Quest for the Perfect Restoration

By Dr. Munir Silwadi, UAE

A

1st Dental Technician Forum highlights current developments in dental labs

By Dr. Dobrina Mollova, DDS

SINGAPORE: Dental technicians are a very important part of the dental team. As an extension of IDEM’s educational offering, the first Dental Technician Forum organised by the Centre for Advanced Professional Practices in Dubai and Koelnmesse saw over 220 dental technicians from 18 countries coming to Singapore to develop the knowledge and skills they need to keep pace with the rapid advances and innovations in dental technology. An exhibition sponsored by VITA, Sirona and SHERA, among other companies, created excellent network ing opportunities and had the latest developments, systems and technologies on display. Moderated by key opinion leaders from around the globe, the two-day event saw participants sharing and discussing cutting-edge knowledge and the newest clinical approaches in prosthetics.

First Dental Technician Forum highlights current developments in dental labs

By Dr. Dobrina Mollova, DDS

SIGNATURE EVENT

CEREC Desert Fest
12-13 September 2014
The Palace Hotel, Dubai

mCME

The power of cross coding: How hygienists can support their patients’ overall body health

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cad/cam Conference Dubai grows as fast as digital dental technology

Conference is co-organized by Emirates Dental Society, Saudi Dental Society, Lebanese Dental Association and Centre For Advanced Professional Practic es - spearheaded by Dr. Dobrina Mollova, DDS, experienced provider of Continual Medical Education for the last 10 years in the Middle East and Asia.

The event enjoys accreditation from ADA CERP, DHA, HAAD and SCHS, including cutting edge presentations and an impressive lineup of lectures to be provided by opinion leading Dental Professionals such as: Prof. Dr. Dr. h.c. Georg Meyer, Germany; Dr. Andreas Kur bad, Germany; Dr. Lida Swann, USA; Lee Culp, CDT, USA; Dr. Andrea Mastrorosa Agnini, Italy; Dr. Alessandro Agnini, Italy; Prof. Alfred Hans Resch, Germany; Dr. Ulrich Wegmann, Germany; Dr. Maria Hardman, UK and Dr. Ziad Salameh DDS, MSc, PhD, Lebanon.

The two day Scientific Session is complimented by eight hands-on courses, pre- and post-conference, including: Indirect Veneers; Laser; Unconventional Management for Soft & Hard Tissue; Mastering

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Chapter 1: The Middle East region

By Dr. Munir Silwadi, UAE

DUBAI, UAE: Juneirah Beach Hotel will once again become the venue hosting the regions dental elite for the 9th CAD/CAM & Digital Dentistry International Conference on 09-10 May 2014. The much anticipated event will have 27 International Speakers, 24 Presentations, 12 Sponsors and 19 Industrial Players, bringing the latest in the field of Dentistry.

This year’s annual CAD/CAM & Digital Dentistry International Conference is co-organized by Emirates Dental Society, Saudi Dental Society, Lebanese Dental Association and Centre For Advanced Professional Practitioners – spearheaded by Dr. Dobrina Mollova, DDS, experienced provider of Continual Medical Education for the last 10 years in the Middle East and Asia. The event enjoys accreditation from ADA CERP, DHA, HAAD and SCHS, including cutting edge presentations and an impressive lineup of lectures to be provided by opinion leading Dental Professionals such as: Prof. Dr. Dr. h.c. Georg Meyer, Germany; Dr. Andreas Kurbad, Germany; Dr. Lida Swann, USA; Lee Culp, CDT, USA; Dr. Andrea Mastrorosa Agnini, Italy; Dr. Alessandro Agnini, Italy; Prof. Alfred Hans Resch, Germany; Dr. Ulrich Wegmann, Germany; Dr. Maria Hardman, UK and Dr. Ziad Salameh DDS, MSc, PhD, Lebanon.

The two day Scientific Session is complimented by eight hands-on courses, pre- and post-conference, including: Indirect Veneers; Laser; Unconventional Management for Soft & Hard Tissue; Mastering...


“New educational format presented at IDEM Singapore a success”

new educational format presented at IDEM Singapore a success

All activities, aesthetics in implantology, and CAD/CAM technologies, among others. “Things in the dental lab are changing in a rapid manner. Digital technology and workflows allow us to be more economical and creative with new materials and produce excellent aesthetics,” said Swiss master dental technician Vanik Kaufmann-Jinoian, who presented a lecture on minimally invasive restorations with CAD/CAM.

The four table clinic presentations, which ran concurrently, were among the most appealing and enjoyable sessions for all participants. Among other things, new hybrid materials and their benefits were presented. Participants were also given the opportunity to ask questions on real cases that were printed live with help of 3-D scanners and milling machines. By analysing different cases, brothers Drs Andrea Mastrorosa Agnini and Alessandro Agnini from Italy gave the audience a surprising insight into the operational techniques that they have developed over time with their increasing knowledge of new materials. With new technologies replacing traditional materials and techniques, they said that achieving good clinical results has become more systematic and time effective.

A ceramist and professional photographer, Naoki Aiba demonstrated the capture of shade views in order to communicate shade accurately. Tips for calibrating and coding a shade guide were also given. Hue and value analysis using Adobe Photoshop for shade availability of crown and bridge materials, as well as which zirconia blocks are recommended for good aesthetics.

New educational format presented at IDEM Singapore a success

vik Jacob’s presentation on the latest developments concerning 3-D printers, software, bio-compatible materials and workflow management drew a large crowd of not only participants but also industry representatives. The ensuing discussion lasted over an hour with debates sparked about the suitability of alginate impression materials for scanning, the accuracy of models milled by the inLab MC XL (Sirona Dental Systems), the shade availability of crown and bridge materials, as well as which zirconia blocks are recommended for good aesthetics.
The Palace Hotel Downtown
12-13 September 2014
Dubai, UAE
www.cappmea.com/cerecfest

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HANDS-ON COURSES

Indirect Veneers
Dr. Munir Silwadi, UAE

Face & Smile Analysis
Dr. Eduardo Mahn, Chile

Direct Veneers: The Shade Dilema
Dr. Eduardo Mahn, Chile

Veneers/ Crowns
The Challenge in Smile Design
Dr. Eduardo Mahn, Chile

www.cappmea.com/aesthetic2014
World oral health report: Almost 100 per cent of adults suffer from dental caries

By Dental Tribune International

LONDON, UK: In celebration of World Oral Health Day, representatives of the FDI World Dental Federation presented the latest findings on oral health on 20 March at a press conference held in collaboration with the British Dental Association in London. The report identifies the main obstacles to achieving universal oral health and includes recommendations to improve oral health worldwide.

Among other aspects, the report, titled “Oral health worldwide: A report by FDI World Dental Federation”, highlights that nearly 100 per cent of adults and between 60 and 90 per cent of children worldwide have dental caries, which results in millions of lost school and work hours. For instance, in the US, an estimated 2.4 million days of work and 1.6 million days of school are missed owing to oral disease. In the Philippines, toothache is the primary reason for school absenteeism. The FDI stated that about 97 per cent of Philippine 6-year-olds have dental caries.

In addition, the report states that only 60 per cent of the world’s population have access to oral care, creating enormous disparities between different populations. According to the FDI, people of a lower socio-economic status visit the dentist less often and have fewer fillings, more missing teeth, higher tobacco consumption, higher rates of caries and untreated decay, and higher rates of periodontitis compared with those of a high socio-economic status.

In order to increase access to oral care, the training of the oral health workforce needs to be strengthened and expanded to improve the quality of and increase the number of oral health professionals. Moreover, emphasis needs to be put on the equal geographical distribution of oral health personnel, especially within developing countries, where the dentist-to-population ratio is approximately 1:50,000 compared with about 1:2,000 in most industrialised countries.

The FDI further highlighted that a solely curative approach to tackling the burden of oral health is neither realistic nor sustainable. The organisation asserts that the prevention of oral diseases and promotion of oral health must be at the core of national policies and programmes. In this respect, global and national surveillance should be strengthened to identify risk factors and oral health needs as a basis for developing appropriate approaches and measures, the FDI stated.

The event also saw the launch of The Tooth Thief, an illustrated book for children that includes oral health tips. The book emphasises the importance of good oral health to children to instil good oral care habits from a young age. The foreword was written by Yaya Touré, Manchester City Football Club player and three times African Footballer of the Year, who was this year’s World Oral Health Day ambassador.

The book is available from the Apple iBooks Store and Amazon, and can be downloaded from the World Oral Health Day website, www.worldoralhealthday.com. The complete white paper can be accessed free on the website as well.

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Passive micro-volume management of sodium hypochlorite in endodontic treatment

mCME articles in Dental Tribune have been approved by:
HAAAD as having educational content for 2 CME Credit Hours
DHA awarded this program for 2 CPD Credit Points

By Les Kalman, B.Sc (Hon), DDS

The passive utilization and micro-volume management of sodium hypochlorite as an endodontic irrigant has been presented with a laboratory demonstration and several clinical cases. By limiting the extrusion of sodium hypochlorite, the irrigant is protected from being expelled from the canal, which diminishes its ability to adequately disinfect and remove organic material. This approach results in a significant reduction of irrigant, thereby minimizing the patient's exposure to sodium hypochlorite.

Introduction

Endodontic treatment addresses the removal of the tooth's internal pulp and microorganisms, primarily due to infection and necrosis. Periapical pathology and propagation has been established, the patient has the option of maintaining the tooth's form and function while the vitality becomes lost. Current endodontic treatment consists of utilizing rotary files to remove the pulpal tissue and shape the internal dentin chamber of the tooth. Chemicals, in the form of gels and liquids, are then utilized to disinfect the canal(s) and eliminate bacteria. The chemicals are then dried and the canal space filled with either gutta-percha or resin to create a hermetic seal.

Chlorhexidine gluconate (CHX) is an uncommonly used irrigant with several desirable properties. It provides antimicrobial activity against certain aerobic and anaerobic bacteria, exhibits no significant changes in bacterial resistance in the oral microenvironment and has no injurious effect to the skin or mucous. In fact, CHX has a role as an oral rinse at the 0.12 percent concentration. Sodium hypochlorite (NaOCl) still remains the most commonly used irrigant due to its availability, cost and effectiveness. Sodium hypochlorite is effective against broad-spectrum bacteria and has the ability to dis- solve both vital and necrotic tissue. However, this irrigant is equally damaging to the patient and has a history of injurious effects. Typically the NaOCl is delivered into the canal space with a syringe dose of 2-10 ml that is expelled under pressure. The ability of NaOCl to escape either through poorly sealed isolation or other means can cause serious injury to the patient.

Injury from NaOCl is rare established in the literature and has been attributed to three main errors: poor handling, injection beyond the apical foramen and allergy. Poor handling injury can result in operator and/or patient injury to the eye and/or skin. Injection beyond the apical foramen can result in the following:

• immediate and severe pain
• edema to adjacent tissue
• edema to the lip, infraorbital region and side of face
• intense bleeding from within the canal space
• skin and mucosa bleeding
• intestinal bleeding
• parasthesia
• secondary infection.

Allergy from NaOCl is rare but has been reported and may result in severe pain, a burning sensation, edema and transient parasthesia.

Methodology

Although there is no universally accepted irrigation protocol regarding endodontic treatment, it is the duty of clinicians to apply evidence-based dentistry within clinical parameters to provide their patients with the highest standard of care with minimal morbidity. The use of NaOCl has numerous beneficial factors that maximize treatment success; however, it is the application of the liquid that can cause injury.

Micro-volume management of NaOCl has been proposed. The concept is based on the premise that endodontic instruments have irregular surfaces, crucial for denital preparation, and that liquids exhibit surface tension characteristics. By placing an instrument into a suitable container, the NaOCl will be carried within the surface tension of the instrument (Figs. 1, 2). As the operator inserts the instrument into the canal (Fig. 5), the NaOCl is carried with it. Upon instrument movement, the NaOCl is released into the canal space (Fig. 4).

The operator has control of the minimized liquid while benefitting from its effectiveness. The micro-volume management of sodium hypochlorite has been applied to numerous clinical cases. Post-operative obturation radiographs of completed clinical cases have been presented (Figs. 5-9).

Discussion

Micro-volume management of NaOCl has been suggested as a delivery modality to maximize its bactericidal effects yet minimize its injurious effects. Surface tension fluid mechanics and permeability suggests that the NaOCl can be carried within the surface irregularities of endodontic instrumentation and deposited into the canal space and percolate within the complex network of the canal. The passive management of the irrigant in micro-volume would greatly reduce complications due to poor handling. CHX has...
The application of micro-volume management of NaOCl suggests that the canal space can be effectively cleaned in a conservative manner. Application of this principle has been applied to clinical cases with little to no post-endodontic sensitivity. Obturation has been completed with Thermseal and Thermafil (DENT-SPL). Even though there is evidence of sealer extrusion, the absence of post-operative symptoms and pathology suggests adequate volume for sufficient disinfection.

Further laboratory studies are required to understand permeability, fluid mechanics and multiphase fluid flow through porous media and their relation to the micro-management of NaOCl. Additional clinical investigations should be implemented to assess and validate the efficiency and efficacy of micro-volume management of sodium hypochlorite on endodontic therapy.

Conclusions

Introduction of lubricants and irrigants into the canal complex is crucial for endodontic success. The action of fluids in the canal complex must be understood within the context of permeability, fluid mechan- ics and multiphase fluid flow through porous media.

NaOCl has several advantages for its role as an endodontic irrigant, but its use must be exercised with caution in order to prevent injury.

"NaOCl has several advantages for its role as an endodontic irrigant, but its use must be exercised with caution in order to prevent injury."

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Les Kalman, B.Sc (Hon), DDS, graduated from the University of Western Ontario with a doctor of dental surgery degree in 1999. He then completed a GPR at the London Health Sciences Centre. He has been involved in general dentistry within private practice since 2000.

He has served as the chief of dentistry at the Stratford-Middlesex General hospital. In 2011, he transitioned to full-time academics as an assistant professor at the Schulich School of Medicine and Denistry. Kalman’s research focuses on clinical innovations, including the Virtual Facebow app. Kalman is also the director of the Dental Outreach Community Services (DOCS) program, which provides free dentistry within the community. Kalman has authored articles ranging from pediatric impression to immediate implant surgery in both Canadian and American journals.

He has been a product evaluator for several companies, including GC America and Clinician’s Choice. Kalman is the co-owner of Research Driven, a company that deals with intellectual property development. Kalman is a member of the American Society for Forensic Odontology, Interna

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For Interaction with the Writers Find the Contact Details at the End of Each Article.

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The power of cross coding: How hygienists can support their patients’ overall body health

By Marianne Harper

Have you lost the excitement? Are you content with what you might now perceive as the same-old, same-old every day? Day after day you may be performing hygiene procedures over and over again, all the while knowing you are helping your patients but perhaps you simply don’t feel as though you are truly making a significant difference in their overall health. If you feel that level of frustration, or even if you don’t, but you are interested in advancing your career, then read on to discover some ways in which you can make a significant difference in the health of your patients.

