters are developed and managed by Dr Nicholas Busuttil Dougall, the DAM's IT Officer. The Association now has its own custom email system and website which features a regularly updated schedule of events. Members are always informed of upcoming events by post and by email and now also by SMS following our recent acquisition of dedicated group SMS facilities.

The DAM is successfully maintaining its Lifelong Learning Scheme by regularly organising or accepting under its auspices a number of lectures and similar events. New improved accredited Continuing Professional Development certificates are issued by Dr Robert Lautier, the Association's CPD Officer, to those DAM members who attend these events.

A major improvement in the quality and number of events has been made possible by the hard work of Dr Lino Said, the Association's Events Coordinator. The climax of the year's events was the sumptuous DAM Christmas Dinner at The TemptAsian. These events were also made possible with Dr David Muscat's public relations efforts and with the financial support of our sponsors and of the DAM.

International Relations Officer, Dr Audrey Camilleri regularly represents the DAM at the Council of European Dentists (CED). This aspect of the DAM's role is of an ever increasing importance so much that we are considering putting our Association forward for election on the CED Committee.

Since the DAM is also the national dental association representing orthodontists we are also considering joining the European Federation of Orthodontic Specialists Associations (EFOSA). Dr Kevin Mulligan has been co-opted on the DAM Committee as our liaison with EFOSA. By establishing such links and relationships the DAM is can follow any new developments that can have an impact on the dental profession in Europe and in Malta.

As DAM President, Government Relations Officer and representative on the Dental Specialist Accreditation Committee (SAC) I have attended a number of meetings this year. I have represented the DAM at every SAC meeting held in 2009.

The SAC's approved regulations for General Professional Training and Specialist Training in Oral Surgery and Orthodontics have been published on the SAC's website (https://ehealth.gov.mt/healthportal/others/regulatory_councils/dental_specialist_accreditation_committe/dental_specialist_accreditatio.aspx). The SAC has also processed a considerable number of applications but since the Registrar changed and the Government Representative and Chairperson resigned there has been a delay in forwarding the certificates to the successful applicants since the SAC has not been able to meet in the past few months. However things should return to normality early in 2010.

With respect the issue of the Medical Council recommending the granting of a licence or warrant to exercise the dental profession without ensuring that such applicants have adequate knowledge of languages necessary for practicing the profession in Malta, the DAM has held a meeting with the Medical Council, and extraordinary general meeting and a meeting with the dental representatives on the Medical Council. Unfortunately this matter has not been resolved so far and will continue to receive our attention in the coming year.

In a meeting with the Director General (Health Regulation), Dr Raymond Busuttil, the DAM consolidated that the requirements for the granting and renewal of the annual clinic licence are limited to those listed on the back of the licence certificate. Any changes to these regulations that might be considered in future should be discussed with the DAM. The licence is now also being mailed to the dental clinics and hence there is no need to collect it in person from the Health Department's offices.

Dr Adam Bartolo
President

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Inflamed and bleeding gums

Available only in Pharmacies

Report of International Relations Officer
AGM January 2010

The role of international relations officer principally involves maintaining good contacts with FDI, ERO and CED (Council of European Dentists) and in providing constant update from the CED Brussels office. I will proceed to provide you with information on EU developments that are of interest to the dental profession and concerning health policy.

MEETINGS ATTENDED

a. CED meeting Prague May 2009
b. FDI Dental Congress Singapore October 2009 (Self funded)
c. CED meeting Brussels November 2009

EU UPDATE ON TOPICS RELEVANT FOR DENTAL ASSOCIATION

1. ACTION TAKEN BY THE CED ON THE UPDATING OF THE DIRECTIVE ON THE RECOGNITION OF PROFESSIONAL QUALIFICATIONS

Based on the CED Resolution on competences required for the practice of dentistry in the European Union (CED-DOC-2009-026-E/F/D-FIN) adopted at the CED General Meeting in Prague, the CED Board decided at the September Stockholm meeting to submit a formal request to DG Internal Market asking for the adaptation of the Annex 5.3.1 of the Directive 2005/36/EC on the recognition of professional qualifications. The proposed change adds new subjects to the existing list of subjects to be studied by dentists, and reflects CED's view of competences necessary for safe and independent practice of dentistry.

2. PATIENT SAFETY

The Head of the CED Brussels Office attended a meeting of the Commission-led Patient Working Group.

During the meeting the Commission suggested that the Working Group should from now on focus on the development of input for a prospective Joint Action on Patient Safety or Patient Safety and Quality of Care, to be adopted in 2011. Also, the Commission presented a first draft of a reflection paper on quality of healthcare and asked the Working Group for ideas for possible policy actions at EU level on this issue. The Commission is planning consultations on the basis of this reflection paper and, possibly, the presentation of the document at the conference on patient safety to be organised by the Spanish Presidency in first half of 2010.

3. CED INVITED TO PARTICIPATE IN THE EXPLORATORY PROCESS ON THE FUTURE OF MEDICAL DEVICES

The CED has been formally invited to participate in the exploratory process on the future of medical devices organised by the European Commission.

The process was launched by the Enterprise and Industry Directorate-General and seeks to map the existing public health and industrial challenges, to identify current dynamics of the industry and to highlight the related key topics at European level from the perspective of industry, health professionals and patients. The outcome of this process will be used to contribute to the agenda of the upcoming European Commission.

4. CED COMMENTS ON THE DRAFT DIRECTIVE ON ELECTRONIC INSTRUCTIONS FOR USE OF MEDICAL DEVICES

On 23 September 2009, the CED submitted its comments on the draft Directive on electronic instructions for use for medical devices prepared by CED WG Medical Devices.

In its response the CED stressed among other things the necessity of including a paper copy of instructions with the medial device or at least a "quick start guide" for the installation of the medical device. The CED indicated that instructions should still be included in each package in which a medical device is provided. Furthermore, regarding the instructions provided through websites, the CED has pointed out the importance of ensure the availability of all language versions required by national and regional legislations.

5. CED-EPF (EUROPEAN PATIENTS' FORUM) COOPERATION

Established with an interest in cooperation between CED and EPF in areas such as health literacy, patient safety, quality of care, exchange of information and e-Health.

6. SCIENTIFIC COMMITTEE OPINIONS ON AMALGAM AND CED COOPERATION WITH COMMISSION

The safety and importance of the continued use of amalgam is supported by the World Dental Federation (FDI) (Consensus Statement, 1997); and by the report from 1998 of the ad hoc dental amalgam working group mandated by the European Commission. The effectiveness and safety of dental amalgam in the restoration of decayed teeth has been demonstrated through long usage.

Research over many decades has failed to show any significant health risk posed by dental amalgam either to patients, dental staff or the public.

ENVIRONMENTAL CONSIDERATIONS

The CED also welcomed the adoption, in May 2006, of the report of the EU Scientific Committee on, "Environmental risks and indirect health effects of mercury in dental amalgam" and but also noted that report stated that "the information presently available does not allow to comprehensively assessing the environmental risks and indirect health effects from use of dental amalgam in the Member States of the EU 25/27."

The dental profession takes seriously the environmental impact of its members' activities and emphasises that the dental professional has an obligation to work within the legal framework governing mercury containing products. The CED calls on Member States to ensure the full implementation and enforcement of EU waste laws, and fully supports examination into whether this is happening. In most Member States amalgam separators are used and in many they are obligatory.

Amalgam separators are an effective way of reducing harmful waste and remove a further 95% from the dental units' existing filtration systems resulting in a total capture of 99%, so preventing waste amalgam entering the waste stream.

Continues on page 10

Report of International Relations Officer

AGM January 2010

Continues from page 9.

The CED also encourages national dental associations to share best practice on waste management and to support their members regarding compliance with waste management obligations.

The worldwide consensus of the dental profession is that amalgam should remain part of the dentist's armoury in order to best meet the needs of patients. It is important that patients must not be denied freedom of choice in respect of how to be treated.

Dental amalgam continues to be the most appropriate filling material for many restorations, due to its ease of use, durability and cost-effectiveness. Dentists are best placed to identify patients' oral health needs. Restrictions on the use of amalgam would damage the financial stability of health systems as well as impact on individual patients' ability to afford dental care.

A few weeks ago a meeting was organised at the initiative of the Commission in connection to the forthcoming revision of the 2005 EU mercury strategy, planned for 2010. Specifically, questions relating to possible environmental impact of dental amalgam are expected to be raised from environmental NGOs and the Commission would like to prepare by having more information. For this purpose, the Commission is asking the CED to:

- Gather information about the implementation of waste legislation in connection to dental amalgam (through a questionnaire to CED Members, comparable to questionnaires distributed in 2006 and 2008)

- Facilitate the Commission's contacts with dental industry

7. CED RESOLUTION – DELEGATION YES, SUBSTITUTION

CED confirms that the dentist is the leader of the team with exclusive role in diagnosis and treatment planning

CED opposes any autonomous, independent treatment of patients by non-dentists, in the absence of supervision by a qualified dentist CED warns the competent authorities in all countries of the potentially harmful consequences for the health of the population, if the right to treat patients independently were to be granted to non-dentists CED opposes any kind of undergraduate – and postgraduate – education which gives non-dentists the status of a partial provider of dental services, with the right to practise certain areas of dentistry on an independent basis.

8. INFECTION CONTROL CODE

Recommendation 5:
Hand-washing and disinfection. Remove rings, jewellery and wrist watches. Dispense liquid soap – preferably containing a disinfectant – using a hands-free dispenser, lather hands and rinse them under cool tap water. An alcohol containing gel (65%) is also recommended, for maximum protection. Dry hands with clean paper towels. The frequent use of an emollient hand cream may prevent skin drying.

Recommendation 7:
Masks and goggles/dental clothing. Splatter, aerosols and foreign bodies may be hazardous for dental personnel during normal operating procedures. Masks, goggles and appropriate clothing can minimize hazardous incidents for the dentist and dental assistant. The use of special masks type FFP3, able to perform as barriers to the mist is recommended in case of operating in a potentially infected patient. It is recommended that the dentist and dental personnel should wear reusable uniforms, aprons, gowns, clinical jackets or even surgery.

Many thanks for the constant support in my work as International Relations Officer and if any member needs further clarification or advice on EU matters relevant to dentistry please feel free to contact me.

Audrey Camilleri
EU/International Relations officer

THE DAM APOLLONIA QUIZ 2010

Prizes kindly sponsored by G. Farrugia and sons, agents for Curasept.

1 (a) In what date was the Ferretti battery built? *1715*

(b) By whom?
Fra Francesco Maria Ferretti

(c) Where is he buried?
St Johns Co Cathedral

2. Where exactly is the area of the church of San Gorg in St Georges Bay known as? *Borg in-Nadur*

3. The fields around the chapel of St Cyrus in Rabat are called 'Gnien Frieres' . What does 'Frieres' mean? *Horsemen*

4. In which chapel in a Maltese fishing village in Malta would the statue of the saint be taken out to sea by fishermen and lowered attached to a tunney-net, saying a prayer for a good catch? (The statue has a ring at the back of the neck). *St Anthony of Padua, Xaghra, Wied il-Ghajn*

5. Which small chapel on the Tarxien-Gudja road has a well in the corner of the zuntier which used to provide water for the pilgrims? The chapel then leant its name to a new town nearby. *St Lucia*

6. Bir Miftuh is a corruption of 'Ma-tfuh'. What does this mean? *Perfumed water*

7. In which chapel in Valletta do you find the relic of 'The head of St Gerardu' who is said to be the founder of the order of The Knights of Saint John? *St Ursula*

8. In which chapel in Buskett do you find paintings by Mattia Preti? *St Anthony Abbott*

Bite Mark Analysis

– The Beginnings...

