DANAHER opens MEA Office in Dubai Healthcare City

By Dental Tribune MEA

DUBAI, UAE: Danaher is a global science and technology innovator committed to helping its customers solve complex challenges and improving quality of life around the world. Its family of world class brands have unparalleled leadership positions in some of the most demanding and attractive markets, including health care, environmental and industrial. The company’s globally diverse team of 66,000 associates is united by a common culture and operating system, the Danaher Business System. In 2013, Danaher generated $19.1 billion in revenue and its market capitalization exceeded $50 billion. For more information please visit www.danaher.com.

Dental Tribune MEA had the pleasure to attend the opening of the Danaher MEA offices at Dubai Healthcare City and shortly interview James Lico, Executive Vice President Danaher and Alex Joseph, President Middle East and Turkey, Danaher Corporation on their thoughts for the region.

What does the opening of the MEA office in Dubai Healthcare City mean for Danaher?

A. Joseph: The opening highlights our commitment to the Middle East and is the direct result of the growth we are experiencing in the region.

And how important is it for you to have an office in Middle East and Africa?

J. Lico: As Alex mentioned, the region is incredibly important for us. Unlike many companies who focus on just selling to the region, for us it is important to be close to customers and build up the capability of our team locally so we can serve customers. The opening of this office really proves we not only want to do business in the region but invest in the long run to serve our clients.

Danaher celebrates together with the Dental Division the opening of the new MEA office.
6th Dental-Facial Cosmetic Int’l Conference attracts 1,527 in Dubai

By Centre For Advanced Professional Practices

DUBAI, UAE: The 6th Dental-Facial Cosmetic International Conference 2014 took place on 14-15 November 2014 closing with a total of 1,527 participants in Jumeirah Beach Hotel Dubai.

The Event
Organized by Centre For Advanced Professional Practices (CAPP), Emirates Dental Society (EDS) and Lebanese Dental Association (LDA). The event stretched over 5 days including a 2 day conference, 12 Hands-Courses and a Dental Hygienist Day. Newcomers, providers and experts from 54 countries gathered for the 6th time a great number of attendances.

There was support from 15 sponsors including Sirona, Ivoclar Vivadent, 3M ESPE, Planmeca, Oral-B, KaVo, VITA, Kerr, Carestream, Southern Implants, Ritter, MPC and Philips Sonicare.

The Scientific Program
Dr. Murir Silwaba, the conference chairman and scientific program advisor introduced a total of 24 international speakers who shared their experience within the fields of Dental and Facial Cosmetics. “A unique blend of science, clinical knowledge, and cutting edge technology in the field of dentistry and beyond. All of us, organizers, speakers, and sponsors spare no time or effort to bring to you the most up to date developments in the various fields of dentistry.” Dr. Murir Silwaba.

Hands-On Courses

Save The Date 2015
In 2015, CAPP will celebrate its 10th year Anniversary of providing top quality continuing dental education in the Middle East and Asia region. This milestone will be celebrated at the 10th CAD/CAM Conference.
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Contact Information
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Participants of the 6th DFCIC enjoying a small group photo

Dr. Nabeel Humood Alsabeeha, MOH, UAE listening to lectures during 6th DFCIC

Dr. Aisha Sultan Alsuwaidi, UAE presenting the welcome message to all participants.

The leading dental industry exhibited during the two day exhibition including 13 sponsors

23 international speakers presented during the 2 day Conference

The Scientific Program was very well attended for two days

Prof. Khaled Balto, KSA talking Endodontics

A total of 12 hands-on courses stretched from 12–16 November 2014

Dr. Ninette Banday, UAE receiving the supporter plaque for American Academy of Implant Dentistry

Dr. Muteir Silvadi, UAE and Dr. Gaetano Palone, Italy during the Q&A Session

Dr. Julian Caplan, UK discussing the latest in Dentistry
General Dental Practitioners Lecture Series
Dubai College of Dental Medicine
Mohammed Bin Rashid Academic Medical Center

Speakers:

Professor David Wray
Dean of the DCDM
Professor of Oral Medicine.
Dubai College of Dental Medicine

Date: January 05, 2015
Time: 07:45 pm – 08:30 pm

Lecture 1
Dental Prescribing

Dr. Iyad Hussein
Assistant Clinical Professor/
Specialist in Paediatric Dentistry
and Dental Anxiety.
Dubai College of Dental Medicine

Date: January 05, 2015
Time: 08:45 pm – 09:30 pm

Lecture 2
The neglect and abuse of children: prevention,
detection and management. What is our role as
healthcare professionals in the modern age?

Dr. Shazia Naser-Ud-Din
Assistant Professor Orthodontics
Dubai College of Dental Medicine

Date: February 02, 2015
Time: 07:45 pm – 08:30 pm

Lecture 1
Treatment Planning In Orthodontics—a
Systematic Approach

Dr. Manal Al Halabi
Postgraduate Program Director of
Pediatric Dentistry
Dubai College of Dental Medicine

Date: February 02, 2015
Time: 08:45 pm – 09:30 pm

Lecture 2
The Child Friendly Dental Practice,
A Myth Or A Fact?