As you are aware, dentistry is becoming recognized as a medical discipline. We in the dental field are in a unique position to support our patients’ overall body health. Our patients who maintain their regular recare schedules are quite probably seen by us more frequently than they are seen by their primary care providers. “Around 59 percent of adults see their physicians in a year while 64 percent see their dentists, which means we see 25 percent more patients than they do.”

Hygienists can be key players in this opportunity. By thoroughly questioning their new patients and providing and reviewing medical history forms that are updated with the most current medical questions, hygienists can begin an evaluation of their patients’ medical state. In addition, our established patients may have had a change in their medical history since their last appointment, so a recare update form is an efficient way to inquire about their health. If your practice is not familiar with recare update forms, please check your software to obtain a copy. Again, thorough questioning of all new and established patients is an essential component to getting the full picture of your patients’ health.

What is discovered from these questions can be a strong determining factor in how each patient is handled. Patient questioning should always be followed by dental exams, X-rays, blood pressure checks and clinical observations. For those patients who may have a systemic disorder, your practice should become proactive by referring the patient back to his or her primary care provider.

However, because dentistry has evolved over the last decade, there are more ways that the dental practice can help make these determinations. With the frequency of patients’ visits and the availability of numerous cutting edge diagnostic tools, we have the unique opportunity to administer different types of disease testing that, in the past, were performed only by medical practices.

If you are unfamiliar with the types of medical testing that are available for dental practices to perform, then the following information can make a big difference in the quality of your practice’s treatment, and it may help to make a significant change in how you perceive your career.

First of all, periodontal diseases interact with many other diseases, fungus, yeast or a cyst; so bacteriologic tests should be performed. If periodontal infections are apparent, tests that can be performed in a dental practice:

- Oral HPV testing
- Diabetes testing with a glucometer – finger stick or blood sample taken from a peripheral pocket
- Oral cancer screening (e.g. ViziLite)
- HIV testing
- Screening for cardiovascular disease (e.g. HeartScore System)
- Saliva biomarker test – measures three specific biomarkers that play a role in cancer development in the oral cavity

As you can see, these tests cover many possible systemic conditions. Your practice will have to determine which staff members are allowed to administer these tests, because your state makes regulations controlling this. Hygienists may be allowed and, if so, this may make a difference in your career. Even if hygienists are not allowed per your state’s regulations, your practice can add these tests to the practice’s procedure mix will be invaluable to the practice. In addition, hygienists need to realize the importance of their observations and questioning of the patients in helping to move these patients to better overall health and a new slant on the same-old, same-old.

Power of cross coding

There is, however, another area in which hygienists can make a significant difference in their practices. Dental-medical cross

Fig. 1: Photocopy of example CMS-1500 health insurance claim for treatment of sleep apnea, considered a medically necessary dental procedure that qualifies for coverage through health insurance. Many other dental procedures and tests also might qualify. But you need to know the diagnosis and procedure codes — and other nuances of the process.
Coding is a cutting edge insurance system whereby dental practices can file a patient’s medically necessary dental procedures with their medical plans. Implementing cross coding creates greater case acceptance resulting in increased patient affordability and practice profitability. Hygienists can play a key role in the implementation of cross coding. Hygienists can be the communicators for cross coding in their practices by alerting the practice of patients whom they believe are medically compromised. Such patients are excellent candidates for cross-coded claims.

As an example, hygienists can inquire about conditions that might indicate that a patient has sleep apnea (Fig. 1). For those practices that treat sleep apnea, the practice would then need to refer the patient for a sleep study before commencing treatment. If the practice does not treat sleep apnea, this referral would be the last hurdle in the process of treatment by another provider.

Hygienists can also be the champions for cross coding by encouraging their practices to implement a cross-coding system. In most practices, the business office staff will need to have been modified by a specific circumstance. As you can see, cross coding is not an easy system to implement. The answer to easing the difficulty with cross coding is to take a good course on the topic. You also can check out my website, www.artofpracticemanagement.com, to see the different tools available to help dental practices implement cross coding.

As mentioned previously, the patient’s benefit from cross coding is that medically necessary dental procedure can be made more affordable. It is possible to file the tests already mentioned with a patient’s medical insurance plan. There are diagnosis and procedure codes that apply to these tests, but those are too involved for the scope of this article to provide all of the codes needed. There is no guarantee that these tests would be covered by the plan. According to the Centers for Medicare and Medicaid Services, “the existence of a code does not, of itself, determine coverage or noncoverage.” It is certainly worth a phone call to determine coverage. I always advise practices that cross code dental procedures with their medical insurance carriers will begin to see the necessity for including these types of procedures in their plans.

The full scope of cross coding is much more extensive than just tests. Dental practices should be cross coding for the following:

- Trauma procedures
- Oral surgical procedures
- TMD procedures
- Sleep apnea procedures
- Medically necessary endodontic procedures
- Medically necessary implant and periodontal procedures
- Exams, radiographs and diagnostic procedures for any medically necessary dental procedure

Between implementing disease testing and cross coding, a hygienist will significantly make positive changes to his or her career. These hygienists will not only help patients obtain optimal health, but they can also help make procedures more affordable. Patients will be able to see their dental practice truly cares about their health and we can have more confidence in the practice. This is a true win-win situation. The dental practices will value the contributions of these hygienists, and hygienists will rarely face each day with that “same-old, same-old” feeling.

The insurance company and the employer, so dental practices have little power to make any plan changes. However, the more that complaints are issued, the more likely that medical insurance carriers will begin to see the necessity for including these types of procedures in their plans.

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4. Access to the subscription – 1 year
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Clinical Tips: Demi™ Ultra and C.U.R.E™ Technology: (Curing Uniformity & Reduced Energy) what this brings versus competition?

By Kerr

C.U.R.E.™ Technology
1. COLLIMATION: collimated light is light with rays are parallel, and therefore will spread slowly as it propagates. The word is related to «collinear» and implies light that does not disperse with distance. A better collimation translates in more curing power and a less sensitivity to tip positioning.

2. DEPTH OF CURE: according to the JADA, %57 of all composite restorations are insufficiently cured [Fan et al, 2002]. Demi Ultra, compared to other lights, guarantees, in addition to an optimal curing uniformity, the best depth of cure. C.U.R.E.™ Technology

1. TIP TEMPERATURE: an increase of 5.5°C can cause irreversible damages to pulp.

Thanks to its proprietary C.U.R.E technology, Demi Ultra is able to maintain low temperatures avoiding any tissue damage.

Universal curing? Seems to be a compromise.

Light and quality of cure.

The photopolymerization process of dimethacrylate-based dental resins is a reaction triggered by free radicals, which are generated by irradiation of a light-sensitive initiator and open double bond of methacrylate groups (C=C), generating a chain reaction.

The depth of cure can settle by playing on light intensity (or irradiance), wavelength and concentration and/or type of light initiators.

Curing Lights with violet LED to cure alternative photoinitiators provide non-uniform beam irradiance that leads to non-uniform cure. The power is distributed inefficiently and additional energy is needed to cure in depth. This unnecessary energy increases the heat and the risk of pulpal damages.

A non-uniform beam also penalizes the irradiance when increasing the tip distance as can be seen in the graph.

In dental composites, the most commonly used photoinitiator system is a combination of camphorquinone and tertiary amines (CQ/Amine). Other materials are blends of CQ and other photoinitiators.

DON’T CHANGE BATTERIES, CHANGE CURING LIGHTS!

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Demi Ultra is a quantum leap in curing light technology!

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Item nr 35664 Contains: 1 x handpiece, 1 x 8 mm light attachment, 1 x charging dock with radiometer, 1 x power supply, 1 x protective light shield, 1 x hardness disk kit, 1 x -5 pack disposable barrier bag, 1 x IFU

Accessories
Item nr 35665 Demi Ultra LED Light Attachment 8mm
Item nr 35666 Demi Ultra Charging dock with built-in radiometer
Item nr 35667 Demi Ultra Handpiece
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Item nr 21042 Optics Maintenance Kit
Item nr PEDEMULTRA100 -Demi Ultra Barrier Bag (pack of 100)
Moreover recent works reports that single diode blue LED light achieve similar degrees of polymerization than broadband (multiple diode) LED and halogen lights, just increasing the curing time when curing clear and white composite shades.

Light guide tip positioning!

The adequate positioning of the light guide tip/attachment can significantly affect the energy received by the RBC, and thereby the quality of its polymerization.

The light should be stabilized during the irradiation procedure.

As the irradiance decreases with the increase of the distance between tip and restoration, the position of the light guide should be perpendicular to the tooth and positioned on the proximiy of the tooth surface being restored.

Intensity and depth of cure decreases as the position of the light moves from the perpendicular.

It will be necessary to increase the cure time and/or cure from multiple directions if optimum positioning cannot be obtained.

By European University College

The European University College (EUC), held its official graduation ceremony on February 22nd at the Fairmont the Palm Jumeirah in Dubai.

45 dental specialists were graduated during the event and earned their Master Degree certificates in Orthodontics and Pediatric Dentistry, Diploma in Advanced Education in General Dentistry, and High Diploma in Oral Implantology. A total of 55 guests of honor attended the ceremony including: Dr. Aisha Sultan, President of the Emirates Dental Association and Head of the Dental Department at the UAE Ministry of Health, Dr. Amer Shafik, Managing Director of the Education division of DHCC, Dr. Leila Al Habashi, Head of Pediatric Dentistry Unit at the Dubai Health Authority, Dr. Khadija Al Maqboul, Head of Pediatric Dentistry Unit at the Abu Dhabi Health Authority, and Dr. Hasna Al Saied, Head of the Orthodontics Unit at the Dubai Health Authority.

The EUC is the first postgraduate dental institution to offer international training programs in the UAE and MENA Region. EUC’s international and “Western-trained” faculty come from reputed Universities and Research Centers based in the USA, Sweden, England, France, and the UAE. Staff selection criteria is based upon their prowess as teachers, clinicians, and researchers and are all well known worldwide.

Since the launch of the EUC, the university has run an extensive range of postgraduate programs across a wide range of dental specialties. These high quality educational programs include the latest research and use innovative approaches to learning. There are currently international residents from Asia, Europe and the Middle East. The students have to meet rigorous theoretical, clinical and research requirements in order to meet the international educational requirements and patient care standards.

Professor Donald Ferguson, Dean of the EUC, expressed: “I am very proud and happy to see young professionals achieve the goals of academic and clinical education, and successfully present and defend a Master degree thesis, and assemble records that thoughtfully explain the forensics of patient care. They behave ethically, act responsibly and eye the world with standards of excellence.”

The EUC has been instrumental in enhancing the clinical capacity of its graduates. The university offers state-of-the-art services, latest trends and treatment philosophies, and uniquely handles highly complicated dental cases within the UAE.

The European University College hosts its official graduation ceremony
Revolutionary aligner appliance expanding in the Middle East

By Inman Aligner

The Inman Aligner is a highly effective and unique evolution of the traditional spring retainer that moves upper and lower anterior teeth predictably, safely and quickly. This makes it a revolutionary appliance, often described as the “missing-link” between cosmetic dentistry and orthodontics. With a proven track record throughout the UK the Inman Aligner is now becoming highly recognized in the Middle East.

One appliance

What is unique with the Inman Aligner is that it can be used to align teeth either as a stand-alone treatment or before aesthetic or restorative treatment. In contrary to other treatments only one appliance will be used. The Inman uses super-elastic Nickel-Titanium open coil springs to move upper and lower anterior teeth with light but consistent forces, enabling correction of anterior crowding, rotations and some types of spacing.

Fast and predictable result

Most cases are completed within 6 - 16 weeks depending on the complexity of the case. The system is removable and very fast, and patients who were previously put off by brackets and months of treatment can now achieve alignment in 6 to 16 weeks, with a brace that can be worn for as little as 16 hours a day. As an Inman Aligner Certified dentist you will understand how to provide a realistic guide of what to expect for each case. For suitable cases, the Inman Aligner is almost always much faster than alternative orthodontic techniques. Treatment is backed up with a full and comprehensive free support forum with many trainers helping to treat planning cases safely and predictably.

The lecturer - Tif Qureshi

The first dentist in the world to use the Inman Aligner as a major tool for cosmetic dentistry is Dr Tif Qureshi. Dr Qureshi qualified from Kings College London in 1992 and he is the Past President of the British Academy of Cosmetic Dentistry. Dr Qureshi has a special interest in simple orthodontic treatments using removable appliances and was the first dentist in the UK to pioneer the Inman Aligner. To this date Dr Qureshi has completed over 1000 cases using Aligners as a stand alone treatment and to align teeth before cosmetic dentistry and functional dentistry. At the coming APDC Exhibition in Dubai the 17-19th of June Dr Qureshi will be having a lecture on the subject “Simple moves upper and lower anterior teeth with light but consistent forces, enabling correction of anterior crowding, rotations and some types of spacing. Fast and predictable result: Most cases are completed within 6 - 16 weeks depending on the complexity of the case. The system is removable and very fast, and patients who were previously put off by brackets and months of treatment can now achieve alignment in 6 to 16 weeks, with a brace that can be worn for as little as 16 hours a day. As an Inman Aligner Certified dentist you will understand how to provide a realistic guide of what to expect for each case. For suitable cases, the Inman Aligner is almost always much faster than alternative orthodontic techniques. Treatment is backed up with a full and comprehensive free support forum with many trainers helping to treat planning cases safely and predictably. The lecturer - Tif Qureshi: The first dentist in the world to use the Inman Aligner as a major tool for cosmetic dentistry is Dr Tif Qureshi. Dr Qureshi qualified from Kings College London in 1992 and he is the Past President of the British Academy of Cosmetic Dentistry. Dr Qureshi has a special interest in simple orthodontic treatments using removable appliances and was the first dentist in the UK to pioneer the Inman Aligner. To this date Dr Qureshi has completed over 1000 cases using Aligners as a stand alone treatment and to align teeth before cosmetic dentistry and functional dentistry. At the coming APDC Exhibition in Dubai the 17-19th of June Dr Qureshi will be having a lecture on the subject “Simple...
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One step further with CAD/CAM

By Dr Steven Soo, Singapore

CAD/CAM methods for conventional dental and implant-borne prostheses have gained popularity for a variety of reasons. Despite many advantages in terms of cost and convenience, the uptake of this relatively new technology is slow, hinting at a reluctance to try something new.

Many, if not most, clinicians still choose to have fixed implant-borne multi-unit prostheses fabricated by traditional methods of casting and veneering precious metal alloys. However, the associated high technical and material costs may be prohibitive to the group of patients who need this treatment modality the most. To this end, more cost-effective alloys, including base metal alloys, have been cast and veneered with a variety of tooth-coloured materials with good success. CAD/CAM takes this one step further. In fact, materials such as zirconia, which has revolutionised dental prostheses, would not be in use were it not for CAD/CAM.