By Romina Carabott
Senior Lecturer in Forensic Odontology, University of Glamorgan
Director, Expert Forensics

"An injury in skin caused by contacting teeth (with or without lips or tongue) which shows the representational pattern of the oral structures"

ABFO Bitemark Terminology Guidelines (1995)

"All the places that can be kissed are also the places that can be bitten... The qualities of good teeth are as follows: They should be equal... of proper proportions, unbroken, and with sharp ends. The defects of teeth on the other hand are that they are blunt, protruding from the gums, rough, soft, large, and loosely set. The following are the different kinds of biting: the hidden bite, the swollen bite, the point, the line of points, the coral and the jewel, the line of jewels, the broken cloud"

Kama Sutra, (100 – 600 AD)

Isn't it interesting that even the Kama Sutra has an opinion about the qualities of good teeth!! But what the Kama Sutra calls "defects" are in fact the qualities of the teeth that make them unique and useful in bite mark analysis.

Bite mark analysis is a relatively "young" speciality. Most of the cases that made a name for bite mark in court occurred over the last century. Over the next few articles I will describe briefly some of these seminal cases.

Examination of a witch, by T. H. Matteson 1853. Courtesy of the Peabody Essex Museum

It is probably worth noting an often quoted early American case - that of the Salem Witch Trials in 1692. Amongst those convicted and hanged was Rev. Burrough. The victims in these cases were young girls that seemed to suffer from seizures during which they claimed to see a number of people colluding with the Devil. The victims presented with injuries to their bodies some of which looked like bite marks.

Rev. Burrough was one of those whose teeth where compared to the alleged bites on the girls' bodies and where found to "match" the marks. This "comparison" was made by looking at the teeth of the men present and the "bites" on the girls. The evidence against Rev Burrough, like most other evidence in the Witch Trials is dubious particularly because the Reverend was in prison during infliction of the alleged bites. A number of medical explanations have been given over recent years for the supposed affliction of the victims. Lyme disease has been one of the suggested explanations since red marks and rashes are one of the recognised signs. Hysteria resulting in self-inflicted bite marks was another possible explanation. It is likely that the truth will never be known but what is certain is the recorded "bite mark comparison" leaves much to be desired.

The earliest records of definite bite marks relate mostly to bite marks in foodstuffs which had been left at the scene of crime. Yes, it seems that the adrenaline rush present while committing a crime results in hunger pangs to which a criminal needs to succumb!

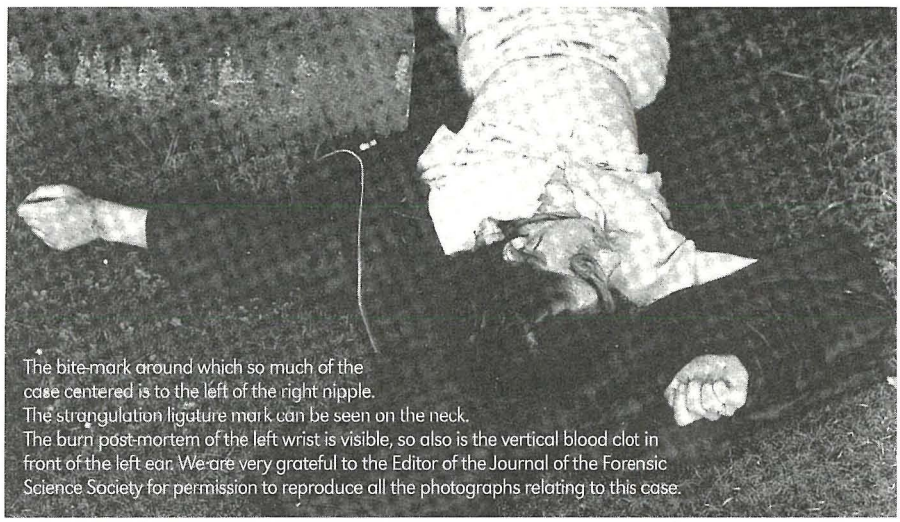
Continues on page 12

Bite Mark Analysis – The Beginnings...

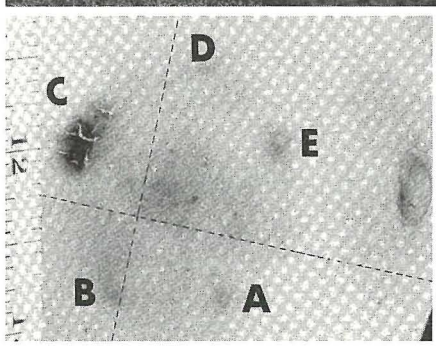
Continues from page 11.

The earliest recorded case in the UK was that which took place in 1906[1] where a burglar was convicted at the Cumberland Assizes, in the North West of England, thanks to a bite mark left in cheese found at the crime scene. Incidentally, the first recorded conviction reliant on bite mark analysis in Texas, is also of a burglar leaving a bite mark in cheese. In 1954, while burglaring a grocery store, the perpetrator bit into a large piece of cheese which he left at the scene.

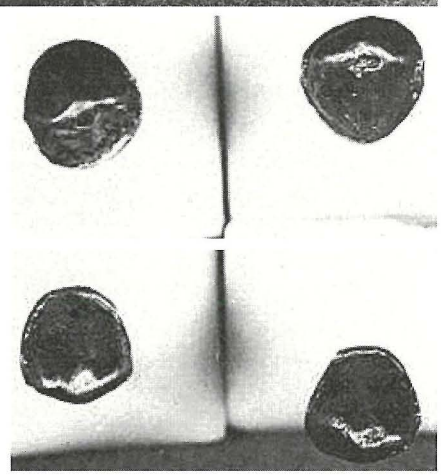
A certain Doyle had been arrested on the same night on a charge of public intoxication and silver coins that had been burglared from the grocery shop were found in his possession. He was asked to bite into another piece of cheese and the two cheeses where then examined by a toolmark comparison expert and Dr. Kemp, a Dental Examiner. Both were of the opinion that the same dentition had bitten in both cheeses.



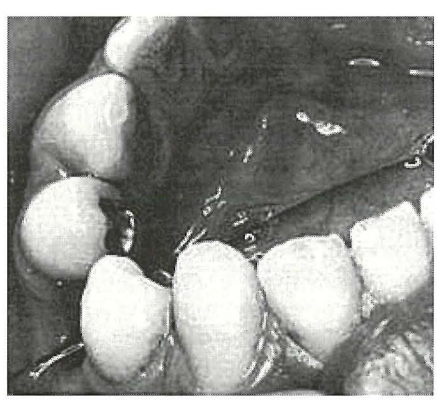
The bite-mark around which so much of the case centered is to the left of the right nipple. The strangulation ligature mark can be seen on the neck. The burn post-mortem of the left wrist is visible, so also is the vertical blood clot in front of the left ear. We are very grateful to the Editor of the Journal of the Forensic Science Society for permission to reproduce all the photographs relating to this case.



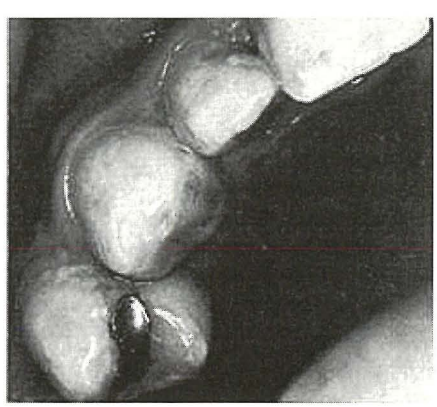
The ring marks A and E have centres the same colour as the surrounding skin. The shapes differ in a manner similar to that seen in the pits in the tips of Hay's right canines. The mark C corresponds in position with Hay's fractured upper central and hook-like cavity in the upper left lateral from which a filling had been recorded as missing



Copper-plated models of Hay's upper and lower four canines



Hay's lower right canine and the pit seen in a mirror



The pit in Hay's upper right canine with the incisal pit

THE BIGGAR CASE

In 1957 Linda Peacock, a 15-year old girl did not return home. A search found the girl strangled in a local cemetery in the market town of Biggar situated between Glasgow and Edinburgh. Suspicion fell on the young offenders at a nearby Approved School. Examination of the victim revealed a bite mark on the right breast.

All the boys at the Approved School were interrogated resulting in 29 possible suspects. All of these 29 gave dental impressions. The bite mark seemed to have only few tooth marks. Examination of all the models and possible scenarios and orientations left 5 out of the 29 as possible suspects. Eventually the comparison relied on Marks A and E seen in the photograph above which appeared as rings with a pale centre. These were thought to represent pits in the upper and lower right canines of the perpetrator and so further detailed impressions were taken of the 5 suspects.

Ultimately 1 of these 5, Gordon Hay, was found to have such pits on the upper and lower right canines as expected. Dr. Warren Harvey, the odontologist leading the comparison claims to have worked blindly i.e. the dental impressions and the suspects were known to them only as a number and no circumstantial evidence had been revealed. Only after narrowing it down to just the one dental cast were they told that Gordon Hay had been their prime suspect for considerable time.

His records also report discussing the case and the evidence with a number of other forensic odontologist who independently came to the same conclusions. Gordon Hay was found guilty by a majority of 14 to one. It is debatable whether a bite mark with so few individual characteristics would have held the same weight in court today; however this case was seminal in establishing the usefulness of bite mark evidence in criminal cases. The meticulous methodology of those involved cannot be flawed when one considers that they were almost pioneers in their field.

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Metcalf RD (2008) www.tarrantcounty.com/emedicalexaminer/lib/emedicalexaminer/BitemarksWrongfulConvictions.pdf

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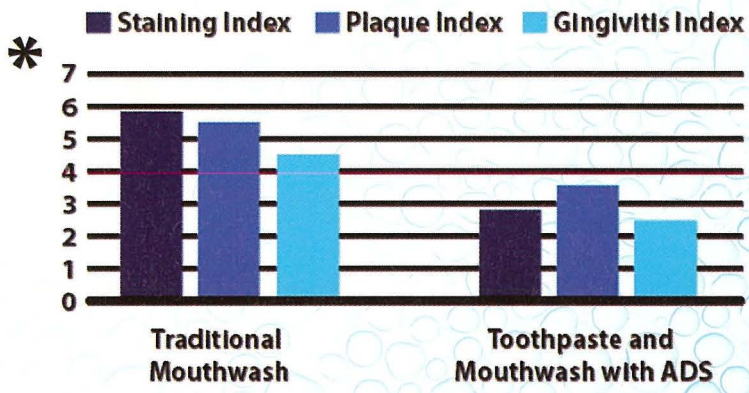

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ROTTING TEETH IN YOUNG ADULTS – CONSIDER EATING DISORDERS

By Dr C Corney, Medical Practioner, Sliema

In the UK I ran a busy medical practice dealing with weight and eating problems, having seen 50,000 such patients in 15 years. The majority were overweight but some were underweight. The commonly held notion that eating too much causes the former and too little the latter but this is not always true. I have selected two cases to demonstrate that the patient's problem is not always as it seems initially.

CASE 1

I saw a 35 year old woman who was 20% overweight. She worked full time as a TV producer which kept so busy that she only had time to eat takeaway food. The most striking feature on examination was the presence of infection of all the teeth which were just stumps. Halitosis and gingivitis were also present.

Small haemorrhages were present in the sclerae of both eyes. When she shook hands with me I noticed she had calluses over the knuckles of both hands. Futhermore I noticed swellings in both salivary parotid glands. A litmus paper placed in the saliva of the mouth registered a pH of 2. A blood test showed low sodium and potassium levels.

CASE 2

A young girl aged 19 saw me because she said physically she was unable to eat without feeling discomfort. Her periods had started at 12 , but for the last 2 years she had none.

She was very thin, with much muscle loss particularly of all four limbs, and underweight with a Body Mass Index [a ratio of weight to height] of 16 which was well below the normal range of 19—25. Her blood pressure was very low at 70/50 with a low pulse rate of 40.

The most striking feature on examination was the presence of infection of almost all the teeth which were stumps. Small haemorrhages were present in the sclerae of both eyes. A litmus paper placed in the saliva of the mouth registered a pH of 2.

I asked her to take a few sips of water from a glass. She immediately pointed to her lower sternal area because she felt hold up of the water there. A blood test showed a severe iron deficiency anaemia of 50% and a raised blood urea and lowered sodium and potassium.

I performed a plain X ray which revealed a small stone in the pelvis of the left kidney, and a barium swallow revealed a tight stricture at the lower end of the oesophagus.

DISCUSSION

The striking feature in both these cases is the presence of severe loss of substance of almost all the teeth, particularly of the posterior aspects of the incisors.

The litmus paper test of the saliva shows a pH of 2 which indicates the abnormal presence of strong acid [of almost the strength of car battery acid] which must have arisen from the stomach ie both patients induced vomiting [explaining the bloodshot eyes from straining, and also explaining the calluses of the knuckles from acid skin burns in Case 1]. This acid is rotting the teeth in both cases, causing gingivitis and infection of the parotid salivary glands in case 1.

The lowered blood sodium and potassium is due to loss from the induced vomiting [bulimia nervosa] . Low potassium levels can cause cardiac arrest and death.

In Case 2 the anaemia, low blood pressure, slow pulse and cessation of periods are due to a combination of not eating enough food and vomiting.

Continues on page 29.

THE VOCO REBILDA DC

An appraisal

by Dr David Muscat

When working in deep posterior class II cavities, it is more reassuring to use a dual-cure material, thus ensuring that your material deep in a sub-gingival box has properly set.

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It is usually used in conjunction with Solobond plus or Futurabond DC. The Rebilda comes in a convenient quick-mix syringe. Rebilda can also be used for luting of fibre-reinforced resin posts.

Rebilda has a working time of 2 minutes. If the light is not used, you need to wait for about 5 minutes for it to harden.

Avoid contact with eugenol.

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REBILDA DC CONTAINS

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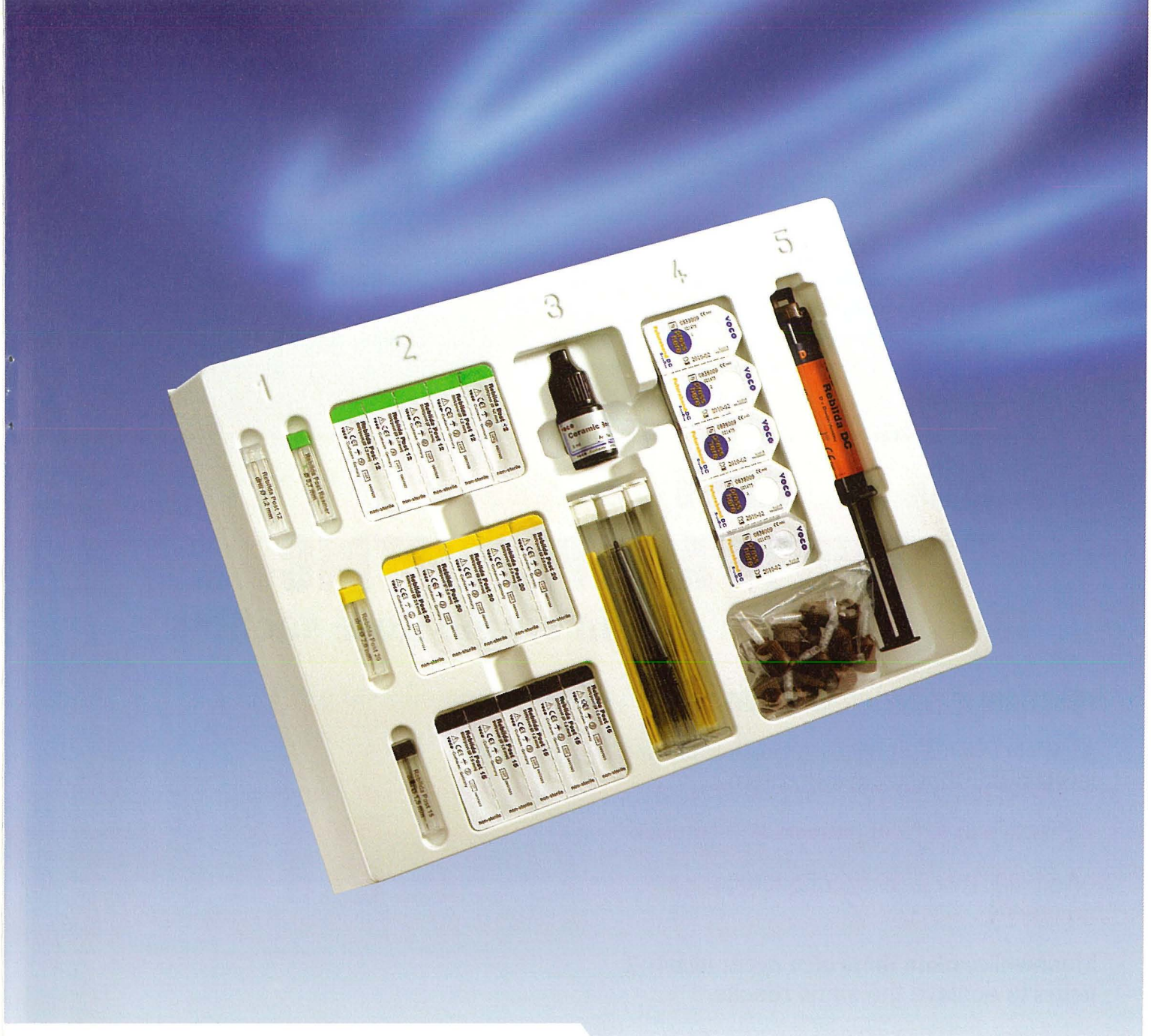
Thus one needs to insulate core build up before taking impressions or making temporary crowns to avoid bonding to these materials.



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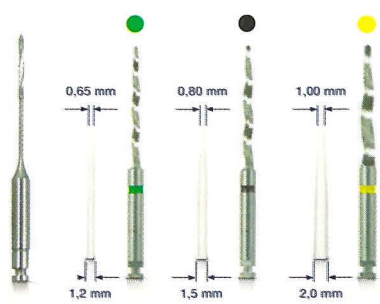

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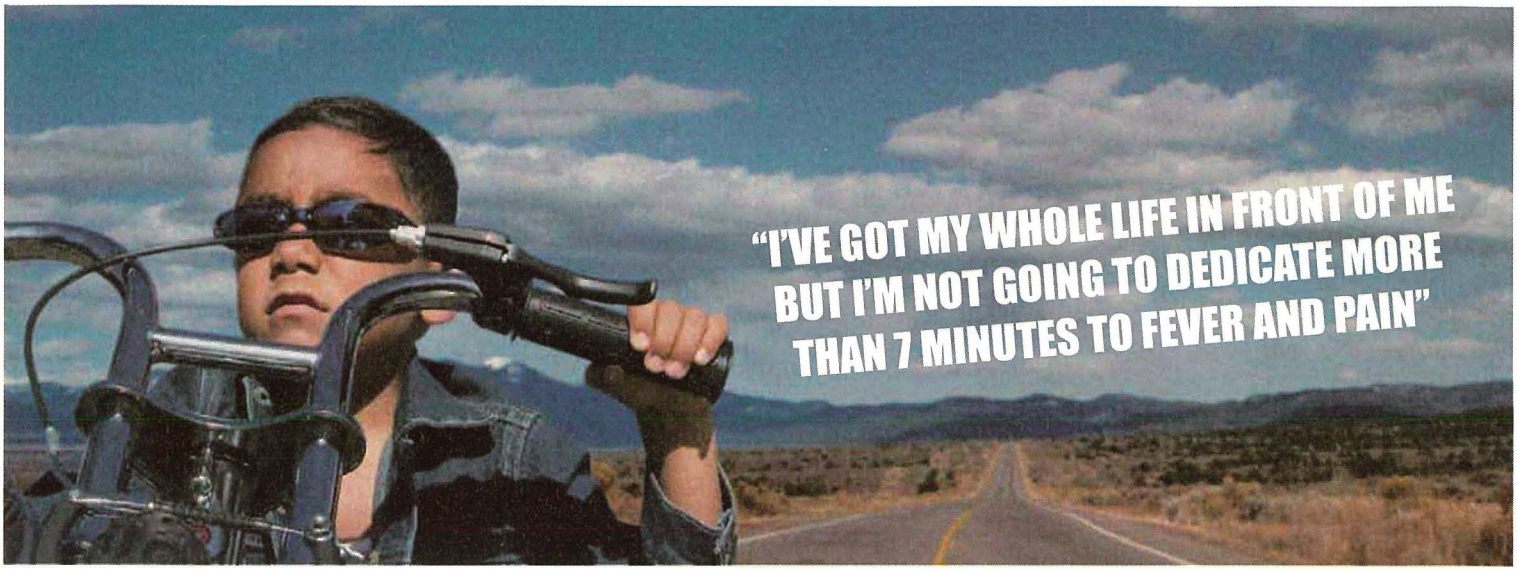

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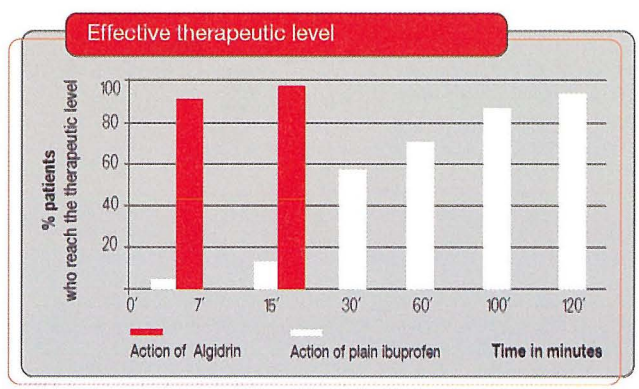

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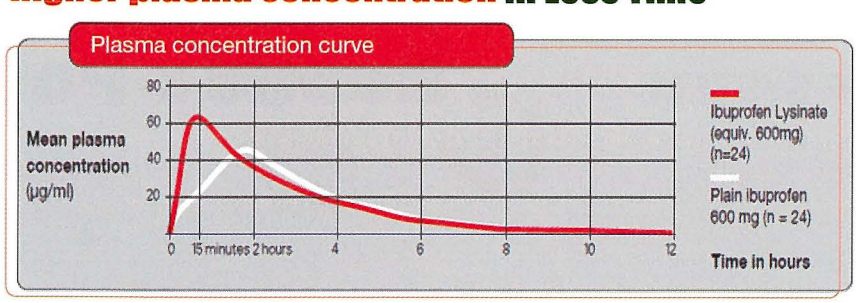

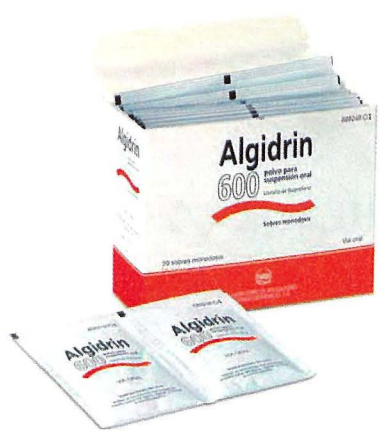

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(1) Portolés A, Vargas E, García M, Terleira A, Rovira M, Caturla MC, Moreno A. Comparative Single-Dose Bioavailability Study of Two Oral Formulations of Ibuprofen in Healthy Volunteers. Clin Drug Invest 2001; 21 (5): 383-389.