There has been much discussion around the problem of achieving passivity of fit, the lack of which, it has been postulated, can contribute to mechanical and biological complications. The multiple steps and materials used in impression taking, casting a working model, producing a wax pattern, casting in metal alloy then veneering in tooth-coloured material all lead to a certain degree of misfit.

CAD/CAM can help to address this common problem. The use of digital dentistry is more common than clinicians might think, as the laboratory processes involved have already been widely implemented and dental technicians can take the credit for driving the use of the technology forwards. The next step is to adopt digital technology to replace some of the clinical steps in fabricating a prosthesis, namely the impression stage, which leads to production of a working cast.

These steps can introduce cumulative inaccuracies, as well as consume a variety of materials that are then discarded. In addition, there are time-savings to be made, perhaps not in the initial stages of learning and integrating new technology, but, once familiar with the systems involved, all will benefit from the improved and efficient workflow.

My presentation at the Dental Tribune Study Club Symposium highlighted some of the advantages and disadvantages of CAD/CAM. My goal was to enable clinicians to see how it might become more widely accepted in their daily practice and remove some of their reservations. The next generation of dentists will hopefully come to view traditional methods of manufacturing dental prostheses in the same way as we now view fixed partial dentures as a way to replace missing teeth before implants. Having received his dental degree from the University of Liverpool in the UK, Dr Steven Soo now works as a dental specialist in prosthodontics at Specialist Dental Group in Singapore. During IDEM, he presented a lecture on the benefits of CAD/CAM technology for dental implant and restorative procedures at the Dental Tribune Study Club Symposium on Level 6 at Suntec City.

Strauman abutments now available to 3Shape software users

By Dental Tribune International

OPENHAGEN, Denmark/Basel, Switzerland: Global implant manufacturer Straumann and CAD/CAM software provider 3Shape have been working together to integrate Straumann CARES libraries into 3Shape's software. Yesterday, the new software function was made available to 3Shape software users, enabling them to design and order customised zirconia or titanium abutments with Straumann original implant connections.

Using the new software capabilities, dental technicians who use the 3Shape Dental System software can design abutments and a range of customised prosthetics, including cobalt-chromium alloy, zirconium dioxide, and various full contour materials. These can be ordered with an original Straumann connection.

"Many laboratories are steadfast users of both the 3Shape Dental System and Straumann abutments. Now, they can design highly aesthetic and functional customised abutments and send them directly for manufacturing at Straumann—thereby introducing a wider range of choices for dentists and their patients," explained Flemming Thorup, President and CEO of 3Shape.

"In addition, 3Shape customers are now able to connect with Straumann dentists and, thus expand their business opportunities," Frank Hemm, Executive Vice-President of Customer Solutions and Education at Straumann, added.

3Shape users who wish to benefit from this opportunity may contact Straumann for information on obtaining the libraries. Availability will depend on the specific system configurations, the companies stated.
event, this year we are involving esteemed speakers as well as fellow dental dealers who are eager to display the latest products in the dental field for 2014.

What are the challenges facing the dental lab order today?

OPDL is an established order due to the solidarity of my fellow peers and colleagues. It’s main challenge is to involve securing the rights of our colleagues and perform strict laws for those who would try to practice our profession illegally.

What are your recommendations to the fresh dental lab graduates?

I would like to tell all fresh graduates to enrol immediately after their graduation in our dental laboratory order to ensure a better future and uphold the right to practice as dental laboratory specialist legally and together we will be more powerful through solidarity, I would advise them as well to be honest individuals in their community.

President Sakr, truly an honor to interview you here today, would you like to share more topics to the Dental Tribune readers in the MEA region?

I would like to thank you for giving me the opportunity to share with your readers all the discussed topics and keep reading the Dental Tribune.
Predictability in Implant Planning with 3D Imaging - Clinical Case Report

By Norberto Velázquez, DDS

Greenville, NC, Dr. Velázquez graduated from dental school in 2002 and attended a general practice residency (GPR) in Oklahoma City, Oklahoma from June of 2002 until June 2003. Shortly after finishing the GPR residency, Dr. Velázquez moved to Greenville, NC and worked in Kinston for the J.H. Rose Dental Clinic as the Dental Director for four years. Dr. Velázquez has advanced education in implantology and enjoys working on cosmetic procedures, oral surgery, crown and bridge (prosthetics), implants, and dentures. He just finished another intensive implant course.

The case presented represents a typical instance where an implant is required in the area of the first or second premolar. A three-dimensional scan is used to accurately locate the exact position of important anatomical structures or landmarks. The 3D scan and software allow moving, slicing, and viewing the anatomy from any direction. A critical step is the ability to mark the position of the nerve (marked in red in the images below) — this becomes especially helpful when virtual implants are used.

A first look might indicate that the implant on this image (1) could interfere with the inferior alveolar nerve and mental foramen. This is not the case. This image (2) is a distal-occlusal view of the 3D scan showing appropriate clearance between the implant, inferior nerve, and the mental foramen — as indicated by the mint color. In addition, the Invivo software provides a visual indication of such clearance by coloring green the implant model in the lower left of the screen.

The arch section of the software shows axial, sagittal, and coronal slices. Multiple views (3) provide a more comprehensive understanding of the anatomical features of the patient. After surgery, a follow up with a post-operative image (4), either 2D or 3D, can be done based on case necessity.

Dr. Velázquez’s Conclusion

The GXDP-700 system offers several functionalities that benefit my patients. The advantage of the extra dimension to both implant patients for me, and orthodontic patients for my wife, is incalculable. This machine has become a basic part of my daily practice.

With the scan, I can inform patients of my implant treatment plan, and show them how the surgery will proceed. They gain confidence in my knowledge of their dental anatomy even before surgery begins. Before 3D, a surprise could pop up during surgery. Then, the patient would be disappointed that he or she was not going to get an implant immediately, but needed an additional procedure first, such as grafting. My patients understand that I have implemented this technology for the sake of their dental health.

For a dentist, the opportunity for improved diagnostic capabilities is always a benefit to the patient. While they are not always directly aware of all the advantages, the information that 1 obtain from these pans and scans is beneficial for their care. I witness these benefits every day, in increased patient communication and more successful treatment outcomes.

Understanding the Advantages of 3D Dental Imaging

By KaVo

With the advent of any new technology, it’s important for dental professionals to consider not only cost and risks, but also the benefits of switching. In the case of 3D dental imaging, the advantages are clear, granting practitioners and patients alike a better clinical experience.

A dental 3D scan provides clinicians to view dental anatomy from different angles. A 3D scan can help gain a better view of bone structures, such as adjacent root positions, in order to locate canals and root fractures, as well as provide the ability to more accurately measure anatomical structures. These scans also support a wide range of diagnosis and treatment planning, making them extremely flexible. Further, they increase the possibility of treatment success, granting practitioners greater predictability and confidence in preparing for extractions, performing root evaluations, and placing implants.

3D dental imaging also delivers the power of repeatability, providing fast and accurate imaging that’s consistent—and thus, reliable. Using a 3D dental scanner equips dental professionals with a comprehensive view, letting them see specific conditions in the region of interest to determine whether a treatment is necessary. Because details show up so clearly, patients can be more confident in a dentist’s decision. In addition, the use of dental imaging technology often creates a more comfortable and engaging dental visit for the patient.

The Gendex GXDP-700 Series features the pinnacle of 3D dental imaging technology, allowing dentists to plan for more predictable treatment outcomes by taking advantage of powerful 3D software analysis and simulation tools. Plus, dental practitioners can control the exposure and the size of scanned areas using the system’s flexible field-of-view (FOV) to meet individual and clinical needs. As a practice grows to offer additional imaging capabilities, the GXDP-700 imaging solution can be upgraded within your own timeline and budget.

X-ray imaging, including dental 3D (CBCT), provides a fast, non-invasive way of answering a number of clinical questions. Dental CBCT images provide three-dimensional (3D) information, rather than the two-dimensional (2D) information provided by a conventional X-ray image. This may help with the diagnosis, treatment planning and evaluation of certain conditions. Dental CBCT should be performed only when necessary to provide clinical information that cannot be provided using other imaging modalities. Concerns about radiation exposure are greater for younger patients because they are more sensitive to radiation.

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For more information about the use, benefits, and risks of CBCT, visit: www.kavo.com/MEA
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For more information about the use, benefits, and risks of CBCT, visit: www.kavo.com/MEA
Or email us: info.mea@kavo.com
Restoration is becoming Easier and Affordable for all Dental Practices

By Norberto Velázquez, DDS

O ur Solutions is the title name for the new CAD/CAM system from Carestream Dental that was launched in the Middle East at AEEDC last February. The system consists of an intra-oral scanner, CBCT impression scanning system, restoration design software, and chair side milling machine. All of the parts are separate creating an open Web-based system that enables dentists to use the complete product family or choose any of the products as a stand-alone unit. The benefit that this offers is an easy sharing of restoration cases between dentists and laboratories.

The important thing about any system is not having to be tied into using every individual product, software or consumable that is incorporated in that system. Although this may be beneficial if you feel there is security in working with one single supplier you may on the other hand prefer the features of another supplier's product that you want to use instead of the one that is provided.

At Carestream Dental we have seen many Dentists choose the CS 5500 Scanner to capture images for their digital restoration work. They have preferred the elegant slim and easy to use design of the scanner which makes it simpler and more reliable to capture detailed scans of the patient's teeth that can then be e-mailed to their laboratory for completion.

The CS 5500 scans patients' teeth directly to acquire true colour, 2D and 3D images. With an average precision of 50 μm, the CS 5500 scans to a depth ranging from -2 to +43 mm and offers high-angulation scanning of up to 45 degrees. It features a light guidance system that enables dentists to use the complete product family or choose any of the products as a stand-alone unit. The benefit that this offers is an easy sharing of restoration cases between dentists and laboratories.

Here is what Leading dentists have had to say about their experiences using the CS 5500:

Dr. Carsten Stockleben Hannover, Germany http://www.stockleben.com/

"With the CS 5500, it's easy. You just say 'I want my scanner,' put it in, and start. It's small, it's light, it can be connected to any computer via USB, so I don't have to have a big trolley with a computer and a monitor that have to be driven around the operatories. You don't need powder, you don't have to mess around in the patient's mouth, keep it dry, put the powder in, and so on. It makes it much easier. It's got a guiding system and that allows me to concentrate and to take the impression or the scan in the mouth, and that's fantastic."

Dr. Dan DeRose North River Dental Ellenton, FL, USA www.northriverdental.com

"By using the CS 5500 intraoral scanner, we eliminate many of the problems that come with using impression materials and pouring casts—all you have to do is scan the tooth and send the data to your restoration software or the lab. But probably the most important feature of the whole scanner is something so simple—that it's not connected to a trolley. It's not connected to a tower or a work-station. You're going to be able to take this light, ergonomic scanner and plug it right into your workstation in the opera- tory, quickly and easily."

Digital restoration and all the benefits it can bring to everyday dentistry, is now available for all dentists to use. The next step is to learn about the technology and to visit the exhibitions and congresses where you can see what is on offer. Carestream Dental will be exhibiting in Dubai at:

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• CAD/CAM & Digital Dentist- ry International Conference on 9-10 May 2014
• Dental, Facial & Cosmetic International Conference on 14–15 November 2014
• AEEDC 17-19 February 2015

But if you need to talk, to someone now then please do not hes- itate to contact me on: Ernesto.jaconelli@carestream.com
**Isolite wins 2014 Scandefa Award in Copenhagen**

*By Dental Tribune International*

**OPENHAGEN, Denmark:** Reporting on this year's Scandefa, the organisers announced that over 10,000 visitors and about 200 exhibitors mainly from Denmark, Sweden and Germany attended the Scandinavian dental trade show from 2 to 5 April. At the opening of the show, dental equipment provider Unident was given the 2014 Scandefa Award for the Isolite oral isolation system.

Isolite is a single-use isolation mouthpiece that retracts and protects the patient's cheeks and tongue, increasing patient safety. It obstructs the entrance to the throat, which not only adds to patient comfort, but also allows the dentist to monitor the patient's airway.

"Using Isolite, practitioners can achieve optimal control of the oral environment and make the treatment more comfortable for the patient at the same time," Marinette Larsson, Chief Marketing Officer at Unident, told Dental Tribune ONLINE in Copenhagen.

The mouthpiece, which is available in five different sizes, was developed by Isolite Systems, a US medical device manufacturer that specialises in dentistry. Unident is the exclusive supplier of the system in Scandinavia. Founded in 1992, the company today has offices in Stockholm in Sweden, in Horten in Norway, and Copenhagen in Denmark.

The next Scandefa will be held from 15 to 17 April 2015. The annual Scandefa Award recognises the most innovative dental products on the Danish market.
“The edentulous patient is an amputee, an oral invalid, to whom we should pay total respect and rehabilitation ambitions”. Per-Ingvar Brånemark

By Safa Tahmasebi DDS MS

As a professor of surgery and research, P-I Brånemark is considered the father of modern dental implantology (Figure 1). In the early 50's he discovered the process of osseointegration, which later was referred to as the direct structural and functional connection between living bone and the surface of a load-bearing artificial implant. (Figure 2)

This discovery was a result of a series of vital microscopic experiments on blood in mobile tissues, bone and bone marrow by placing titanium optic chambers in rabbit's tibia. Later it was discovered it was extremely difficult to remove these chambers for further use after a period of healing. (Figure 3)

Since then Brånemark and his team conducted numerous research aimed at Orthopedics, joint replacements, plastic surgery and tumor defects. In 1965 Brånemark treated the first human patient Gösta Larsson with titanium dental implants who was missing teeth as a result of jaw deformities. Larsson passed away in 2006 and used his implants for more than 40 years. (Figure 4 - page 34)

The initial reaction of skepticism and doubt was overcome in 1982 in North America at the Toronto conference on osseointegration. Here the biology, clinical research and applications of osseointegration were presented to the world and since then for 32 years millions of people have been able to benefit from the life changing contributions of osseointegration.

Today the rehabilitation of patients with oral, Maxillofacial and orthopedic impairments has been accepted and adopted by the international community and through a worldwide collaboration and ongoing research and advancements we have gained enormous knowledge for treating our patients. These advancements have allowed the clinicians to apply load-bearing implants with teeth the day of the surgery and this has had a remarkable impact into the quality of the patient's lives.

In 1989 Professor Brånemark founded the first The Brånemark Osseointegration Center (BOC) in Gothenburg, Sweden (www.branemark.com). BOC's principal task was to offer management for patients with severe oral, maxillo-facial and orthopedic disablements. There are only 10 such clinics in the world and in the June of 2013 due to its excellence in dental implant treatment the Dubai BOC was founded by Dr Cotsa Nicolopoulos and Dr. Petros Yuvanoglu at the Dubai Healthcare City and named SameDay Dental Implants (www.Samedayme.com). This demonstrates a milestone of progress for the health system in Dubai being able to host a BOC in the Middle East.