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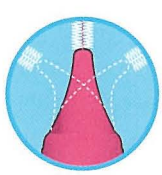

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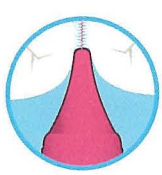

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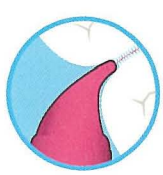

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3D IMAGING FOR DENTAL IMPLANTS

By Dr Muralidhar Mupparapu, DMD, MDS

Visualization of the third dimension especially for placement of implants has become a necessity rather than a luxury for a wide variety of reasons, the most important of which being the accurate placement of the implant structure within the bony anatomy and away from the neurovascular elements and or sinuses.

The advent of Computed Tomography in the 70s resulted in an explosion of clinical application and research. Called Computed Axial Tomography, this new exciting technology was utilized for the placement of dental implants via a special software called the "Denta-Scan".

However technologically innovative this technique was and the third dimension was surely seen, the radiation doses that the traditional CT scanners used were enormous and these radiation –intensive scanners were not a big hit among dental practitioners. This also meant referral to large hospitals and the time and expense was too much to incorporate in to their dental implant treatment plans... until of course the introduction of Cone Beam Computed Tomography. The CT technology has moved from the large hospitals to private dental offices.

Dentists had some odds against them for adapting to the newer technologies. First and foremost being the "Technophobia" As digital radiography became mainline dental tool, it was mandatory to have the necessary computer skills and the right equipment.

New computers were being developed at a pace that the generally "technophobic" dentist was not able to keep up with. The RAM (Random Access Memory), the hard drive storage kept changing by the day. This was a major problem for dentists to keep their offices up to date with the computers, let alone a Cone Beam CT scanner.

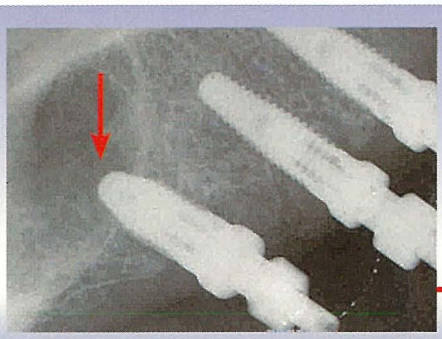
Dentists were still largely using dental films for their radiographic needs and the fact that turning digital (to increase the diagnostic capability) would require them to use the computers. They were back to the same problem again.

Medical and dental practitioners have to deal with human anatomy as depicted in radiographs in shades of gray rather than their natural anatomic colors. This meant utilization of computers to decipher some subtle radiographic changes human eye could not notice. Yes, this would also mean that the dentists would have to use the computers again.

Today, the CBCT became a common dental application for the placement of implants having overcome all of the above odds. The savvy dentist uses not only the latest computer technology, but also the scanners that are very radiation thrifty.

Two dimensional radiographs traditionally did not give the information that the Implantologist needed – the bucco-lingual width or the relationship of the proposed implant to the nerve canals or the maxillary sinus. Placement of implants without any regard for this resulted in implant failures.

CBCT volumes solved that problem and the OEM (Original Equipment Manufacturer) Software that was part of the scanner solved this problem. The method of viewing the anatomy in an interactive frontal, sagittal and coronal modes was known as Multi-Planer Reconstruction (MPR).



Far left: Failed implant in the maxilla. Implant showing the periimplantitis

Left: Failed implant in the mandible. Implant showing the peri-implantitis

CT AND CBCT

The original CT scanner was developed in the 70s by the British engineer, Godfrey Hounsfield of EMI laboratories with the help of physicist Allan Cormack of Tufts university, Massachusetts, USA.

Little did we know that the "Beatles" – John, Paul, George and Ringo were instrumental in the development of the original CT scanner[1].

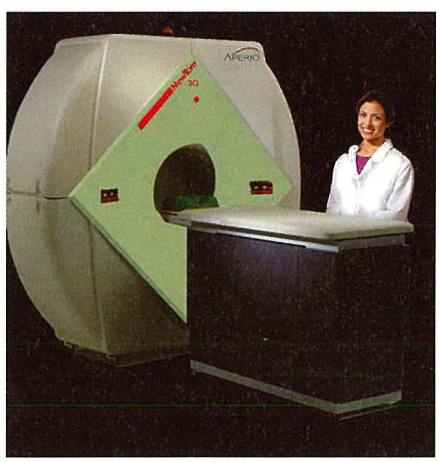
The success of the Beatles generated the necessary research funds for their recording company, EMI, which inturn developed the CAT scanner. Hence the original CAT scanner was known as the "EMI Scanner"

The densities in a CT scan were recorded by a quantitative measure of density of different material as compared to the standard density of water. If water is assumed to be at density 0, then the Hounsfield Unit (HU) range can go from air (-1000) to cortical bone (+1000). The ideal bone density for placement for implant can be assessed with this unit as opposed to the traditional bone density visual scale of D-1 to D-4 that the early Implantologist used. HU units are thus more accurate.

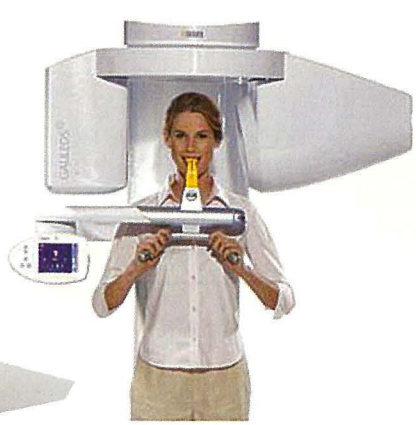
CBCT MACHINES

In the last decade, over a dozen CBCT units were developed by various companies around the globe and following is a list of some of them.

An I-CAT scanner



The NewTom CBCT



CBCT by Sirona

The scan acquisition times have tremendously improved over the last few years from over 20 seconds to a mere 8 seconds today. This has resulted in a reduction of the radiation dose to the patient. The effective radiation dose from a medical CT scanner can be around 1200- 1300 micro Sieverts, where as the effective radiation dose from a CBCT scanner is approximately 68 micro Sieverts. This is about 20 times lower dose than the medical CT scanners. The doses are lowered again from this range due to improvements in the scan times.

DATA COMPILATION (IMAGES ON PAGE 22)

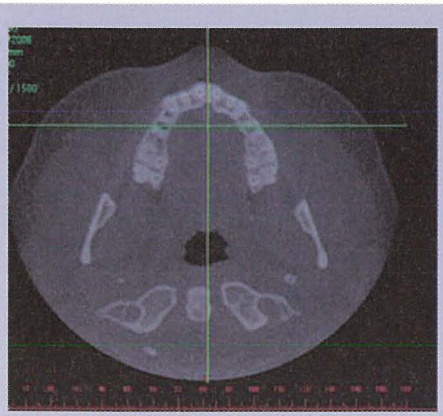
CBCT scanner acquires hundreds of slices per rotation and once obtained, the computer processes these slices by assembling them into a full cylinder-shaped volume analogous to a stack of compact discs. Various proprietary software applications compress and compile the data into the DICOM (digital imaging and communication in medicine) format for use in the various applications.

A panoramic reformation was also possible using CBCT volumes. Software applications enable us to view the entire volume in 3D and the additional diagnostic detail is immensely helpful for a customized treatment planning.

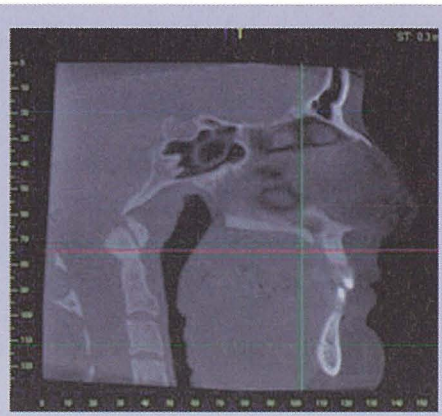
Cross-sectional imaging gives the information about the bucco-lingual dimension as well as the location of the inferior alveolar nerve canal in the mandible and the proximity to the maxillary sinus in the maxilla.

This situation could have been avoided easily with a prior cross-sectional information. Radiographic guides or stents (stereolithographic models) are commonly used for placement of implants.

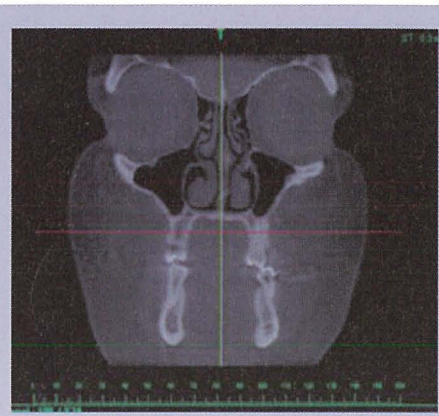
Continues on page 22.



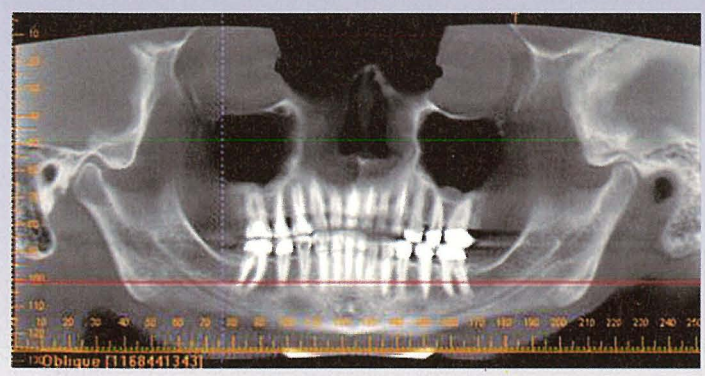
Axial Slice from a CBCT



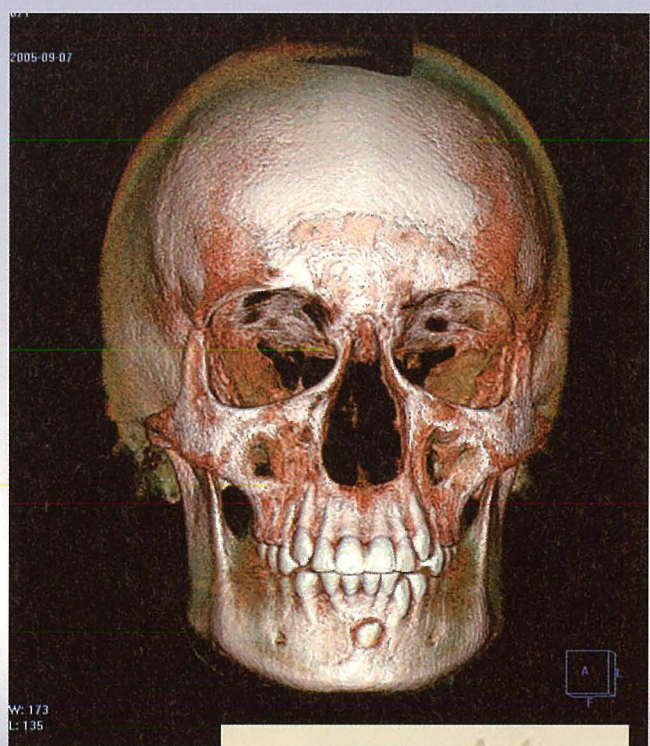
Sagittal Slice from a CBCT

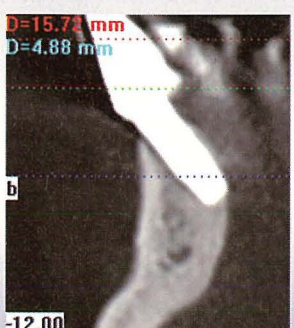


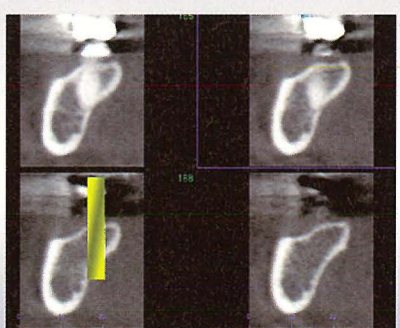
Coronal Slice from a CBCT



Panoramic reforamtion







Cross-sectional imagery is mandatory

Continues from page 21.

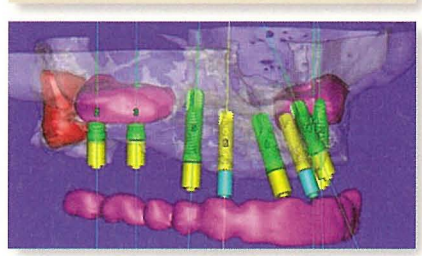
An implant laboratory will construct these for the implantologist upon receiving the CBCT data on where the proposed implants are planned. This results in an accurate placement of implants both directionally and away from the nerve canal.

Simulated Implant placement is possible today with the availability of special software that used the CBCT data and gives the access to varieties of dental implant simulations that can be preselected before the information is sent to the lab for fabrication of radiographic guides.

In the near future, CBCT is predicted to replace the introral radiology[2] for general dental applications. It will also reduce the need for medical CT scans for dental needs due to the following significant advantages among others:

- X-ray beam limitation
- Image accuracy
- Rapid scan times
- Dose reduction
- Reduced image artifacts
- Curved planar reformations

The future of implant dentistry is secure with the introduction of the CBCT scanners. The dental profession should be able to embrace this new technology for not only predictable outcomes, but also for the diagnostic value that the dentists obtain in identification of the appropriate patient and area within the jaws for the placement of implants – implants that are anatomically accurate and functionally sound.



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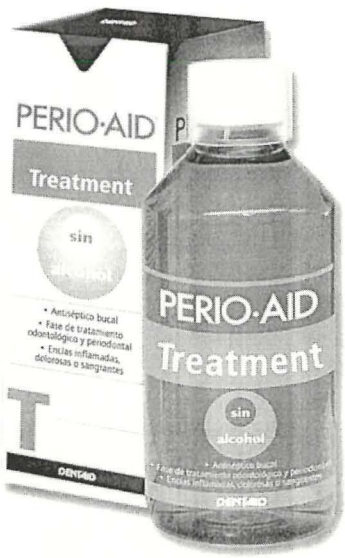

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Excipient q.s.	100g

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composition:

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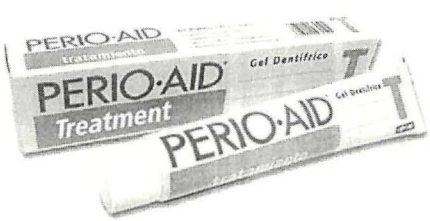
Cetylpyridinium chloride	0,05g
Excipient q.s.	100g



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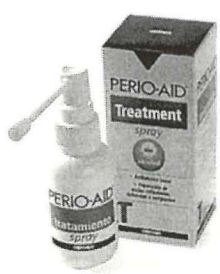
Excipient q.s.	100g



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Pen pictures of 19th century dentists in Malta

NOBLE SPARKS

By Professor George Camilleri

One of the earlier English dentists to come to Malta was Noble Sparks. He came to Malta, accompanied by his wife, Mietta Sparks and a child, on the English brig "Vincitore" from Marseilles on 5th December 1832. He practised in Malta at least till 1849.

I have no information on his dates of birth and death or family background. The May 1833 issue of the bilingual Malta Government Gazette, the only publication allowed at that time, contained this advertisement in Italian: "Il Sig. Sparks Dentist offre I suoi servizji tanto per pulisce i denti che e tanto necessario per la loro preservazione a tal oggeto provede Polvere et Elixir, come pure per qualunque operazione risquardante la sua professione. Provede anche Denti artificiali a una nuova invenzione che sono state approvate in Londra e in Parigi. Il suddetto parla Italiano. Il tutto a prezzi moderati. Valletta Strada Zecca No.109".

In it states that he was able to speak Italian, which he must have learnt before coming to Malta, a most unusual attribute for an English dentist. However his wife's name of Mietta suggests an Italian origin. In the seventeen years in Malta both Noble and Mietta together with their children crossed over to Sicily (or Naples), together or separately, for varying lengths of time. It appears that she did not settle in Malta and went to live in Sicily, possibly with her family. In 1837 she is recorded as arriving from Naples and in 1838 as travelling to Messina. Noble Sparks often travelled to Sicily (or Italy) for short periods in 1835 and 1849 and one may conjecture that his family had remained in Sicily and he went over when possible. The last details I have are that Mrs M Sparkes left Malta on 11th May 1849 on the "Leonidas" whilst Noble followed on the 16th on the "Scamandre". Although his surname was definitely Sparks it was often spelt Sparkes in his advertisements and on the ship manifestos.

In the long span in which he practised dentistry in Malta he advertised regularly in the local papers, calling

59, St Paul Street

141, Strait Street

himself Surgeon Dentist from London. These advertisements give an interesting insight in the development of dentistry in that period. In 1833 he offered the usual range of treatment including the sale of Powders and Elixirs for tooth cleansing, as well as the provision of artificial teeth according to a new invention. Presumably these were Porcelain teeth which were introduced in dentistry in 1825 although the vulcanite base had not yet been invented. In 1843, he moved his practice from Strada Zecca to 40, Zachary Street, Valletta. Then, he charged 1 dollar for cleaning of the teeth and 2-3 dollars for a natural or mineral tooth. Sparks was very active in 1847. In separate adverts, he announced in April 1847 that he extracted teeth with the least pain under ether vapour and that he filled teeth with Succadeneum "without, pain, heat or pressure" (October 1847).

It was only, seven months earlier, in October 1846 that the first public demonstration of ether as an anaesthetic took place in Massachusetts (USA) whilst its first use in Malta is attributed to the famous surgeon Thomas Spencer Wells at Bighi Hospital on March 1847. Succadeneum (Silver amalgam) was invented in 1826 by Auguste Taveau of Paris and introduced in 1833 to the United States by the Crawcour brothers as a gold replacement for dental fillings. This was to lead to a long bitter struggle, the so-called "amalgam war", between its supporters and antagonists. A problem which haunts us till today.

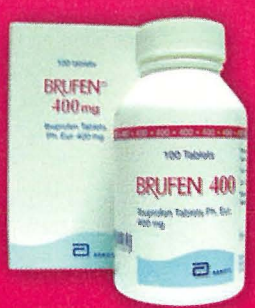
The Muir's Almanack of 1847 advertised the Spark's Royal Clarendon Hotel housed in two big houses, Nos 56 and 59 St. Paul Street, Valletta. The advert also adds the detail, usually found in his dental adverts, that all the continental languages are spoken. This last information together with the spelling of his name strongly suggests that this was our Noble Sparks who was moving in the hotel business. In the next two years he often went to Sicily for short sojourns and moved the practice to his domicile in Strait Street, His final advert stated "Mr. Sparkes, Surgeon Dentist is to returning his thanks to his friends, and the public in general for the favors received during his short residence in the island, since his return, begs to acquaint the public that owing to imperative engagements he will quit the island tomorrow for a short period. Malta 10 May 1849".

We do not know what these engagements were but there are no records that he ever returned to Malta. Presumably it must have been family pressures. It would be interesting to know if he ever set up practice in Sicily.

BRUFEN®

Ibuprofen

25 years of trust



INDICATIONS

Articular
Painful Conditions

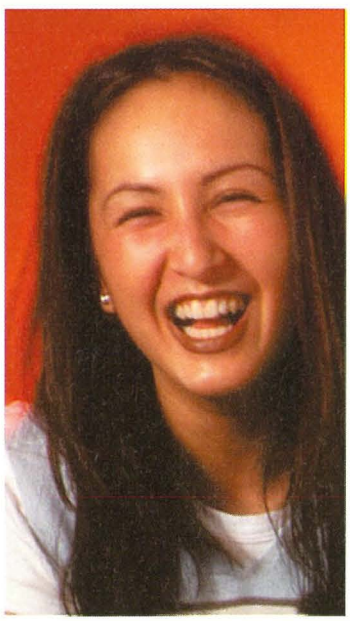
- Rheumatoid arthritis
- Osteoarthritis
- Ankylosing spondylitis

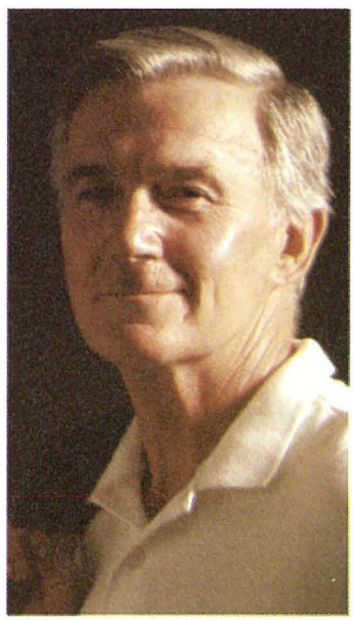
URTIs

- Tonsillo-pharyngitis
- Otitis media
- Sinusitis

Non-articular
Painful Conditions

- Post operative pain
- Soft tissue trauma
- Back pain
- Dental pain





- Original brand
- Effective relief of pain
- Fast action
- High tolerability
- Flexible dosing
- Cost effective

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Abbott
A Promise for Life

ROTTING TEETH IN YOUNG ADULTS

– CONSIDER EATING DISORDERS

Continues from page 16.

The elevated blood urea is due to the body excessively breaking down muscle protein [in the absence of fat] for energy which I would describe as "self cannibalisation".

The renal stone is due to dehydration as fluid is being vomited away. The stricture and consequent hold up in the lower oesophagus is due to the vomited acid burning the lining of the oesophagus here. Subsequently this stricture had to be dilated with a bougie.

HISTORY RELIABILITY

Both patients did not volunteer that they were inducing vomiting. I never ask such a direct question because there is a risk that the patients will not reveal any more information because vomiting is their secret.

By performing the above tests I know that Case 1 diagnosis is Bulimia Nervosa and Case 2 is Anorexia Nervosa and Bulimia Nervosa without obtaining a reliable history. Also, initially, I do not reveal the results of the above tests until I have identified a psychogenic cause for these problems because this has to be treated if the patient is going to be cured from a condition which could cause further disease and even death.

WATCH THE PATIENTS EAT

I usually say to such a patient that it is now lunch time and I would like to discuss the problem informally with her over a snack at the nearby wine bar. Whilst talking I casually watch how she eats.