*With dental implants & new teeth all in one day my life changed thanks to SAME DAY DENTAL IMPLANTS. I can now...*
NEW: Philips Sonicare FlexCare Platinum

For outstanding cleaning, even deep between the teeth

Philips has the right sonic toothbrush for every cleaning need. The latest innovation is called Philips Sonicare FlexCare Platinum. Its innovative pressure sensor gives immediate feedback in a simple manner if too much pressure on the brush head minimizes the vibrations. This makes the Philips Sonicare FlexCare Platinum ideal for those of your patients who are worried about using too much pressure when cleaning with an electronic toothbrush. Nine individual settings and intensity levels thereby make adaptation to the individual cleaning requirements possible.

Pressure sensor
This innovative sensor gives simple and intuitive feedback if the brush head is pressed down too hard.

3 cleaning settings
- Clean – ensures optimal plaque removal (standard)
- White – removes discoloration of the tooth surface in 2 minutes, and the front teeth are whitened and polished in a further 30 seconds.
- GumCare – combines 2 minutes in the Clean setting with 1 minute of gentle gum massage for healthy gums.

3 intensity levels
Maximum comfort with the 3 adjustable intensity levels: low (for sensitive areas), medium and high. Each of the 3 intensity levels can be combined with each of the 3 cleaning settings.

Philips Sonicare InterCare brush head
Extra long filaments reach deep into the spaces between teeth and ensure an excellent plaque removal there compared to a manual toothbrush. For better tooth and gum health.

UV-Sanitizer
With the UV light technology from Philips, up to 99% of the bacteria and viruses¹ on the brush head are rendered harmless – in only 10 minutes.

Lithium-ion rechargeable battery
With 3-week working life

¹ E. coli, S. mutans and HSV1, HA
**Keeping Hygienists in par with Continuing Education initiatives**

By Victoria Wilson, Dental Hygiene Therapist

**I** t is our aim of the Dental Hygiene Tribune MEA to keep you, our valuable members and readers, on par with continuing education initiatives across the region. We will target and focus on the most up-to-date treatment methods available, the emerging scientific research and the current best practice techniques used in dental hygiene.

Hygienists or Dental Care Professionals (DCPs) are ideally positioned to provide comprehensive support to dentists and patients – starting from pre- and post- restorative work through to periodontal treatment, maintenance and long-term continuing care. In order to do this effectively, DCPs need to be continually updating and developing their knowledge and clinical skills, as well as being aware of the new technologies on the market.

I welcome the opportunity to bring my enthusiasm for Dental Hygiene Tribune to Dental Hygienists in the Middle East and offer an earnest commitment to meeting the need for high quality training and ongoing support in our commendable profession.

I am dedicated to raising and representing the Continuing Medical Education (CME) team for Dental Hygiene Tribune members to ensure that your interests are being met. With your support, I look forward to developing new programmes for this publication to further encourage collaboration and clinical excellence in the hygiene field.

I would appreciate hearing your preferences for CME topics and any other suggestions that you would like to offer.

**Contact Information**

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**Maintenance of dental implants for the hygienist**

By Biberach/Riss

Implant dentistry has become more and more prominent in our everyday practice as patients are keen to have implant-borne prostheses than a conventional bridge work or removable dentures. One of the most important factors for long term success of dental implants is the maintenance of healthy peri-implant tissues. Hygienists are now seeing more of their patients with dental implant and this is only going to increase in the future as implant therapy becomes cheaper. The role of the hygienist has increased in many ways with regards to dental implants. It is important for a hygienist to be able to diagnose peri-implantitis and to have the knowledge to treat simple to moderate peri-implant tissues and to monitor the health of dental implants in the long term as part of the patients regular maintenance.

How do you know when an implant has problems?

It is essential to be methodical when monitoring the peri-implant tissues at review appointments to spot the early signs of peri-implantitis. The clinical markers that are used to assess the presence and severity of inflammation around the implant are:

- Plaque and calculus accumulation;
- Inflammation of the peri-implant tissues;
- Increase in peri-implant probing depths;
- Bleeding on probing;
- Suppuration from the peri-implant pocket;
- Implant mobility;
- Radiographic changes.

When probing peri-implant tissues at review appointments, it is important to be aware of the following:

- **Why CME (Continuing Medical Education) or CPD (Continuing Professional Development) is important to Dental Professionals**

**By Victoria Wilson**

B** y defining Continuing Professional Development (CPD) and outlining the need for it for dental professionals through a series of publications from Governing bodies, it can be seen that with proper planning, goal assessment and verifiable CPD activities, one can not only meet government regulations for CPD but gain insight and skill set for further professional and personal development.

**Method**

Review an analysis of CPD for dental professionals from online publications related to bodies in the UK, US, Canada, and the Middle East.

**Results**

CPD can be obtained through a wide range of activities. A structured approach when undertaking the CPD projects of choice, in line with key targeted learning objectives, is key to achieving a noteworthy and credible progression in job performance.

**Conclusion**

Not only is a minimal amount of CPD required in most countries by law, it can be determined that CPD will not only enhance one’s performance and the overall operations of the facility/clinic, but will result in valuable public awareness for the safety and regulated practices of dental facilities in general.

**Introduction**

What is CME - CPD?

Continuing Medical Education (CME), otherwise referred as Continuing Professional Development (CPD), is the way in which professionals can enhance their knowledge and skills related through a structured approach.

CPD for dental professionals is an obligation in many countries. A mandatory amount of course-related points must be fulfilled in the form of: lectures, seminars, courses, individual study, peer review, clinical audit or E-learning. These hours can be recorded on a personal CPD record providing the courses are designed to advance professional development as a dental professional and is relevant to one’s practice. (1)

**Why is CPD in Dentistry so Important?**

Education and qualifications are only the first step towards obtaining a professional career. CPD is an obligation to one’s profession - not only for the personal benefits for individuals and clinics, but also for the overall perception and confidence that the public has in the dental industry.

Dentistry is constantly evolving through new methods and technologies to better meet the needs of patients. CPD will ensure that dental professionals continue to be at the forefront of this knowledge. It is important for patient comfort, well-being and safety.

It is also required by law for all registrants working under the local medical authority to undertake a minimum amount of CPD points in order to maintain the license of the practice. If this minimum is not met by all of the professionals, the license cannot be renewed.

**Verification of CPD points**

In some countries, such as the UAE, the Governing body acts to verify the CPD provider. Submission of papers for a CPD event must be approved by Dubai Health Authority (DHA), Dubai Health Care City (DHCC) or Health Authority Abu Dhabi (HAAD) prior to an event.

In other countries, such as the UK, parts of US and Canada, verifying the CPD provider is determined by the judgment of the registrant. It is a common requirement to have to keep documentary evidence in these countries for up to 5 years post CPD cycle. (4,5)

There will generally be documentary evidence that the CPD has been undertaken with concise educational aims and objectives and clear an
In ‘bleeding on probing’ trials over 4 weeks, parodontax® demonstrated significant effects in reducing bleeding gums by 22% (p<0.01)

Bleeding on probing increased after 4 weeks of brushing with the fluoride control toothpaste

Adapted from Saxer et al 1994. All interdental spaces from 6-1 to 6-6 were tested at baseline and 4 weeks for bleeding on probing on the right side (buccal) and left side (lingual). Findings were recorded as 0=no bleeding; 1=slight/isolated bleeding; 2=marked bleeding. Mean scores were determined. N=22.
Baseline values (Mean SD): Control (fluoride-containing toothpaste) group 24.75 (6.34), parodontax® group 25.40 (5.80). After 4 weeks: Control (fluoride-containing toothpaste) group 26.00 (9.14), parodontax® group 19.80 (7.38). *parodontax® vs control p<0.05.
Every day protection from everyday acids

Modern eating and drinking habits increase the exposure of tooth enamel to dietary acid that can lead to Acid Wear (erosive tooth wear), the biggest contributor to tooth wear. In the early stages of Acid Wear, a patient’s enamel can become translucent, anatomical features can be lost and molar cupping can occur.

GSK collaborated with leading experts in the field to develop Pronamel Daily Toothpaste to help protect patients at risk of Acid Wear. With its optimised formulation, Pronamel is proven in a range of clinical in situ and in vitro studies to reharden acid-softened enamel and protect against acid challenges.

Not all toothpastes are the same

In laboratory experiments Pronamel’s optimised formulation ensures more fluoride is available at the patient’s tooth surface to protect from the effects of Acid Wear compared to other toothpastes with the same marked fluoride levels.

Pronamel has been clinically tested in situ to:

- Reharden acid-softened enamel
- Build protection against future acid challenges

![Figure 2: In situ rehardening microindentation study following treatment with dentifrices](image)

Figure 1: DSIMS imagery to show amount of fluoride at the tooth’s surface in vitro

![Image: Pronamel and Placebo DSIMS imagery](image)

Adapted from Edwards MI et al. Dynamic Secondary I on Mass Spectrometry (DSIMS) of the fluoride content of human enamel exposed to a citric acid challenge followed by treatment for 2 minutes with a range of dentifrice slurries.


Pronamel is proven to reharden acid-softened enamel and provide ongoing protection from the effects of Acid Wear:

- Low abrasivity
- Neutral pH (7.1)
- SLS*-free
Reveal your patients’ most healthy, radiant smile with Philips Zoom WhiteSpeed

Give your patients the immediate white smile they want and the healthy white teeth they need, with the new Philips Zoom WhiteSpeed. The number one patient-requested professional teeth whitening brand* is clinically proven to deliver superior whitening results in just one office visit. WhiteSpeed is shown to whiten teeth up to 8 shades in 45 minutes; that’s 40% better than a comparable non-light activated system.†

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Now better than ever — Philips Zoom WhiteSpeed.

* In the U.S.
† Compared to Philips Dash
‡ Results based on 500-person study. Data on file.

New Philips Zoom WhiteSpeed Light-Activated Whitening System.
A better experience for your patients and your practice.

Philips Zoom In-Office Whitening kit makes treatments easier
Packed in procedural order, you get everything you need for each treatment, including Philips Zoom at-home whitening gel for follow up and maintenance complete in a single package. The Philips Zoom Kit also includes simplified visual instructions.

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Philips Zoom is funding a worldwide public relations campaign to drive patients to dental professionals, and new programs to help you quickly and easily integrate Zoom into your practice.

“With this new light the patient’s sensitivity is minimal, making the procedure much more pleasurable.”
— Juban Dental Care - Baton Rouge, LA

“With this new light the patient’s sensitivity is minimal, making the procedure much more pleasurable.”
— Juban Dental Care - Baton Rouge, LA
Scientists from Norway develop scaffolding to repair severe teeth and jawbone defects

By Dental Tribune International

O

SLO, Norway: Dental re-
searchers at the Universi-
ty of Oslo have developed a
new artificial scaffolding that
aids bone regeneration. Within
a few years, they hope to market
their invention to help patients with
severe periodontitis, jawbone,
cancer, infection or trauma.

According to the researchers, the artificial scaffolding could be used in particular for cases in which the gap between two bone fragments is too wide, or when large parts of the bone have been damaged through surgical removal or radiother-
apy. The scaffolding helps the body repair such serious defects, the researchers explained.

"With the new method, it is suf-
ficient to insert a small piece of
synthetic bone-stimulating
material into the bone. The ar-
tificial scaffolding is as strong as
real bone and yet porous enough
for bone tissue and blood ves-
sels to grow into it and work
as a reinforcement for the new
bone," said Prof. Ståle Petter
Lyngstad, Dean of Research
at the Department of Bio-
materials at the university’s Institute
of Clinical Dentistry.

The scaffolding can be pro-
duced like cinder blocks and
cut into individual shapes to fit
into specific bone defects. It is
manufactured from a mixture
of water and ceramic powder,
which is poured through foam
rubber that was designed to
look like trabecular bone. The
ceramic powder consists of
medical-grade titanium dioxide
and disperse nanoparticles,
which are also widely used
as an additive in sweets, toothpaste
and baked goods. Once the mix-
ture has solidified, it is heated to
a temperature that causes the
foam rubber to dissolve into wa-
ter vapour and carbon dioxide
and the nanoparticles to ligate
into one solid structure. It has an
open porosity of 90 per cent,
containing mostly empty space
that can be filled with new bone
and blood vessels, which cur-
rent materials do not provide.

While current materials are de-
graded gradually, the new scaf-
dolding remains an integral part
of the repaired bone, working
as reinforcement, Lyngstad explained.

In addition, the gener-
ation process could be
accelerated by the
insertion of bone pro-
genitor cells or bone
marrow, containing stem cells.

Conventionally, dam-
aged bone is repaired by
removing tissue
from healthy bones,
such as the mandible or hip, for implanta-
tion. Patients often
experience discomfort
and complications af-
ter the surgery. This can
be avoided by us-
ing the scaffolding.

Since the scaffolding has shown
positive results in preliminary
animal studies, the researchers
are currently planning to un-
dertake clinical trials on patients
with periodontitis and damaged
jawbone. They also
hope that orthopaedists will
show interest in the new meth-

The new material was devel-
op in collaboration with Certo-
calis, a Norwegian company
that specialises in innovative bio-
materials. In order to market their
invention, the researchers are
currently looking for an industry
partner.

Dubai Health Care City
(DHCC)
Dental Hygienists, require 24
Continuing Professional De-
velopment (CPD) credits per
year. These credits must be
acquired through CPD activities
that are relevant to practice.

In order to market their inven-
tion, the researchers are
currently looking for an industry
partner. (Photo courtesy of the University of Oslo)
If there is on-going bone loss it is important to ascertain the cause. The causes of bone loss are:

- Occlusal overload;
- Bacterial induced inflammation.

Any occlusal overloading needs to be corrected by the implant dentist.

Plaque induced inflammation is initially treated non-surgically but depends on the initial clinical presentation. This involves the removal of dental plaque with or without the use of locally delivered or systemic adjuncts. Lesions with probing depth of 5 mm or more and bone loss of greater than 2 mm would need surgical intervention as recommended by the International Team for Implantology (ITI) consensus report Figure 1.

A common cause of plaque induced peri-implantitis is excess cement which has been forced around the implant surface, therefore there is less resistance when probing around the implant. This will result in deeper peri-implant probing depths compared to probing around natural teeth. Peri-implant probing depths of implants placed in sites excluding the aesthetic zone range between 2-4 mm under healthy conditions. In the aesthetic zone where the implant is usually placed deeper, the probing depths are greater than the normal range. It is important to note that most implant systems show evidence of a small amount of marginal bone loss within the first year of function. Smoking has been shown to be a risk factor to affect the long-term prognosis of dental implants therefore it is essential to assess the health of the peri-implant tissues regularly in smokers.

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What to do if there is bone loss?

If there is on-going bone loss it is important to ascertain the cause. The causes of bone loss are:
Complex dental problems and the contribution of adjunctive orthodontics

By Professor Athanasios E. Athanasiadis, DDS, DMD

The goal of contemporary dentistry is the maintenance of natural dentition under biologically, functionally and esthetically optimal conditions, for the longest possible period. An increasing number of adult people present a variety of complex dental problems, which concern more than one clinical discipline or specialty. These include caries, periodontal diseases, dental trauma, edentulous sites, malocclusions, or their combination.