Case 1 said she was starving and wolfed the food but spent nearly 20 minutes in the toilet with return of the bloodshot eyes—obviously had vomited, confirming bulimia. Case 2 picked at the food but spent a similar time in the toilet with return of the bloodshot eyes—obviously had vomited, confirming anorexia and bulimia. I say nothing about my observations.

BACKGROUND HISTORY

I casually ask the patient if she has any idea of possible causes and diagnosis of her troubles. This indirect form of questioning gives the patient extra confidence to volunteer an opinion on her problem which may well be more truthful than information gleaned by direct questioning which she sees as too obtrusive.

The first patient recalled an uncle showing her "the facts of life "when she was 6 but she could not remember anything else. The second patient recalled her father sleeping with her and "doing things" which she thought then were normal. It was not until she went to school that she realised these "things" were not normal.

The background history of both anorexia and bulimia nervosa usually indicates difficult family relationships and atmosphere, eg abuse [sexual, emotional,or physical] causing low self esteem and emotional immaturity or instability or depression.

Often the patient is of the perfectionist personality type such as dancers, models, keep fit gymnasts and teen age pony owners. Sometimes also there is a family history of anorexia nervosa.

MANAGEMENT

Both anorexia and bulimia nervosa respond best to cognitive behavioural therapy [CBT]. This is where the patient is exposed to others with the same condition who can give helpful advice.

Sometimes CBT is preceded by hypnotherapy to identify the psychogenic trigger if the patient cannot recall one, because it has been suppressed and relegated to the subconscious. Hypnotherapy will release this into the conscious so that the problem can be faced. The first patient underwent this, revealing that she had been sexually abused.

Also casually placing the patient in front of others who are eating their meals is beneficial in curing the eating disorder and stopping the vomiting. Didactic advice from doctors and other workers and family members is usually anti-productive in treatment management.

OUTCOME

The first patient responded well to CBT, and after about a year had lost weight to within normal ranges. She was eating good food. Her vomiting had stopped, as confirmed by the dentist who had performed considerable repair work.

The second patient also responded well to CBT. She preferred to eat with her boy friend's large family who were both supportive and non-combative.

Once again the dentist confirmed an absence of vomiting. When I saw her at 6month follow up she looked well having put on weight, and again at a year her Body Mass Index had reached 18.5.

CONCLUSION

Rotting teeth in a young adult should raise the suspicion of an eating disorder such as anorexia and/or bulimia nervosa.

The patient's history is often incomplete, because she is defensive and therefore cannot be relied upon to reveal the problem, so an indirect approach as described above should be diagnostic. This is necessary to stop the very definite risk of morbidity and mortality.

MANAGING THE OPE

The absence of an apical constriction presents a management challenge to adequately obturate the root canal space. Most obturation techniques rely on an apical stop and a small apical constriction to confine the obturating material within the root canal space. Incomplete obturation or overextended obturation can result in a compromised endodontic case requiring possible surgical correction. The absence of an apical constriction can be due to incomplete root development secondary to trauma, aggressive apical resorption due to periapical infections or iatrogenic enlargement during instrumentation of the root canal space.

There are several options for managing these situations: Apexification, Revascularization, Apexogenesis and Apical barrier techniques.

Apexification: Apexifcation has traditionally formed an integral part of the treatment of teeth with necrotic pulps and open apicies. Apexification is defined as a method of inducing a calcified barrier in a root with an open apex or the continued apical development of an incompletely formed root in teeth with a necrotic pulp. The aim of apexification is to establish a root canal space that can be successfully obturated.

Historically, calcium hydroxide has been the material of choice used to induce the formation of an apical hard tissue barrier before placing the permanent root canal obturation. Granath in 1959 was the first to describe the use of CaOH for apical closure. Prior to this, nonvital immature teeth were often extracted. In 1966 Frank popularized the technique in which the canal was debrided and packed with a CaOH paste. This technique required the replacement of CaOH paste every 3 months until a barrier was formed.

There is debate as to the mechanism of action of CaOH. It is proposed that (1) CaOH has osteogenic potential. (2) The alkaline pH of CaOH may favor the formation of alkaline phosphate which favors calcification (3) CaOH is antimicrobial (4) CaOH small particle size may stimulate calcification (5) Ca from CaOH may actively participate in the hard tissue.

The disadvantages to the traditional apexification technique using CaOH are (1) immature teeth are weakened by CaOH and thus have decreased resistance to fracture. (2) Poor patient compliance in that several appointments are necessary.

Many different filling materials have been used to stimulate the formation of the hard tissue barrier in apexification. The material used is probably not as important as removal of the etiology of the periapical lesion. Blood clots, collagen-calcium phosphate gel and tricalcium phosphate have also been used with good success.

An alternative material, MTA (mineral trioxide aggregate) has been introduced to replace CaOH in the apexification procedure. The advantage of using this material is the apexification procedure can usually be completed in one or two visits. MTA is composed of dicalcium and tricalcium silicate, bismuth oxide and calcium sulfate. This material solidifies to a hard structure in less than 3 hours and has the ability to induce cementum-like hard tissue when used adjacent to periradicular tissues. MTA has excellent sealing properties and has the ability to set up in the presence of blood and is biocompatible. MTA has demonstrated a greater degree of hard tissue formation when compared to CaOH.

The technique for using MTA is not much different than that of CaOH. The canal must be clean and disinfected. This disinfection can be accomplished with NaOCl or with 2% chlorhexidine. MTA is then placed at the apical extent of the root canal and is verified radiographically. Approximately a 4-6mm plug of MTA is needed to be placed in the apical area. The remaining portion of the canal can be obturated with gutta percha and then restored with a composite resin. Some advocate filling the remaining portion of the canal with a composite resin.

REVASCULARIZATION

Revascularization procedures in immature teeth with periapical pathology attempt to preserve the potentially remaining dental pulp stem cells and mesenchymal stem cells of the apical papilla. This can then result in canal revascularization and the completion of root maturation.

Revascularization of a partially necrotic pulp in an immature root is based on the concept that vital stem cells located in the apical papilla can survive pulpal necrosis, even in the presence of periradicualr infection. These stem cells are believed to differentiate into secondary odontoblasts.

Revascularization can be thought of as a combination of apexification and apexogenesis. Revascularization procedures attempt to obtain a longer and thicker root as is the case in apexogenesis. Revascularization achieves this through restoring vital pulp conditions. A successfully revascularized tooth should require no additional treatment.

The treatment approach for revascularization varies from one appointment to two appointments. The common thread is no instrumentation of the root canal space. The root canal space is irrigated with 20-30ml of 1.25 to 5.25% NaOCl , followed by saline and then with Peridex or 2% chlorhexidine. In the 2 appointment approach, the canal is dried with paper points and dressed with a triple antibiotic paste consisting of 20mg/ml each of metronidazole, ciprofloxacin and minocycline for 1-4 weeks.

At the next appointment, the paste is removed with saline irrigation and bleeding is stimulated with an endodontic file. After the formation of a blood clot, MTA is placed over the clot and the tooth restored with a composite resin. Periodic follow up with radiographs should show the resolution of the periapical radiolucent area and intact lamina dura and with longer follow up, continued root development.

N APEX

By Dr Dan Keir
Associate American Board of Endodontists

A drawback to revascularization is it is difficult to select those teeth which clinically test nonvital, but maintain vital apical cells believed to be necessary to successfully perform a revascularization procedure. It has not been determined at which stage and duration of pathosis the dental pulp stem cells and apical mesenchymal cells are either still viable or completely destroyed. The fall back position if revascularization does not occur is apexification.

A recently published article in the Journal of Endodontics investigating revascularization showed in dogs the canal dentinal walls thickened by the apposition of newly generated cementum-like tissue termed intracanal cementum. The increased root length was due to cementum growth. Bone and bone-like tissue was also observed in the canal space. Connective tissue similar to periodontal ligament was also found in the canal surrounding the intracanal cementum and intracanal bone. It appears that revascularization/ revitalization consists of tissue of cementum, PDL and bone which are not derived from pulp parenchymal tissue. This represents wound repair as opposed to revascularization or revitalization of the dental pulp.

APEXOGENESIS

Apexogenesis is vital pulp therapy procedures performed to encourage continued physiological development and formation of the root end. The goal of apexogenesis is continued root end development and formation of apical closure through continued deposition of dentin and cementum. Another term to describe this procedure is maturogenesis which describes root development that is not restricted to the apical segment.

Apexogenesis procedures are performed on immature teeth with exposed vital pulps. These procedures range from direct pulp capping procedures to partial or complete pulpotomies.

It has been shown by Cvek and others that an exposed vital pulp has the potential to heal even after exposure to the oral cavity for several days such as in traumatic exposures. Also apexogenesis procedures are successful in about 96% of cases.

Direct pulp capping is a technique in which a protective dressing is placed directly over the vital pulp in a traumatic or mechanical exposure and the tooth is then restored.

A pulpotomy may be partial or complete. A partial or shallow pulpotomy is the surgical removal of a small portion (1-3mm) of the coronal portion of a vital pulp as a means of preserving the remaining coronal and radicular pulp. A complete pulpotomy or pulp amputation is the surgical removal of the coronal portion of a vital pulp to the cervical line in anterior teeth and to the pulpal floor in posterior teeth so as to preserve the vitality of the remaining radicular portion.

CaOH is the medicament of choice in pulp capping and pulpotomy procedures. The pulp tissue response to CaOH depends upon the type of formulation. With formulation of CaOH in a methylcellulose base, there will be a necrotic zone or a noticeable space will develop between the calcified bridge and the CaOH material.

Continues on page 32.

MANAGING THE OPEN APEX

Continues from page 31.

Formulations such as Dycal and Vitrebond result in the calcified bridge forming up against the material. MTA can also be used in pulpotomies, but there are some concerns about staining especially with the grey formulation. The white formulation appears not to cause much discoloration. In areas of high esthetics, it may be best to use CaOH.

APICAL BARRIER TECHNIQUES

In many teeth there is no natural constriction in the apical area of the root canal against which to pack/control the obturating material. In other teeth, the apical portion of the root canal may lack a constriction as a result of apical resorption or iatrogenic causes—over instrumentation due to improper working length. If a stop cannot be created during preparation, it becomes difficult to contain the obturating material within the canal. Generally these techniques are used in mature teeth and many of the materials used are the same as in apexification.

To overcome this lack of apical stop/constriction, the placement of a material in the apical area of the root canal space becomes essential and one that can provide an apical barrier to prevent extrusion of the obturating material into the periapical tissues. This material also needs to be biocompatible and provide an adequate apical seal. Several materials have been investigated—CaOH, tricalcium phosphate, freeze-dried (lyophilized) cortical bone and collagen products, dentin chips and MTA.

The material of choice is presently MTA since it has all the desired properties for these situations. It is easily placed and compacted, has good compressive strength to withstand obturation forces, has good sealing properties and is biocompatible. CaOH powder also has similar properties but may dissolve out with time.

SALIENT POINTS FROM THE **ANTIBIOTIC PROPHYLAXIS** LECTURE BY DR R. XUEREB

UP TO NOW, ANTIBIOTIC PROPHYLAXIS HAS BEEN:

- Given empirically
- To pts with a wide range of cardiac conditions
- In the absence of a robust evidence base
- The efficacy of this regimen has never been properly investigated
- Clinical guidelines based on expert opinion

EXISTING DOGMA HAS BEEN CHALLENGED:

- Bacteraemias arise from everyday activities such as toothbrushing
- Lack of association between episodes of IE and prior interventional procedures
- Lack of efficacy of antibiotic prophylaxis regimens
- Antibiotic administration is not without risk to the individual pt
- Unnecessary antibiotic use encourages the emergence of antimicrobial resistance
- Antibiotic prophylaxis prior to dental and certain non-dental procedures is an expensive exercise

The Guideline Development Group of the National Institute for Health and Clinical Excellence (NICE) were convinced by the evidence that current antibiotic prophylaxis regimens might result in a net loss of life!

NEW GUIDELINES HAVE BEEN PRODUCED BY:

- The British Society for Antimicrobial Chemotherapy (BSAC) Gould et al 2006
- American Heart Association (AHA) Wilson et al 2007
- National Institute for Health and Clinical Excellence (NICE) Wray et al 2008
- European Society of Cardiology (ESC) Habib et al 2009
- Malta Xuereb et al 2009

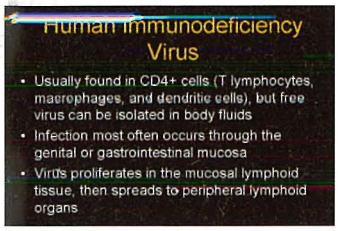
THE NEW GUIDELINES:

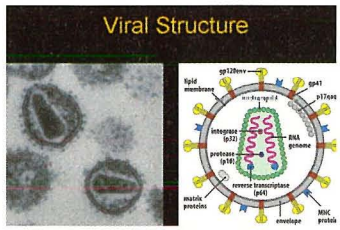
- IE prophylaxis should be restricted to those pts with the highest risk of adverse outcome from IE who would derive the greatest benefit from prevention of IE
- In pts with underlying cardiac conditions associated with the highest risk of adverse outcome from IE, IE prophylaxis for dental procedures is reasonable even though its effectiveness is unknown (Class IIa, LOE B)
- Under these revised guidelines many fewer pts would be candidates to receive IE prophylaxis
- Prosthetic cardiac valve or prosthetic material used for cardiac valve repair
- Previous IE
- Congenital heart disease (CHD)
- Unrepaired cyanotic CHD, including palliative shunts and conduits
- Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure
- Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialisation)
- Cardiac transplantation recipients who develop cardiac valvulopathy

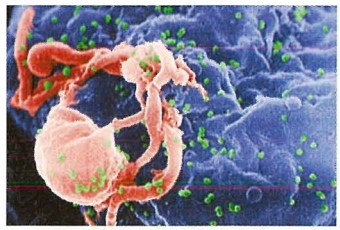
IE prophylaxis is no longer recommended for Mitral Valve Prolapse pts.

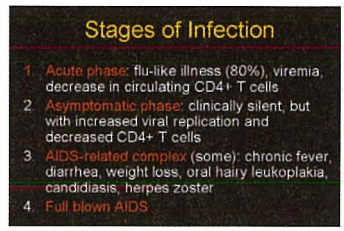
ORAL MANIFESTATION OF **HIV INFECTION**

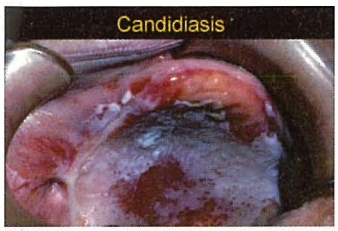
By Prof. Muralidhar Mupparapu, DMD, MDS

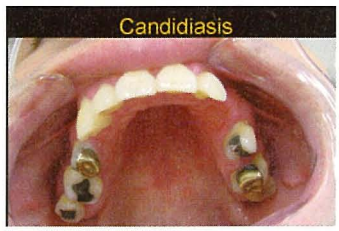


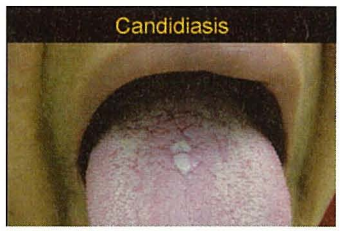


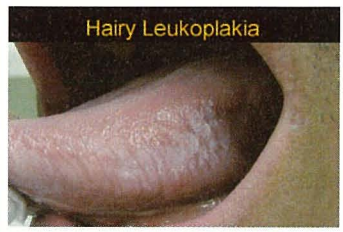


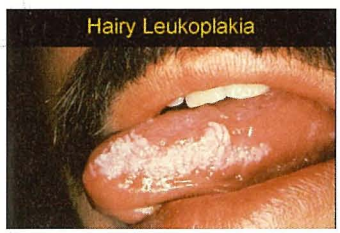


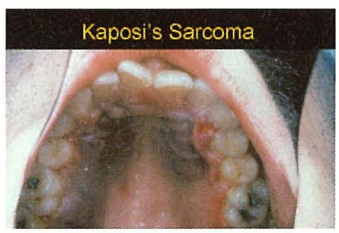


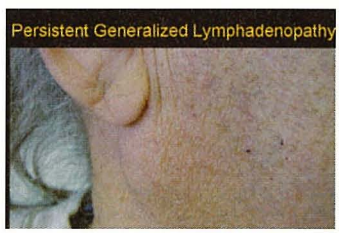


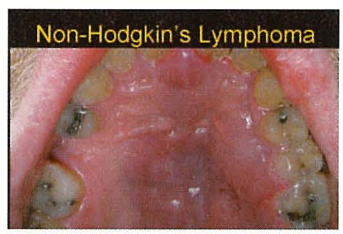


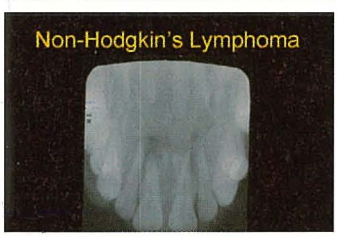


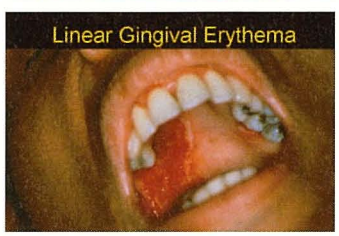


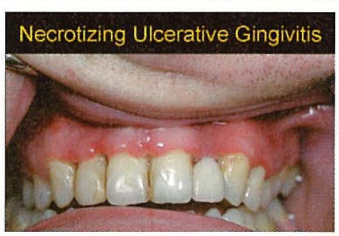


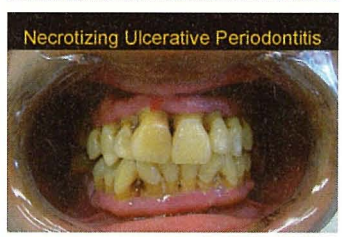


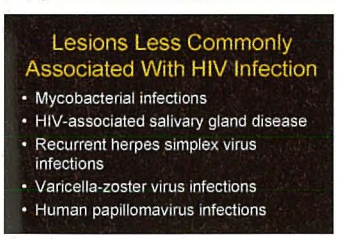


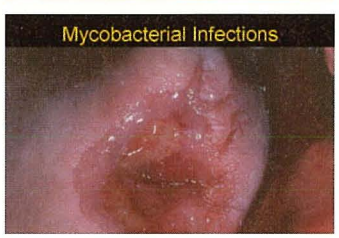


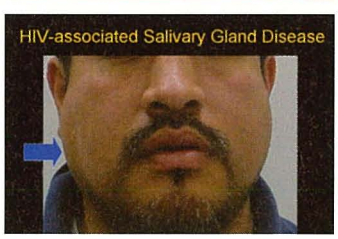


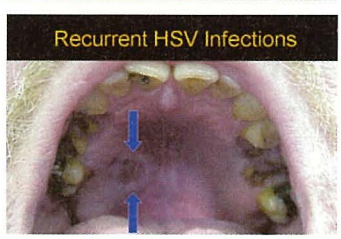


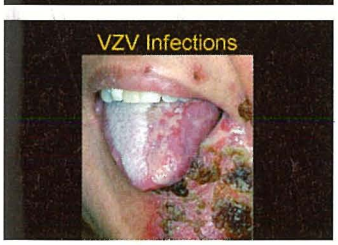


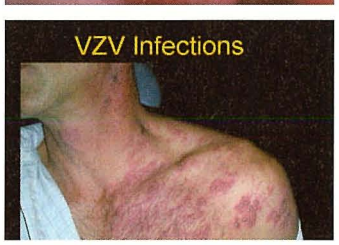


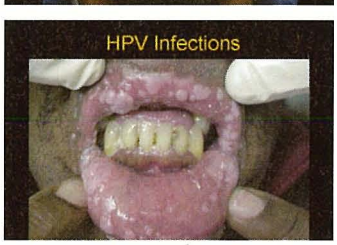


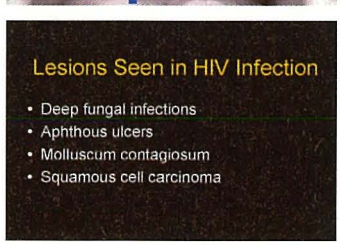


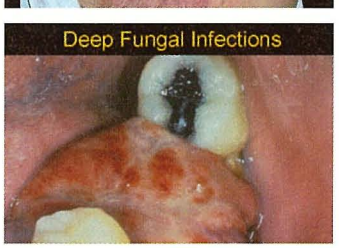


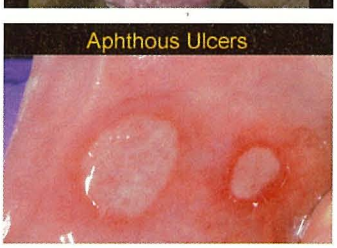


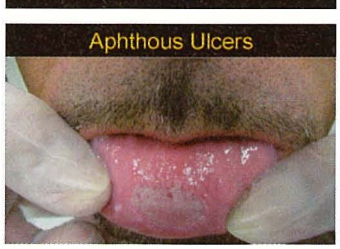


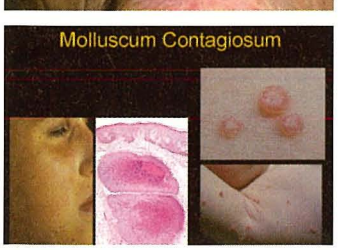


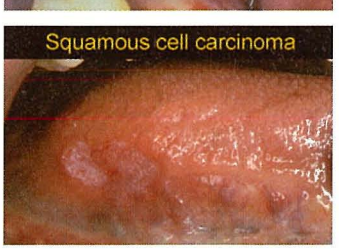


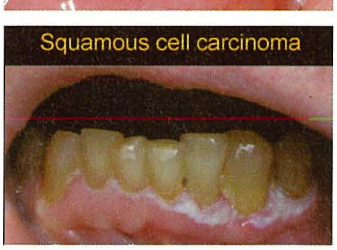


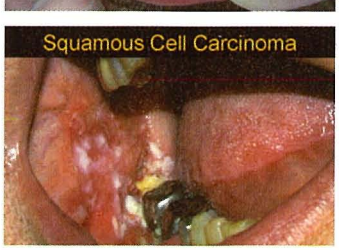






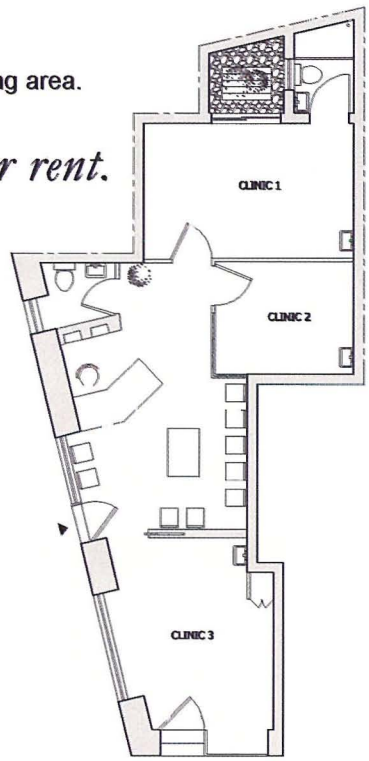






Highly finished, corner commercial property for rent in High Street, St.Venera.
The property enjoys excellent exposure and yet ample parking.
It covers an area of 75 sq.m and is ready to move into.
Presently it is partitioned into three clinics, two bathrooms and a large waiting area.