This article outlines existing orthodontic therapeutic possibilities for adjunctive dental work and emphasizes the importance of teamwork among the general dentist, the orthodontic specialist, and other dental specialists.

Principles of treatment planning for complex dental problems

The need to formulate problem-oriented treatment plans, which address patients’ chief complaint for complex cases necessitates consensus among the parties involved namely the general dentist, the specialist and the patient. Diagnosis must utilize patient’s data, derived from records interpreted by the clinician using strict scientific criteria. On the other hand, treatment planning constitutes an intellectual process where subjective elements are often involved. It is the path that the well-educated and experienced clinician follows in order to maximize the benefits for the patient, which must be contrasted to the cost and risk involved when certain procedures are adopted (1). An essential requirement for successful interaction is that both general practitioner and specialist are in agreement regarding the advantages and limitations of the treatment chosen.

Adjunctive orthodontics

Adjunctive orthodontic treatment is tooth movement carried out to facilitate other dental procedures necessary to control disease and to restore function. It may be an alternative adjunct to general dentistry by providing (a) rehabilitation following tooth migration due to pre-existing periodontal disease; (b) pro-prosthetic orthodontics; (c) treatment of periodontal defects; and (d) orthodontics as an alternative to prosthetics (2).

Orthodontics and periodontics

It has been documented that orthodontic treatment in patients with severe periodontal destruction is no longer a contraindication (5). On the contrary such treatment might even enhance the possibilities of saving and restoring a deteriorating dentition. During the orthodontic movement it is the entire periodontal unit (bone, periodontal ligament, and soft tissues), which moves with the tooth (4). This all-embracing movement has been shown to be beneficial when orthodontic uprighting of tipped molars is undertaken since the crestal bone exhibits predictable and considerable changes (5) (Figure 1). Forced eruption has also been reported to decrease the depth of isolated vertical infrabony defects and to expose tooth structure, thus allowing the prosthetic management of subgingival fractures, caries and lateral root perforations (6) (Figure 2).

Orthodontics and missing teeth

In cases where lateral incisors are congenitally missing and other malocclusion co-exist, in most instances the treatment of choice is the orthodontic movement of the canines to...

> Page 33
O ral surgery is an important cornerstone in orthodontic treatment of malocclusions. Tooth movement is only possible to a limited extent and always depends on the dynamics of the growth of the maxilla and mandible in relation to each other, as well as on deformities of the jaw in relation to the other facial bones.

Abnormalities may be congenital or acquired and may affect patients in childhood already. If so, the focus of orthodontic treatment is not primarily in the aesthetic correction, but is guided by functional and prophylactic concerns. Efficient occlusion and restoration of masticatory function are decisive factors for tooth preservation and prevention of secondary disorders (Figs. 1a–c). Without a doubt, aesthetic improvement, as well as the associated self-consciousness, is the main concern of adult patients, which can be pursued through surgical correction.

Causes of malocclusion

Generally, patients visit an orthodontist for aesthetic reasons under pressure of its peers. A detailed medical examination must be performed, in particular in patients with orofacial pain. The varying findings and remarks illustrate the difficulty of clear classification of malocclusion. Nonetheless, the demands of the patient have priority and he expects a symptom-limited therapy with stable treatment results. This means that in malocclusion cases that cannot be resolved by functional orthodontics alone, orthodontic-surgical planning can be done before any treatment is attempted by pure dentoalveolar compensatory intervention. Compensatory dentoalveolar procedures could prevent a surgical operation. At the same time, patients can run the risk of protracted treatment without any long-lasting benefit. The decision for or against orthodontic surgery requires interdisciplinary agreement and reliable treatment goals must be defined in advance (Figs. 2a & b).

Target group for orthopaedic surgery

Nowadays, adults make up the majority of patients in the orthopaedic practice. They are generally motivated by high socio-cultural demands and the desire for perfect teeth. In adults who have an obvious discrepancy between their maxilla and mandible, it must be clarified whether the deviations are dentoalveolar or skeletal. Owing to the limitations of conventional orthodontic treatment, skeletal discrepancies can rarely be entirely resolved. In those cases, combined orthodontic-surgical treatment is necessary. During growth, it is mostly possible to treat malocclusions successfully without surgery by purely orthodontic treatment using removable appliances or brackets. Children and young people for whom functional orthodontic treatment has not led to the desired result are treated surgically after the growth period. Early surgery always carries the risk of unexpected growth pattern or unilateral abnormal hyperplasia and can affect the results of the operation.

Selection of patients

Combined orthodontic-surgical treatment requires not only strong and focused interdisciplinary collaboration, but also absolute acceptance of the treatment plan by patients and parents. The treatment is time-consuming and post-operative corrections cannot be excluded. A detailed medical preoperative discussion should inform patients about the risks of combined treatment and the consequences of untreated malocclusions. Malocclusions can cause numerous side-effects, such as back pain and chronic headaches (Figs. 4a–c). In markedly dolichofacial face types, malocclusions can lead to a pharyngeal constriction, which can manifest as obstructive sleep apnoea syndrome (Hochhan et al., 1997).

In adults, it is normally useful to determine the amount of malocclusion and force bite using a flat-plane bite splint. The splint is worn for six to eight weeks, and guarantees the identification of the physiological condylar position. Pursuing orthodontic correction depends on the intended post-operative situation. Therefore, such correction is only dentoalveolar and does not transfer bite forces of the articulator after successful simulation of surgery (Fig. 3a–c & 5a–e). The most favourable position of the maxilla and mandible is assessed on the basis of simulated cast surgery in which the amount of shift is determined. Using these casts, a splint can be fabricated and placed during surgery to fix the determined physiological condylar position preoperatively (Figs. 6a–c).

Teenagers with mandibular asymmetry that cannot be clearly classified should be treated with special care. Should clinical records be available only from the age of 16 — whether as a result of erroneous dental records or simply owing to late initial assessment in a specialised practice — accurate early diagnosis of potential unilateral hyperplasia with further growth tendency is essential. According to the German Society of Oral and Maxillofacial Surgery guidelines, a nuclear medicine diagnostic is necessary — in addition to inspection, palpation and radiography—to determine the risk of an abnormal growth in time. Through increased uptake in the affected region during scintigraphy, it is possible to draw conclusions about the growth's behaviour. If the jaw continues to change by absorption or growth, it is advisable to postpone surgical therapy until the cessation of growth.

Surgical technique

The choice of technique for the osteotomy depends on various factors. Facial asymmetry, occlusion, surgical access to the bone is created, which is split at fixed points. Correction of the bone and bone healing in the new fixed position is accomplished using simulated cast surgery and a fabricated splint. Following surgical modification of the jaw area, it is important to consider the correct position of the jaw and optimal occlusion. This crucial planning stage is performed by the orthodontist as accurately as possible because it determines the degree of displacement of the jaw depend on achievable occlusion. Furthermore, teeth have an influence on access to the surgical field and wisdom teeth must be removed before osteotomy in certain cases.

Osteotomy can be done on both jaws or can be limited to the maxilla or mandible. However, in many cases it is functional to perform bimaxillary osteotomy and to shift both jaws. Today, generally the entire tooth-bearing portion of the jaw is shifted. Segmental osteotomy has not been proven to be very successful in the past and correc- tions of malocclusions are left to the orthodontic treatment partners. In this field of treatment, the Ohwage-Dal Pont surgical technique is recommended. This procedure describes an intra-oral stepped osteotomy at the mandibular rami (Figs. 7a & b). Since Bell and Epker described the possibility of bi- maxillary surgery as the “down fracture” technique in 1975, it has been popular and today you can find it mostly as a combi-
nation of Obwegeser–Dal Pont and Le Fort I osteotomy. The bimaxillary approach seems reasonable, since the maxilla and mandible influence each other during growth. However, it is frequently only possible to obtain a very good and risk-free result by using Obwegeser–Dal Pont surgery. Fixation in split osteotomy of the mandible is usually realised by using minimally invasive plate osteosynthesis. In modified techniques of Obwegeser–Dal Pont surgery, a displaced ramus is fixed using osteosynthesis screws only (Hochban 1997; Figs. 8a & b). This modification avoids the complicated surgical removal of osteosynthesis plates.

Operation risk
Any surgical procedure can lead to unexpected complications, which must always be considered according to the risk–benefit principle. Today, the need for osteotomy remains controversial because a jaw deformity is not a serious illness like a tumour, abscess or bone fracture, which is necessarily treated by surgery. Since deformities are often aesthetic corrections and can be classified as elective procedures, operation safety is a chief concern. Isolated osteotomies of the mandible, which present a significantly lower surgery risk, should be the first choice for orthodontic–surgical interventions.

The most significant risk of osteotomy of the mandible is a probability of about 5% of damaging the sensory nerve, called the inferior alveolar nerve. This can cause sensibility problems of the lower lip and chin area (Figs. 9a–c). Additional serious risks are not expected using Obwegeser–Dal Pont surgery and post-operative bleeding can be controlled very safely.

Interdisciplinary collaboration

The literature review of work done in the 1970s makes clear that today’s conscientious collaboration between surgeons and orthodontists is not a matter of course. Over the years, orthognathic surgery was considered to be the last option for treating orthodontic cases that could not be resolved using standard treatment techniques. Therefore, operations were carried out based on tolerance of dentoalveolar compensation and likely made further corrective surgery more probable.

Today, in almost all cases of malocclusion, orthodontic treatment is preceded by surgical treatment. Nowadays, the planning of the operation based on simulated cast surgery and the creation of a splint is a very safe method by which to achieve predictable and stable long-term results (Figs. 10a & b). Individual dentoalveolar discrepancies in occlusion can be corrected preoperatively or post-operatively by orthodontic treatment. Therefore, interdisciplinary collaboration is always a benefit for the patient and treatment team.

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**By Dr. Khaled Abouseada, KSA**

It was a pleasure to interview Dr. Nikhil Vaid, who could be ranked as one of the key doctors to enrich and strengthen our orthodontic section in the Dental Tribune, bringing it to new heights by displaying a wide screening of Dr. Nanavati’s vast crucial achievements. The focal objective was encapsulating the accumulated information I received from him into an easily digestible manner providing a platform for all the diverse ideas, updates, ethics and principles of orthodontic practices and researches Dr. Nikhil conveyed. Working with the philosophy of placing an attractively remarkable paper to shine light to a distinguished professor orthodontists to paint the path forward for our science-related readers. Dr. Vaid is an innovative leader in the field of Orthodontics and has demonstrated an approach that played a major role in improving the practice in India, targeting unique researches and development efforts as well as leading growth initiatives.

Dr. Nikhil Vaid: To be very honest I have not been an orthodontist for that long, to see a decade-by-decade shift in the practice of orthodontics has been fascinating. In the last 12 years from when I did start out, the major thrust has been on the incorporation of technology in all spheres: Diagnosis, Research, Practice, Management and Appliances. A lot of purists feel the skill levels of the contemporary Orthodontist are becoming redundant because of technology; I would like to think otherwise.

The biggest change is the quality of life of both the orthodontist and the orthodontic patient. Today Micro implants are the main stay of anchorage control, I only use Self Ligating brackets, because of chair side efficiency. Lingual Orthodontics, Aligners, Stereolithographic printers and Robotics are the main stay of our teaching and practice protocols. The thing that has caused a dramatic improved precision in these appliances due to CAD CAM and Robotics.

Back to years of study and resiency in India, how can you describe those days?

My residency years in Mysoor, India at the JSS Dental College & Hospital were literally, to borrow a line from a famous song, the “best days of my life”. Orthodontic training in India is very regimented and even today the accent is mainly on enhancing dexterity skills, which I think are non negotiable as far as any Orthodontic training is concerned. The programme at JSS was very “cerebral” and “clinical”; in the sense, we were encouraged to think, very often, out of the box. This has influenced us to be receptive to new advances, without the dogma of fundamental principles of orthodontic practices. The bonding and the camara­derie amongst colleagues as well as the discipline that kept us on our toes, were actually lessons that have moulded me to assume greater responsibilities in life.

Do any of your teachers stand out who encouraged you to pursue this career? What would you tell them now?

Well the soul of any teaching programme is the Programme Director or a Guide in Masters Programme, whatever the nomenclature is in any part of the world. The biggest influence in my life has been my Professor, Prof E. T. Roy, who has mentored me as an Orthodontist in my years in my Masters programme. He is a strict disciplinarian, and was responsible for influencing my life beyond Orthodontics as well. Its important to inspire your residents to be complete professionals, Orthodontics is only a part of what we do. The spirit to serve my profession and professional organization is something that he has inculcated in me. Dr Ashok Simha, Dr Ravi Gugta, Dr Ravi Sable, Dr Shailesh Doshukum and Dr Sripad Nagarsekhar have taught me Orthodontics at different stages of my life as an undergraduate and graduate student. My colleagues during my Masters programme, and later, most importantly Dr Meghna Vandskar, Dr Gur­kiran Singh and Dr Jacob John are also responsible for what I am today. I would like to thank each of these individuals for touching my life and promise to make them proud with everything I attempt to do.

What can you tell us about your experience as the president elect of the Indian Orthodontic society and Editor in Chief of the Asian Pacific Orthodontic Society?

I have just been elected President Elect of the Indian Orthodontic Society, which is amongst the largest Orthodontic Societies globally. We have an obligation to contribute to the knowledge bank of global Orthodontists, and encourage scientific content of the highest caliber. I will be President in the coming 2014-15 IOCS Year, my focus would be to have an excellent young and enthusiastic team which is committed to the cause of achieving excellence in documentation of scientific data from the Asian Pacific region. I was appointed Editor of the APS Trends in 2011 and the Chief Editor in 2013. Today the Journal is indexed by multiple indexing agencies. I have an excellent young and enthusiastic team which is committed to the cause of achieving excellence in documentation of scientific data from the Asian Pacific region that is available to orthodontists across the globe at no cost. I have to compliment the past APOS President Dr Loh Kai Woh, for his vision, Dr Kazuo Tanne, President APOS and Dr Bryce Lee, Secretary General APOS, for their support as well as American Orthodontics for being the corporate sponsor of this endeavor for 2013-14.

What golden advice could you provide to orthodontists regarding their future careers as Orthodontists?

I don’t know if I’m qualified enough to advice, but I am greatly influenced by a quote of our times, “The differences the 21st century will not be the ones who cannot read or write but the ones who cannot unlearn and relearn new things.” Science today is progressing at a pace where the global knowledge bank doubles in just a few years. We have to open our minds and the willingness to be students all our lives. If we can atone our minds to this aspect, success in every sphere of life will follow.

**Conclusion**

My main purpose will always revolve around focusing and bringing Professors of the highest level into focus to enhance quality, ensuring this top quality and therefore creating the ultimate satisfaction for our readers. I hope that our crew have gained the trust of our readers by always respecting them, providing the best service possible and improving our material by sending out the timely feedback is always welcome whether positive, negative, thankful or harsh replies, which will always keep us on our toes and guide us to our next steps. Continuous improvement of this section is a top priority and its growth is our distinct mission, which we hope would be envisaged to meet your needs.

Dr. Khaled Abouseada
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**Contact Information**

**What are your future expectations in Orthodontics?**

I envision a tomorrow, where Orthodontic care will be available in every corner of the world, provided by a specialist Orthodontist. From a healthcare perspective, the scope of orthodontics should also include interdisciplinary and adjunctive therapies. Collaboration with Sleep Medicine, Plastic Surgery, ENT, Maxillofacial and other Dental Specialists will be the tomorrow of Orthodontics. Aesthetic Orthodontics using CAD CAM and Robotics will be a regular feature of our appliances as well as our Diagnostic and finishing protocols. Diagnostic Aids will become 3 Dimensional for a fact, Research in Genetics, Bone Biology and Molecular Genetics will play a significant role in the way we approach the growing patient in the next decade. It is an exciting time to be an orthodontist in this change in Orthodontics.

Regarding our Middle East region, as you are an active contributor in many events in the area, what are your future expectations for the Orthodontic mark in the area?

I think the Middle East region is right up there in terms of Orthodontic care. I have travelled to lecture in UAE, Jordan, Lebanon and Oman and I am impressed with the quality of work and enthusiasm in the region.

I envision a tomorrow, where Orthodontic care will be available in every corner of the world, provided by a specialist Orthodontist. From a health care perspective, the scope of orthodontics should also include interdisciplinary and adjunctive therapies. Collaboration with Sleep Medicine, Plastic Surgery, ENT, Maxillofacial and other Dental Specialists will be the tomorrow of Orthodontics. Aesthetic Orthodontics using CAD CAM and Robotics will be a regular feature of our appliances as well as our Diagnostic and finishing protocols. Diagnostic Aids will become 3 Dimensional for a fact, Research in Genetics, Bone Biology and Molecular Genetics will play a significant role in the way we approach the growing patient in the next decade. It is an exciting time to be an orthodontist in this change in Orthodontics.

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The 2nd International Students’ Dental Conference 2014

By University of Sharjah Dental Students Association

April 9-10, 2014, saw over 700 students from ten countries gather together at the University of Sharjah College of Dental Medicine for the 2nd International Students’ Dental Conference. The conference was opened by His Highness Crown Prince Sheikh Sultan bin Mohammed bin Sultan Al Qasimi who toured all the exhibits from eight companies such as Listerine/McIl Crest Oral B and GlaxoSmithKline, asking many questions along the way, before he oversaw the opening ceremonies.

The conference was a huge success for the students of the University of Sharjah Dental Students Association, who created, planned, organized and executed the whole conference of exhibits, poster presentations, oral research presentations and debates. The two debates focusing on the treatment options of endodontics versus implantations, and the other debate on where to draw the line between prevention and restoration in cases of incipient caries, drew lots of interest and resulted in lively and sometimes passionate discussion.

Additionally, a number of participation workshops on topics ranging from layering of anterior resin composite, to TMJ, lasers, rotary endodontics, implants, veneers and a suturing clinic gave participants some outstanding hands-on experiences.

All-in-all, the conference was a culmination of very hard work from the Executive Committee of the Student Association and the Organizing Committee. Dean of the College, Professor Richard J. Simonsen noted in his strong praise of the students that he has never seen a more active and giving group of young people in his over 40 years in dental education.

“When is quite remarkable that a group of 20-year old young students (mainly ladies by the way!) could pull this off” - Prof. Richard Simonsen, Dean of the University of Sharjah College of Dental Medicine.

The main organizer, Rawwand Naji, the President of the USDSA was very pleased with the program and participation from countries as far afield as Russia and Poland. “Next year we hope to consolidate this conference into a regular annual highlight on the dental calendar and eventually to attract many more students from all over the world to the University of Sharjah” said student-doctor Rawwand.

Social events such as a desert safari, go karting, and a dinner cruise in Dubai were added attractions for the international students which also included large contingents of students from the Kingdom of Saudi Arabia, Sudan and Malaysia as well as students from all the local schools.

The President of the USDSA was also supported by the rest of her Board of student-doctors, Maya Faris, Jumana Liwa, Amalia, Sara Anbari, Deema Rashad and Mohammed Hussein Haider, all from the second-year dental program at CoS. “It is quite remarkable that a group of 20-year old young students (mainly ladies by the way!) could pull this off with such success while still studying hard for upcoming final exams,” said Dean Simonsen.

Faculty support was provided by Dr. Karim Sabah and Dr. Eman Mustafa, and huge support was provided by former USDSA Presidents, Faraj Edher and Hiba Abdulhadi, who were the first to give the credit to the student association leadership, and all the many other students who helped out with the execution of this remarkable conference.

Attendance figures are also expected to increase by 12 per cent, with many new visitors coming from nearby countries like Cambodia, Myanmar and Taiwan. “Not just a place where East meets West, Singapore is also increasingly being considered a gathering point for different parts of the East to meet one another,” Dreyer said.

“IDEM also offers the opportunity to share knowledge, ideas and practical applications in dentistry.”

New concepts and methods for dental labs will be discussed at the Dental Technicians Forum, one of the new educational formats specifically targeting other members of the dental profession. In addition to these presentations, lectures for dental hygienists/therapists were also held throughout the days.

Aside from the trade fair bustle, clinical presentations as part of the scientific programme will continue today at Level 4 with lectures and workshops focusing on fields like prosthodontics and orthodontics. A special presentation by US dentist Dr Barry Freydberg on 05 April 2014 at 4.50 p.m. focused on the detection and prevention of oral cancer, which is among the few types of cancer which are currently on the rise worldwide. At the Dental Tribune Study Club Symposium at booth 6P-22, Singapore’s own prosthodontic expert, Dr Stephen Soo of Specialist Dental Group, will provide insight into CAD/CAM and how its use can benefit workflow in dental practices.
Dentistry – your dream profession

By Danube Private University

At Danube Private University, students undergo a six-year course in dental medicine, and on completion of the course are awarded the internationally recognized degree Dr. med. dent. This elite course of study at the leading edge of medical and dental science, utilising state-of-the-art medical and dental equipment, practical facilities and our in-house clinic, stresses to both challenge and support its students. We want our graduates to be among the acknowledged leaders of their profession. The dental faculty of the University includes many highly respected scientists who take great pleasure in being a part of a new, innovative project in basic dental studies that is of particular benefit to society — led by our Chancellor, Professor Dr. Dr. Dieter Müssig and our Dean, Professor Dr. Dr. h.c. Andrej Kielbassa.

In addition to instruction in medical and dental subjects, the President of the University, Honorary Consul M.B. Wagner-Pischel, is dedicated not only to the achievement of excellence in research, instruction and innovation, but also to the holistic education of the young people, ensuring that they receive a solid grounding in the arts, literature, science journalism and music, as well as training in empathy. The aim is to promote the well-rounded development of the young people, and equip them with positive approaches for their subsequent career that enhance their communicative intelligence. Dental health and personal care and hygiene play a key role in how people are perceived today. Beauty and mindfulness are reflected more than anywhere else in oral and dental health. A good dentist can be compared to an artist, as she requires an exceptional understanding of form and colour as well as spatial visualisation skills. When combined with the state of the art in medical and dental knowledge, the result is uncompromising excellence in patient treatment.

For President Wagner-Pischel, a life spent in the exercise of a profession about which one is passionate is an important and meaningful life commitment as well as a significant contribution to the welfare of society as a whole.

“Our students at Danube Private University have excellent life and education opportunities. We offer them a top dentistry course equipped with state of the art technology that focuses on students’ needs and values them above all else, while upholding the finest traditional humanistic values. Danube Private University emphasises not only medical and dental science, but also human interaction among students and instructors as well as responsibility to both patients and society,” explains M.B. Wagner-Pischel, President of Danube Private University.

To date, the student body of Danube Private University is made up mostly of the children of dentists and doctors from German-speaking Europe. Young people from all over the world are interested in studying at Danube Private University. In response, we are offering a preparatory course of study for students outside of German-speaking Europe.

Additional to the knowledge delegates will exchange, all attendees will benefit from the networking opportunities in the cozy atmosphere provided by Jumeirah Beach Hotel where you can meet your colleagues from across the globe while lunching at Dubai’s best restaurant.

All Dentists, Dental Technicians and Dental Hygienists are welcome to get the most updated scientific exchange and view the latest technology, trends and developments in CAD/CAM & Digital Dentistry. The future is here and all are welcome to join.

Contact Information
http://www.danube-private-university.at/studien.php?id=130&PHPSESSID=um7ngso5ouere80DDx13ae7
subsequent absence from the dental arch of impacted permanent teeth is not an indication for their prosthetic replace-
ment but rather a sign for the start of their orthodontic trac-
tion, placement and alignment into their natural position in
the dentition (9).

In cases of extreme anterior overbite, direct trauma to the gingiva from the incisal edges of the mandibular molars may result in palatal recession of the maxillary incisors (Figure 5). Similarly, in severe Class II, division 2 malocclusions with lingualversion of the maxillary incisors, functional trauma can cause marginal recession of the labial gingiva of the mandibular incisors. This recession, although not the result of peri-
odontal loss, can result to a signifi-
cant loss of attachment.

Clinical observation suggests that when crowding causes overlapping of adjacent teeth, the interproximal space may be minimal, root proximity may occur, and the quality and amount of bony support may be compromised (Diedrich, 2000). This is a poor environment for tissue health. The removal of plaque and subgingival calculus in the inaccessible proximal space may fail despite careful application of prophylaxis pro-
cedures. Orthodontic interven-
tion can improve the anatomical and functional environment and may limit the recession.

Conclusions

Provision of adjunctive ortho-
donotic treatment should be characterized by the following preconditions: (a) Knowledge of the clinical boundaries of gen-
eral dentistry and of any other dentistry involved in maintaining natural dentition under biologically, function-
ally, and esthetically optimal conditions; (b) establishment of two-way, structured, and continuous communication between general dentists and orthodontists concerning the contribution of specialised care to the oral rehabilitation; (c) assessment of the cost-benefit relationship concerning treat-
ment fees and duration, coop-
eration, inconvenience, dis-
comfort, pain and difficulty; and (d) diagnosis and treat-
ment planning relying on strict evidence-based criteria.


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Editorial note:

Full list of references is avail-
able from the author.

About the Author

Dr. Athanasios E. Athanasiou is Professor and Program Director of Orthodontics, Dubai School of Dental Medicine, United Arab Emirates and Professor of Or-
thonotics Aristotle University of Thessaloniki, Greece.

He is former President of the World Federation of Orthodon-
tists and the European Federa-
tion of Orthodontics.
bite into my food without pain & with confidence”. Said P.V. Shah an elderly man who received his oral rehabilitation in Dubai by Oral Maxillofacial Surgeon Dr. Costa Nicolopoulos at SameDay Dental Implants. Since 1991 Doctor Nicolopoulos has been practicing as a full time Maxillofacial & Oral Surgery specialist concentrating on immediate loading of dental implants. (Figure 5).

“Less is more, that is our ambition when it comes to dimensions and numbers of anchoring elements” says Per-Ingvar Brånemark. In ordinance with the founding father of modern implants we can now install a full set of teeth on only four implants thanks to the new advancements in implantology. This total rehabilitation technique for the edentulous patient known as the All-on-4® treatment concept, is a well documented surgical and prosthetic medical procedure.

Clinics like The SameDay Dental Implants Clinic utilize this treatment protocol allowing patients to have their implants and teeth placed all in the same day as opposed to the conventional technique where dental implants are loaded with teeth usually two or three months later. (Figure 6)

Every year all the BOC clinics from around the globe are invited to the Annual Brånemark Osseointegration Center meeting in Gothenburg Sweden to pay respects and tribute to the man who started it all. (Figure 7)

“It is the works of Professor Brånemark sixty years ago that allows us to change our patients lives on a daily basis”, said Dr. Costas Nicolopoulos at the ABOC annual meeting 2014 in February. Here SameDay Dental Implants Clinic was given the Leading Dentists of the World award as a special member at the ABOC meeting 2014.

While new advancements in the medical and dental world impact our patient’s lives, one must not forget that the basis of this invention lies within a man who saw a future while living in the past. (Figure 8)
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Case Report Maxillary Implant

By Stavros Mastronikolas
D.D.S., M.Sc. Periodontist
(Dubai, UAE)

Extraction, site preservation and delayed placement of maxillary implant using the bone added osteotome sinus floor elevation technique.

Initial Presentation
Pt is a 28 y.o. female, medically healthy, denies taking any medications, reports a heavy smoker, NKDA’s. A cone-beam computed tomographic scan was acquired pre-operatively. A prophylaxis was completed and oral hygiene instructions were given. Surgical treatment plan consisted: a) extraction, site preservation on #3 (Eu.#16) using the bone added osteotome sinus floor elevation technique; b) three months later, implant placement on #3 (Eu.#16) using the bone added osteotome sinus floor elevation technique;‡

Extraction and Site Preservation
Pt was pre-mediated, one day pre-operatively, with Augmentin (1 week dose pack) and 875+125 mg Augmentin, two days daily for 9 days. Atraumatic tooth extraction on #3 (Eu.#16) was performed using a piezotome. The deficient alveolar socket on #3 (Eu.#16) was carefully enucleated, soft tissues were manipulated and 0.7cc DFDBA (Deminerlalized Freeze Dried Bone Allograft) and (15x30mm) X-Sm Fascia Lata membrane were placed. DFDBA vs FDBA was placed on the extraction site to facilitate greater new bone formation.* DFDBA was hydrated with physiologic saline. Fascia Lata membrane was allowed to be soaked into saline for 40-15 minutes. Allograft ID stickers are always kept for traceability purposes. Primary closure was achieved with minimal tension. Post op instructions were given. Sutures were removed 2 weeks after the site preservation was performed.

Implant Placement
Three months later, pt was pre-medicated 1 day pre-operative-ly with 875+125 mg Augmentin, two times daily for 9 days and an implant (3x11.5mm) was placed flapless. An internal si-nus technique was performed using osteotome instruments and 0.25cc FDBA (Freeze Dried Bone Allograft). The technique employed a specific set of os-teotome instruments to tent the sinus membrane with bone graft material placed through the ostomy site. Implant sur-vival expected to be high since preexisting bone height between the sinus floor and crest was more than 5mm.‡ Fixture stability>45N/cm allowed for a healing abutment to be placed (Stage I). Post op instructions and sinus precautions were given.

CT/Scan and Restoration
C.T/Scan was prescribed to verify the amount of floor elevation achieved. Soon after an implant supported crown was fabricated and delivered. Pt was placed on a 6-month peri-odontal and restorative recall.