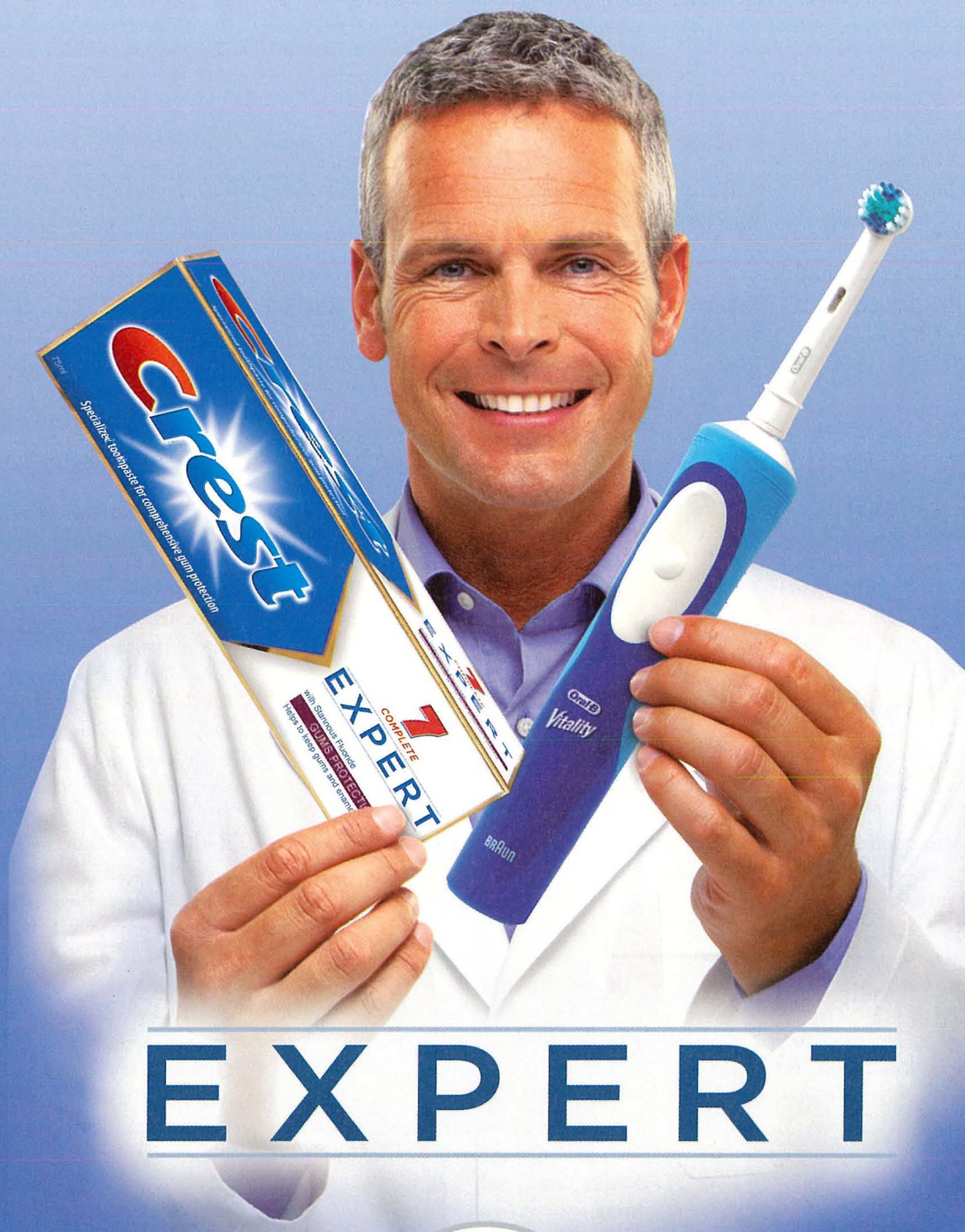
Highly finished, corner commercial property for rent.



Contact owner on m: 9944 0260 or t: 2124 7658

clinically proven to

PROTECT GUMS*



EXPERT

Crest RESEARCH CENTERS Oral-B®

Recommended by dentists

*contains stannous flouride, clinically proven to fight plaque, inhibits bacterial growth and effectively fights gum problems.

DENTAL EMERGENCIES– TREATMENT AND TRIAGE

THE DR DAN KEIR LECTURE – SUMMARIZED BY DR DAVID MUSCAT

True dental emergencies involve swelling and trauma. A toothache that requires a constant application of cold water to stop the pain. There is no colour to the iris of the eye-the patient is in real pain.

TOOTHACHE

1. ACUTE PULPALGIA

(the true toothache)
Cold water causes constriction-takes the pressure off.
Pain is due to gas in the pulp.
Opening the pulp relieves the pressure.
Give an LA-get patient out of pain. An immediate situation is now delayed.
Pulpotomy
Pulpectomy
Follow on treatment

2. ACUTE APICAL PERIODONTITIS

Patient cannot bring teeth together as it hurts too much.
Take tooth out of occlusion so that they do not touch during biting.

3. DENTAL ABSCESS

Incise and drain
Pulpectomy if possible
Extraction
Follow on treatment
Swellings are more acidic, so you do not convert so much of the anaesthetic.
Rarely do you open a tooth and obtain drainage.
Incise and drain-use lots of irrigation.
Flush out plus antibiotics.
One may get a fistula. An acute problem becomes chronic.
Do not drain through a narrow canal.
Carry out an incision and drain.
Extraction provides good drainage.
Exercise care in mental nerve area when incising.
Go high to the bone and get under the periosteum.
Make the incision high in the gingiva and tunnel down.

DENTAL TRAUMA EMERGENCIES

1. CROWN FRACTURE WITH PULP EXPOSURE

History, radiographs, pulp tests. Verify status as you need a baseline for future reference.
Pulpal treatment
Restoration
If the pulp is exposed for some time there is very little penetration into the pulp histologically so you can put a capping over it. In trauma the patient is in shock and may be harder to manage in the chair. Parents can be a problem.

2. CROWN ROOT FRACTURE

Radiographs, pulp test, stabilize coronal segment with resin, follow on treatment

3. ROOT FRACTURES

Radiographs to assess different vertical lines, pulp test, stabilize coronal segment and splint it., follow on treatment.
If the fracture is in the cervical third, splint for 3-4 weeks to allow for cemental healing.
With horizontal fractures, check for pulpal necrosis. The radiolucency will be at the fracture line. Only 5% of the time will the apical segment become necrotic-you will then have to extract.
The more apical-the less urgency.
With a middle third fracture- one week of splinting.

CONCUSSION

Tender to percussion and no mobility or displacement
2 radiographs, pulp test, stabilize for patient comfort if necessary, follow on treatment.
Calcific metamorphosis occurs in only 20-25% so one does not necessarily need to root treat.

SUBLUXATION

Loosening of tooth without displacement
Bleeding from sulcus

INTRUSIVE LUXATION

Axial displacement of the tooth into alveolus with fracture of the alveolar socket.
Radiographs, pulp test, stabilize, follow on treatment.
If over 12 years-may ankylose
Use forceps to reposition
Or use rapid orthodontic extrusion

TWO PROBLEMS

a. Inflammatory root resorption is a problem as you have a crushed periodontal ligament. Clean out and use calcium hydroxide.
b. Ankylosis -replacement root resorption
With trauma- do not wait-just reposition.

EXTRUSIVE LUXATION

Radiographs, pulp tests, reposition manually, stabilize and follow up.
Recall every year for next 5 years.
With the others one year only.

LATERAL LUXATION

This is usually accompanied by a fracture of the alveolar socket. Use a finger to reposition it with local anaesthetic. Follow up with endodontics.

AVULSION

Splint 7-10 days
Start endodontics before you remove splint
Calcium hydroxide for a minimum of 1 month.
If splint beyond 10 days there is a risk of inflammatory root resorption in the over 10-12's AS ROOT FULLY FORMED.
AN OPEN APEX CAN REVASCULARISE.
If the avulsed tooth was left out for more than 1 hour, clean the tooth and soak in fluoride solution for 5-20 minutes. Turn the tooth into an implant. The fluoride toughens up the root to slow down the resorption process and makes the dentine more resistant to replacement resorption.
Radiographs, flush out socket, reposition.(10-12 years)
Give 100mg penicilln and then 500mg BD. Or doxycycline twice daily 100mg for over 12s.
Check tetanus status. Soft diet. Do RCT in 7-10 days. It is easier to do the RCT when tooth is in the mouth.
OPEN APEX
Monitor. If tooth was out for less than 1 hour soak it in doxycycline for 5-10 minutes and replant.100mg in 20mls saline.
If tooth was out for more than one hour try to replant or leave it out
Incidence of replacement resorption.

THE ABOVE GUIDELINES WERE GLEANED FROM THE INTERNATIONAL ASSOCIATION OF DENTAL TRAUMATOLOGY

www.iadt-dentaltrauma.org
This is updated every year with research and the recommendations are changed every year accordingly.

GOLDEN STEPS TO **HEALTHY & BEAUTIFUL** SMILES FOR LIFE

It is important to brush teeth properly with a quality toothpaste to ensure proper cleaning and to prevent tooth decay.

Dentists recommend their patients to regularly brush their teeth twice per day with toothpaste containing fluoride. Crest and Oral-B Expert have this advice to give to readers:

CLEAN TEETH REGULARLY

Brush teeth thoroughly at least twice a day.

1. **OUTER TEETH AND IN BETWEEN TEETH**
   Place brush on outer surface of teeth on gum line. Use very small movements backwards and forwards on each individual tooth.
2. **OUTER TEETH AND IN BETWEEN TEETH**
   Brush inside of each tooth using the same short backwards and forwards motion.
3. **CHEWING SURFACE**
   Brush the biting and chewing surface of each tooth.
4. **INNER TEETH**
   Brush behind each front tooth top and bottom.

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V. J. Salomone Marketing Ltd.
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Original
Strong hold,
all day long

Precise tools for precise problems

In your office… and at home

New Crest and Oral-B EXPERT

The line of specialised pastes and brushes to meet patients' individual needs

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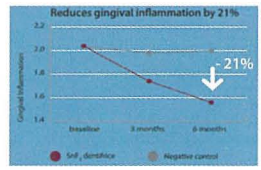
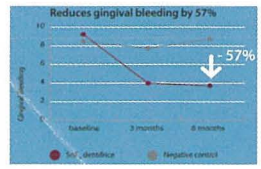
The new Crest EXPERT line of **specialised pastes** includes EXPERT Gums Protection which, for the first time ever **combines stabilised stannous fluoride and sodium hexametaphosphate.** This breakthrough technology provides **superior gum health benefits.**





Crest EXPERT pastes are also available for **Enamel Protection** and to **treat Sensitivity.**

For better Results, brush with the **Oral-B Expert specialised line of manual toothbrushes** (Expert Antibacterial, Expert Complete 7 and Expert Clean) **and power toothbrushes** (Vitality Expert, Expert Power Antibacterial and Whitening).

Oral-B®

Crest