Results
Pre-treatment the alveolar dimensions of the first maxil-lary molar were 12mm widthx 8mm height and 3 months post fixture placement the ridge di-mensions were 8mm width x 7.5mm height. Verifiled with the cone-beam computerized tomographic scan a 4mm in-ternal sinus lift was achieved using FDBA (Freeze Dried Bone Allograft) and osteotome instruments.

Conclusions
Ridge dimensions can be pre-served on extracted molar teeth with deficient alveolar architecture. Successful site preservation can favor placing fixtures flapless decreasing patients’ morbidity and chair time. Internal sinus lift with the bone added osteotome si-nus floor elevation technique is a successful procedure. The FDBA placed into the maxillary sinus cavity appears to surround circumferentially the implant having intimate contact with it.

Acknowledgments
The author wants to thank Li-fenet Health for providing the allograft materials used in this case report. Furthermore special thanks to Dr. Paul Rosen (www.psrperiimplant.com) for his review for this case report.

References

About the Author
Periodontist Dr. Stavros Mastronikolas received his dental degree at University of Illinois at Chicago. He completed his advanced training in periodon-tology and implantology at Uni-versity of Maryland at Baltimore. He is a Diplomate of the Ameri-can Board of Periodontology. At the moment Dr. Mastronikolas is working full time as a Periodontist and Implant Surgeon at Drs Nicolas and Asp (Dubai, UAE).

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Stem cells in implant dentistry

By Dr. André Antonio Pelegrine, Brazil

The human body contains over 200 different types of cells, which are organised into tissues and organs that perform all the tasks required to maintain the viability of the system, including reproduction. In healthy adult tissues, the cell population size is the result of a fine balance between cell proliferation, differentiation, and death.

Following tissue injury, cell proliferation begins to repair the damage. In order to achieve this, quiescent cells (dormant cells) in the tissue become proliferative, or stem cells are activated and differentiate into the appropriate cell type needed to repair the damaged tissue. Research into stem cells seeks to understand tissue maintenance and repair in adulthood and the derivation of the significant number of cell types from human embryos.

It has long been observed that tissues can differentiate into a wide variety of cells, and in the case of blood, skin and the gastric lining the differentiated cells possess a short half-life and are incapable of renewing themselves. This has led to the idea that some tissues may be maintained by stem cells, which are defined as cells with enormous renewal capacity (self-replication) and the ability to generate daughter cells with the capacity of differentiation. Such cells, also known as adult stem cells, will only produce the appropriate cell lines for the tissues in which they reside (Fig. 1). Not only can stem cells be isolated from both adult and embryo tissues; they can also be kept in cultures as undifferentiated cells. Embryo stem cells have the ability to produce all the differentiated cells of an adult. Their potential can therefore be extended beyond the conventional mesodermal lineage to include differentiation into liver, kidney, muscle, skin, cardiac, and nerve cells (Fig. 2).

The recognition of stem cell potential unearthed a new age in medicine: the age of regenerative medicine. It has made it possible to consider the regeneration of damaged tissue or an organ that would otherwise be lost. Because the use of embryo stem cells raises ethical issues for obvious reasons, most scientific studies focus on the applications of adult stem cells. Adult stem cells...
are not considered as versatile as embryo stem cells because they are widely regarded as multipotent, that is, capable of giving rise to certain types of specific cells/tissues only, whereas the embryo stem cells can differentiate into any types of cells/tissues. Advances in scientific research have determined that some tissues have greater difficulty regenerating, such as the nervous tissue, whereas bone and blood, for instance, are considered more suitable for stem cell therapy.

In dentistry, pulp from primary teeth has been thoroughly investigated as a potential source of stem cells with promising results. However, the regeneration of an entire tooth, known as third dentition, is a highly complex process, which despite some promising results with animals remains very far from clinical applicability. The opposite has been observed in the area of jawbone regeneration, where there is a higher level of scientific evidence for its clinical applications. Currently, adult stem cells have been harvested from bone marrow and fat, among other tissues. Bone marrow is haematopoietic, that is, capable of producing all the blood cells. Since the 1950s, when Nobel Prize winner Dr E. Donnall Thomas demonstrated the viability of bone marrow transplants in patients with leukaemia, many lives have been saved using this approach for a variety of immunological and haematopoietic illnesses. However, the bone marrow contains more than just haematopoietic stem cells (which give rise to red and white blood cells, as well as platelets, for example); it is also home to mesenchymal stem cells (which will become bone, muscle and fat tissues, for instance; Fig. 5).

Bone marrow harvesting is carried out under local anaesthesia using an aspiration needle through the iliac (pelvic) bone. Other than requiring a competent doctor to perform such a task, it is not regarded as an excessively invasive or complex procedure. It is also not associated with high levels of risk. Bone marrow harvesting is carried out under local anaesthesia using an aspiration needle through the iliac (pelvic) bone. Other than requiring a competent doctor to perform such a task, it is not regarded as an excessively invasive or complex procedure. It is also not associated with high levels of risk.
of discomfort either intra or post-operatively (Figs. 4a & b).

Bone reconstruction is a challenge in dentistry (also in orthopaedics and oncology) because rebuilding bony defects caused by trauma, infections, tumours or dental extractions requires bone grafting. The lack of bone in the jaws may impede the placement of dental implants, thus adversely affecting patients’ quality of life. In order to remedy bone scarcity, a bone graft is conventionally harvested from the chin region or the angle of the mandible. If the amount required is too large, bone from the skull, legs or pelvis may be used. Unlike the process for harvesting bone marrow, the process involved in obtaining larger bone grafts is often associated with high levels of discomfort and, occasionally, inevitable post-operative sequelae (Figs. 5a–e).

The problems related to bone grafting have encouraged the use of bone substitutes (synthetic materials and bone from human or bovine donors, for example). However, such materials show inferior results compared with autologous bone grafts (from the patient himself/herself), since they lack autologous proteins. Therefore, in critical bony defects, that is, those requiring specific therapy to recover their original contour, a novel concept to avoid autologous grafting, involving the use of bone-sparing material combined with stem cells from the same patient, has been gaining ground as a more modern philosophy of treatment. Consequently, to the detriment of traditional bone grafting (with all its inherent problems), this novel method of combining stem cells with mineralised materials uses a viable graft from the patient himself/herself without the need for surgical bone harvesting.

Until recently, no studies had compared the different methods available for using bone marrow stem cells for bone reconstruction. In the following paragraphs, I shall summarise a study conducted by our research team, which enzyme-treated the creation of critical bony defects in rabbits and subsequently applying each of the four main stem cell methods used globally in order to compare their effectiveness in terms of bone healing.\[1\]

- fresh bone marrow (without any kind of processing);
- a bone marrow stem cell concentrate;
- a bone marrow stem cell culture; and
- a fat stem cell culture (Figs. 6 & 7).

Evidently, although bone marrow stem cell techniques for bone reconstruction are very close to routine clinical use, much caution must be exercised before indicating such a procedure. This procedure requires an appropriately trained surgical and laboratory team, as well as the availability of the necessary resources (Figs. 11a–h), taken during laboratory manipulation of marrow stem cells at São Leopoldo Mandic dental school in Brazil.

References


About The Author

Dr André Antonio Pelegrine is a specialist dental surgeon in periodontology and implant dentistry (CPD) with an MSc in Implant Dentistry (UNISA), and a PhD in clinical medicine (University of Campinas). He completed post-doctoral research in transplant surgery (Federal University of São Paulo).

He is an associate lecturer in implant dentistry at São Leopoldo Mandic dental school and coordinator of the perio-implantodontic-implant dentistry team at the University of Campinas in Brazil.

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Visual information and imaging technology in endodontics

By Prof. Hideaki Suda & Dr. Toshihiko Yoshikawa, Japan

In addition to intra-oral and panoramic radiographs, various visual techniques are available for endodontic treatment today. Above all, information obtained through the dental microscope has become essential.

“See better, do better” is a slogan in modern endodontics. The dental microscope is a wonderful tool for problem-solving in endodontics, for instance for the removal of broken instruments and root-filling materials, lining missed canals, perforation repair, diagnosis of tooth fractures, evaluation of marginal integrity of restorations, precise manipulation in periradicular surgery and deep endodontic caries, and confirmation of root-canal cleanliness. Yoshikawa et al. (2002), for example, reported that the rate of detection of root-canal orifices under a microscope was significantly higher than the number detected with the naked eye. It was also found that surgical loops were relatively ineffective compared with the microscope.

In addition, computed tomography (CT) is becoming increasingly popular among endodontists, particularly in the assessment of difficult cases and for problem-solving in endodontic treatment. Higher use (54.2 per cent) of CBCT was demonstrated by a recent web-based survey of active members of the American Association of Endodontists in the US and Canada (Dailey et al. 2010). Owing to its high radiation dosage, however, careful consideration is needed before taking CT images. Consequently, a project team from the Japanese Association for Dental Science presented a report in 2010 on the use of CT in dentistry, and a joint position statement by the American Association of Endodontists and American Academy of Oral and Maxillofacial Radiology was issued in February 2011. The combined use of the dental microscope and CT for apicectomy was approved as an advanced dental technology by the Ministry of Health, Labour and Welfare in Japan in 2007, and seven Japanese dental hospitals have been using the technology since 1 February 2015.

Optical coherence tomography (OCT) is a high-resolution imaging technique that allows micro-metre-scale imaging of biological tissues over small distances. It was introduced in 1991 and uses infrared light waves that are reflected from the internal microstructure within the biological tissues (Shemer et al. 2008). There have been reports on its use for intra-oral imaging, diagnosis of vertical root fracture (Yoshikawa et al. 2015) and perforations. Since OCT is non-invasive and free of radiation, this technology may be very useful for endodontic diagnosis and treatment (Figs. 1a–2).

**Contact Information**

Prof. Hideaki Suda is a professor of Pulp Biology and Endodontics at the Tokyo Medical & Dental University’s Graduate School. During the APEC congress in Seoul, he will be presenting a paper titled “Visual information and imaging technology in endodontics”.

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**“Continuous Education is a top priority for us, first proof is our new Training Centers”**

By Dental Tribune Middle East & Africa

Alexandre Mulhauser: Founded in 1913 in the heart of the watch valley, FKG Dentaire is a Swiss company internationally renowned for its high quality products for dentists, Endodontists and laboratories. This Swiss High Tech company is led by two visionaries Jean Claude Bouri (Chairman) and his son Thierry Bouri (CEO) who have a mission to always push Endo forward for the benefit of both the dentists and patients. This is possible thanks to the creation of one of the most modern Endo factories and the close collaboration between the Research & Development, Sales team, Marketing and a team of General Practitioners and Endodontists globally.

FKG inaugurated its Regional Office and Training Centre around 6 months ago in Dubai. What were the reasons for this setup?

I joined the FKG team almost four years ago to build up a new strategy which to develop FKG Dentaire in the Middle East and Africa Region. When I started this new challenge the FKG Dentaire name was known but the distribution network in the ME-A region was not working properly and the sales were below average sales in other regions. We are pleased to see that in a few years we were able to level up from the few countries where we were represented to over 50 countries today and continue to increase monthly. It has been possible thanks to a new positioning, a complete reorganization of the distribution channels, selection and training of serious Distributors that share our vision of quality and service to customers. It has been a success also thanks to the reactivity and flexibility of the structure and a fluidity of information together with fast decision processes with our CEO, Thierry Bouri. Even with all the effort and dedication, we believed being in the core of this market and tighten the links with our customers will be the key of success. The decision was finalized in December 2012 and already in June 2013 the subsidiary was created and we moved to Dubai.

Has the decision been good to choose UAE as your regional hub?

Companies that open a regional HQ in the ME-A Region usually open it either in Egypt, Jordan, Lebanon or United Arab Emirates. Due to the number of meetings we have around the region, installing the ME-A office less than 45 minutes road of two major airports (Dubai and Abu Dhabi) was the best choice to manage efficiently our travels. We decided to create the first MEA Endo Training Center owned by an Endo manufacturer and fully equipped with microscopes. The UAE training center receives groups from Middle East, Africa but also now India and is open to all other countries. Dentists who would like to come for a training do not have time to lose in connections between airports and these two hubs and their great number of connections are very useful for us to organize trainings. In addition, many love to enjoy Dubai and the other Emirates while coming for the training. In all cases the decision was the perfect choice.

What are the plans for 2014 and the Training Centre?

FKG Dentaire is already collaborating with international speakers (Dr. Gilberto De Belian, Dr. Martin Trope, Dr. Bertrand Khayat and others). We are currently finalizing a team of highly skilled clini-

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![Image 1a](https://via.placeholder.com/150)
![Image 1b](https://via.placeholder.com/150)
![Image 2](https://via.placeholder.com/150)
How does FKG separate itself from its competitors?

The Swiss Venture Club award-
ed FKG ‘Western Switzerland Company of the Year 2012’, a reward for the company’s dy-
namism, high product quality, and its continuing innovation. Race files is a real revolution in the Endodontic world, these files are opposite to most of the products on the market and it does not screw thanks to an al-
ternating cutting edge design. This allows the dentist to be more confident using a precise file he controls. It also features the SMD (SafetyMemo®), a patented daisy on all the in-
struments which is the only user friendly system allowing the clinicians to know exactly how many times a file has been used and help to monitor the file stress to reduce risk of file separation.

FKG Dentaire has developed a sequence of scouting files years before any company on the market, the ScoutRace 10.02 is still today smallest rotary file and now a new generation of tips is available with six blades (Available on BT-Race). It is able to drill and follow the way in the canals without stress-
ing the root unlike big tapered files. FKG Dentaire is not ruled and led by marketing and sales figures but by passion of preci-
sion, quality and pride of happi-
ness of dentists and patients.

How important is Continual Medical Education for FKG and its clients?

Continual Education is a top priority for us, first proof is our Educational Programs. Depending-

Where do you see FKG in a year from now?

In the hands of all dentists and Endodontist wishing to share our vision of conservative and biological Endo.

What are some of the regional events you are attending with FKG?

In United Arab Emirates we are present in most of the important conferences in the region (Dental Facial Cosmetic Int’l Conference, AEEDC, APDC, and even the CAD/CAM & Digi-
tal Dentistry Int’l Conference through our distributor Dubai Medical Equipment) and we have been really active at the Pan Arab Endo Conference in Lebanon this year bring-
ing Dr. Gavin Williams, a very experienced South African Endodontist and Prof Roger Rebeiz, Lebanon who provide live retreatment with FKG Files D-Race and 1race. We are also represented in most of the con-
ergess and shows in the region with our distributors and part-
ners.

You are a member of MEMA As-
sociation, can you tell us about it?

MEMA (Middle East Managers Association) has been created few years ago in Lebanon. To-
day it gathers over 70 Middle East Managers of Top Dental companies. The goal of this as-
sociation is to grow the dental market through the network and expertise of this team of skilled professionals, I believe all Dental Industry Middle East Managers that are not already part of MEMA should join; it is a very respectful and friendly environment with great per-
spectives.
The Pinnacle of Precision: The KaVo CAD/CAM Systems Everest & Arctica

By Dental Tribune International

W ith the ARCTICA and Everest CAD/CAM systems, KaVo offers dental and practice labs in the CAD/CAM field practice-oriented economic solutions for high-quality restorations.

The KaVo ARCTICA CAD/CAM system is optimally attuned to the daily requirements in small labs and practice labs. It provides dental technicians and dentists with high-quality results. For maximum flexibility, the ARCTICA system has open interfaces allowing, for example, the upload of various intraoral scanner data (which are available in the market) into the KaVo multiCAD software.

Dental photography made simple by Shofu

By Dental Tribune International

S ingapore: For almost a century, Shofu Dental has been a household name for dental clinical and lab materials. However, the company has also been manufacturing and selling equipment for digital dentistry and photography, if only in its home market in Japan.

With the introduction of the new EyeSpecial C-II (on display at IDEM 2014), Shofu is now bringing a new digital camera to Singapore, exclusively developed for use in dentistry.

Made completely in-house in cooperation with experts in photography and cosmetic dentistry, the camera was conceptualised to be useful for a wide range of dental applications including intra-oral photography, shade selection and detailed imaging of anterior teeth. It comes with eight pre-set dental modes which, according to Shofu Dental’s Asia-Pacific Managing Director Patrick Loke, are combined with a built-in proprietary flash unit and a number of image processing functions like colour-correction and auto-cropping to simplify the process of dental photography significantly. He added that the camera is extremely lightweight and features a large LCD touchscreen display, making it possible for the user to operate it with one hand, leaving the other hand free for holding the mirror or cheek retractor.

“**This camera is so simple and predictable that it provides a fool-proof solution for dentists, eliminating even those without any in-depth knowledge of dental photography to take accurate photos every time. The entire dental team, even in multi-specialty practices, will benefit from it,”** Loke told Dental Tribune Online on Thursday.

Prior to its premiere here at IDEM, the camera has been showcased at large dental meetings in the US and China. But it is here, in Singapore, that the EyeSpecial C-II will be presented to a large community of Asian dental professionals for the first time. “We believe that IDEM is the most suitable event in which to launch the EyeSpecial C-II as it will give this unique product regional exposure,” explained Loke.

He said that further development into shade taking and restorative simulating functions is anticipated for the camera in the future.

Visitors to IDEM Singapore 2014 will be able to get hands on with the EyeSpecial C-II at Shofu’s booth 4A-10 on Level 4. In addition to the camera, the company also has a number of products for restorative dentistry on display, including the universal direct aesthetic restorative Beautifil Injectable and Beautifil Essential, a product for sealing deep grooves and fissures without the need for a conventional phosphoric acid etchant.

Contact Information

For more information visit: www.Kavo.com/MECA
Or email us: info.me@kavo.com

![KaVo Arctica CAD/CAM System](image1)
![KaVo Everest CAD/CAM System](image2)

GC announces changes at executive management level

By Dental Tribune International

L euven, Belgium: Dental materials manufacturer GC has announced that it has adapted organisational structures at its European headquarters to accommodate its new orthodontic business. On 1 April, Eckhard Maedel assumed the role of President of GC Orthodontics Europe and GC Tech.Europe, while Michele Puttini was named new President of GC Europe.

Maedel has served as President of GC Europe for the past two years, and will now help strengthen the growth of the company’s orthodontic product portfolio to customers in Europe and the Middle East. GC Tech.Europe offers a variety of possibilities and solutions in implant therapy to dental professionals.

Last September, GC Corpora tion announced the foundation of GC Orthodontics Europe, which currently aims to sell the company’s orthodontic product portfolio to customers in Europe and the Middle East. GC Tech.Europe offers a variety of possibilities and solutions in implant therapy to dental professionals.

Puttini will retain his responsibilities as General Manager of Sales and Marketing in Europe for the time being, and will contribute his expertise in international management in the dental industry to develop GC Europe’s business further.

![Eckhard Maedel (left), new President of GC Orthodontics Europe and GC Tech.Europe, and Michele Puttini, new President of GC Europe.](image3)

Doctor smile educates Saudi supplier on dental lasers

By Dental Tribune International

Jeddah, Saudi Arabia: Italian dental laser manufacturer LAMBDA has announced that it is aiming to strengthen its position in the Middle East. At the beginning of the year, the company’s sales manager met with Saudi sales representatives to instruct them in the use of doctor smile lasers, a line of products made by LAMBDA.

Doctor smile’s Export Sales Manager Alessandro Boschi and the board of directors of Medical & Pharmaceutical Services Bashir Shahib Al Jabri, a supplier of dental products in Saudi Arabia and the Gulf region, met to define the support strategy for laser users in terms of educational opportunities and services across the Saudi territory.

Boschi trained the Saudi company’s sales team by providing in-depth information on the lasers and outlining the relevant marketing strategies.

In addition, doctor smile’s sales and dental lasers were installed at the Faculty of Dentistry at King Abdulaziz University, which was established in 1985 in response to the need for qualified Saudi dentists to maintain the dental health services in the country.

The company works in close collaboration with the faculty in establishing higher education fellowships for all doctors interested in learning more about advanced laser dentistry.
1 denture

Everyday, day after day, your patient’s denture will have to support thousands of tasks. So it’s little wonder that even people with well-fitting dentures will have problems with trapped food, fears their denture will dislodge or a concern about bad breath.

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SENSITIVE TO THE NEEDS OF YOUR
DENTINE HYPERSENSITIVITY PATIENTS

Sensodyne® understands that dentine hypersensitivity patients have differing needs

Sensodyne® Complete Protection, powered by NovaMin®, offers all-round care with specially designed benefits to meet your patients’ different needs and preferences. With twice-daily brushing, Sensodyne Complete Protection:

- Clinically proven to provide dentine hypersensitivity relief* 1-3
- Contains fluoride to strengthen enamel
- Helps to maintain good gingival health* 4-6

Sensodyne® Complete Protection, powered by NovaMin® – an advanced approach to dentine hypersensitivity relief

NovaMin®, a calcium and phosphate delivery technology, initiates a cascade of events on contact with saliva* 7-9 which leads to formation of a hydroxyapatite-like restorative layer over exposed dentine and within dentine tubules.* 2-6

In vitro studies have shown that the hydroxyapatite-like layer starts building from the first use* 10 and is up to 50% harder than dentine.* 14-17

The hydroxyapatite-like layer binds firmly to collagen within exposed dentine* 20 and has shown in in vitro studies to be resistant to daily physical and chemical oral challenges* 21-24 such as toothbrush abrasion* 25 and acidic food and drink* 26,27.

In vitro studies show that a hydroxyapatite-like layer forms over exposed dentine and within the dentine tubules:* 7,9,10,13

Adapted from Earl et al, 2011. | All-round care for dentine hypersensitivity patients* 6

Sensodyne® Complete Protection helps maintain good gingival health* 6

Good brushing technique can be enhanced with the use of a specially designed dentifrice to help maintain good gingival health.* 15,16

In clinical studies, NovaMin® containing dentifrices have shown up to 16.4% improvement in plaque control as well as significant reduction in gingival bleeding index, compared to control toothpastes.* 6,7

Adapted from Tai et al, 2008. Randomized, double blind, controlled clinical study of 65 volunteers given NovaMin® containing dentifrices or placebo control for aqueous dentifrices containing no NovaMin® for 6 weeks. All subjects received supra gingival prophylaxis and polishing and were instructed in brushing technique. *GBI scale ranges from 0-3.

Significant reduction in gingival bleeding index (GBI) over 6 weeks with a NovaMin® containing dentifrice* 6

58.8% reduction from baseline in 6 weeks with a NovaMin® containing dentifrice* 6

All-round care for dentine hypersensitivity patients* 6

References:

Gsk
GlaxoSmithKline Consumer Healthcare
Arenco Tower, Media City, Duha, U.A.E.
Tel: +971 4 3769696, Fax: +971 3366945 P.O.Box 29816.
For full information about the product, please refer to the product pack.
For reporting any Adverse Event/Side Effect related to GSK product please contact us on contactus@GSK.com.
Dear Friends and Colleagues

Welcome to yet another edition of the 9th CAD/CAM & Digital Dentistry International Conference.

We live in an exciting era of medical and technological breakthroughs. Having witnessed a number of great advancements in the dental industry we need to keep abreast with these latest developments in order to serve our patients at the best level which they deserve.

This year’s conference will cover several subjects related to Digital Dentistry enlightening all delegates with experiences from over 25 international key Opinion Leaders who have gathered in Dubai to share with us the latest research and developments. Participants will also have the unique chance to see the latest equipment which will be showcased at the product display made available by the top of the dental industry. We sincerely hope that this meeting will let participants immerse themselves in plenty of knowledge exchange and share opportunities with one another.

On behalf of Emirates Dental Society, I would also like to take this opportunity to invite all of you to join us for the 56th Asia Pacific Dental Congress which will take place on 17-19 June 2014 in Dubai, UAE. The event will be held under the patronage of H.H. Sheikh Hamdan Bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of Finance and President of Dubai Health Authority. We look forward to seeing you there.

Dr. Aisha Sultan
President Emirates Dental Society
President of the Conference

8th CAD/CAM & Digital Dentistry


As you all know, the 8th edition was held in May in Dubai and the 2nd Asia Pacific edition was held in October 2013 in Singapore. As you may expect, both events enjoyed the same success that we are all used to.

We are very much thrilled by the grounds that our conferences are covering year after year. By now, all of us; organizers, sponsors, as well as speakers are a very well known symbol of quality at the international level. It is our mutual cooperation that brought us to this level of professionalism. All of us put the interest of our participants as our top priority.

Though the dental CAD/CAM industry has reached quite a very high level of development and became a major trusted player in Dentistry, it continues to improve on a fast pace. Statistics tell us that by the year of 2050, more than 50% of dental services will be done through CAD/CAM technology. This serves only to highlight the importance in keeping up with this fast moving technology through such highly specialized conferences.

We will continue this unsurpassed cooperation to bring to our audience the most recent updates of technology in the CAD/CAM eld with few “surprises” as well.

Dr. Munir Silwadi
BDS, MRCDSO, DUSS, FADI, FICD
Conference Chairman & Scientific Advisor
### DAY ONE

**FRI 9-10 MAY 2014**

**Jumeirah Beach Hotel, Dubai, UAE**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00-09:45</td>
<td><strong>Lecture</strong> Prof. Gufranbain Scottland - Maintenance of the Dental Implant Patient; How was it?*</td>
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<tr>
<td>09:45-10:30</td>
<td><strong>Lecture</strong> Dr. Matthew Sudbrake - Clinical hygiene protocols and complications within various fields of Dental Treatments</td>
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<tr>
<td>10:30-11:30</td>
<td><strong>Lecture</strong> Victoria Wilson - &quot;Lost in Translation&quot; Enhanced Effective Communications in Dentistry</td>
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<tr>
<td>10:30-12:05</td>
<td><strong>Lecture</strong> Dr. Abdulla Ahmed - Advanced Innovations in Dental Hygiene and Plaque Management: HOW TO TREAT THE BEAST?</td>
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<td>12:05-12:50</td>
<td><strong>Coffee Break</strong></td>
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### DAY TWO

**SAT 10 MAY 2014**

**Jumeirah Beach Hotel, Dubai, UAE**

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<tr>
<th>Time</th>
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<tr>
<td>09:00-09:45</td>
<td><strong>Lecture</strong> Dr. Kurt Davies, Germany - High Performance CEREC and Intraoral Cameras in Modern Dentistry: - A State of the Art Review</td>
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<tr>
<td>09:45-10:30</td>
<td><strong>Lecture</strong> Dr. Andrea Agnoli &amp; Dr. Alessandro Agnoli, Italy - CAD/CAM Solutions in the Digital Worldflow (the Fully Digital Workflow)</td>
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<tr>
<td>10:30-11:00</td>
<td><strong>Lecture</strong> Dr. Andrea Kurbad, Germany - The management of missing teeth (2) - Fixed partial dentures</td>
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<tr>
<td>11:00-11:30</td>
<td><strong>Lecture</strong> Dr. Matthias Leunig, Germany - CAD/CAM for the Future due to technological and economic reasons</td>
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<td>11:30-12:15</td>
<td><strong>Lecture</strong> Dr. Petros Yannopoulos, Greece - CAD/CAM Screw Retained Implant Prosthesis</td>
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<td>12:15-13:00</td>
<td><strong>Lecture</strong> Dr. Etel Tashkin, UAE - Bone-Centric Treatment in the Aesthetic zone</td>
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<tr>
<td>13:00-13:50</td>
<td><strong>Lecture</strong> Dr. G. John, UAE - Computer Assisted Periodontal Probing and Diagnosis</td>
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<tr>
<td>13:50-15:00</td>
<td><strong>Lecture</strong> Dr. Bernardo Caruso &amp; Dr. Nicolaus Bodi, France - Digital workflow and 3D printing applied to implant treatment (the new 3D implant)</td>
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#### HANDS-ON COURSES

**Jumeirah Beach Hotel, Dubai, UAE**

- **Dental Hygienists**
  - **Direct Viewers Disinfection Course**
    - Dr. Ayat Abou, UAE - 09-10 May, 2014 (10:00 - 11:00) - **2 CME ADA CERP**
  - **Virtual Anticariat and CAD/CAM Designing**
    - Dr. Lisa Wieringa, Germany - 10-11 May, 2014 (10:00 - 11:00) - **2 CME ADA CERP**
  - **Dental Hygienists**
    - **Oral Hygiene and Management of dental hypersensitivity**
      - Dr. Huda Al Arfaj, UAE - 10-11 May, 2014 (10:00 - 11:00) - **2 CME ADA CERP**
### Game Plan

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<thead>
<tr>
<th>PLATINUM SPONSOR</th>
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### Instructions:
1. Exchange Business Cards with Company - Ask for Stamp in return
2. Find out the Main Product
3. Complete the Game plan with products & stamps
4. Submit your contact details to the reception
Planmeca’s open CAD/CAM solutions

Your ideal combination

- Open solutions for efficient digital dentistry
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- Perfectly fitting prosthetic works
- Flexible and advanced same-day dentistry

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Manufacture.
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Planmeca PlanMill® 50
PlanEasyMill™

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Crystal sponsor at
CAD/CAM & Digital Dentistry International Conference
Jumeirah Beach Hotel, Dubai 09-10 May 2014
Bio-Emulation™ Colloquium
The Santorini Experience - June 21-22, 2014, Greece

Mentors

Emulators

Registration information:

June 21-22, 2014, Greece
The Venue will be held at the Petros M. Nomikos Conference Centre, Fira.
Colloquium fee: € 799
Tel: +971 4 361 617 / email: info@cappmea.com
INTRODUCING

DIGITAL DENTISTRY SHOW

AT INTERNATIONAL EXPODENTAL MILAN

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