For online registration please visit: http://events.dhcc.ae
For inquiry, please contact Ms. Rose Clemente
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CAPP designates this activity for 2 CE credits.

By Lawrence Kotlow, DDS, Emirco DiVito, DDS, and Giovanni Olivi, MD, DDS

Lasers provide a exciting new technology that allows the dentist the ability to give patients optimal care without many of the “fear factors” found in conventional dental techniques. Used with proper understanding of laser physics, lasers are extremely safe and effective.

Using lasers for caries removal, perioperative, endodontic treatment, bone management, cutting and shaping, and soft-tissue procedures can reduce postoperative discomfort and infection, and provide safe, simple in-office treatment. As a result, we can increase our efficiency, expand what we can do, achieve better results and increase production.

Lasers represent a real quantum leap forward in the treatment of our patients, including the pediatric patient. The U.S. Food and Drug Administration (FDA) gave approval for the use of the Er:YAG laser in 1997 for both hard- and soft-tissue procedures. The erbium:yttrium-aluminum-garnet’s (Er:YAG) development and success have made the treatment of children safer and quicker.

Plainly stated, a laser is a piece of equipment that creates a concentrated monochromatic beam of visible or infrared light that can be absorbed by a specific target. In cases where alloy is preferred, 3, 4, 5, 6 restorative medici- nes can reduce postoperative discomfort and infection, and provide safe, simple in-office treatment.

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of NaOCl significantly increasing production and consumption of available chlorine in comparison to ultrasound activation. 1,2 A recent study has reported how the use of an Er:YAG laser, equipped with a newly designed radial and stripped tip, in combination with 17 percent EDTA solution, using a very low pulse duration (50 microseconds) and low energy (20 mJ) resulted in effective debris and smear layer removal with minimal or no thermal damage to the organic dentinal structure through a photoacoustic-technique called photon-induced photoacoustic streaming or "PIPS." 13,14 Also the same photoacoustic protocol in combination with 5.25 percent sodium hypochlorite has been investigated and shown to reduce the bacterial load and its associated biofilm in the root canal system three dimensionally. 8 Other similar studies are in progress for publication and the results are promising and suggest a three-dimensional positive effect of this laseractivated decontamination (LAD) method.

The purpose of this article is to present briefly the experimental background of this laser technique and to introduce the clinical protocol.

Scientific background

The microphotograph recording of the LAI studies suggested that the erbium lasers used in irrigant-filled root canals generate a streaming of fluids at high speed through a cavitation effect. 9 The laser thermal effect generates the expansion of the irrigation media of the irrigant solution, generating a secondary cavitation effect on the intracanal fluids. To accomplish this streaming, it is suggested the fiber be placed in the middle third of the canal, 5 mm from the apex and stationary. 10 This concept greatly simplifies the laser technique, without the need to reach the apex and to negotiate radicular curves.

Also, the recorded video of the new technique, PIPS, showed a strong agitation of the liquids inside the canals. It differs from the already cited LAD technique by activating the irrigant solutions in the root canals using a laser of profound photoacoustic and photo-mechanical phenomena. The use of low energy (50 microsecond pulse, 20 mJ at 15 Hz, 0.5 W average power, or less) generates only a minimal thermal effect. The study with thermocouples applied to the radicular apical third revealed only 1.2 degrees C of thermal rise after 20 seconds and 1.5 degrees C after 40 seconds of continuous radiation. 11,12

When the erbium laser energy is delivered at only 50 microsecond pulse durations through a specially designed tapered and stripped 400 microns tip (Fotona Light-Walker, Technology4Medicine), it produces a large peak power of 400 watts when compared to a longer pulse duration. Each impulse, absorbed by the water molecules, creates a "water wave" that leads to the formation of an effective streaming of fluids inside the canal while also limiting the undesirable thermal effects seen with other methodologies.

The placement of the tip in the coronal portion only of the treated tooth allows for a more minimally enlarged canal preparation with less thermal damage as seen with those techniques placed into the canal system. The root canal surfaces irrigated with 17 percent EDTA and laser activated for 20 seconds showed exposed collagen matrix, opened tubules and the absence of smear layer and debris (Figs. 1-5). The running with 5.25 percent sodium hypochlorite and laser irradiation for 20 seconds produced a strong activation of the solution, as reported by Macek, 13 improving the disinfecting action of the sodium hypochlorite. 14 The disinfecting action of PIPS is very effective both on the root surface, the lateral canals and the dentinal tubules, as confirmed with SEM imaging, as demonstrated that PIPS technique produced, often to a size 25/04, allowing for a more minimally invasive and biomimetic preparation that can then be obturated three dimensionally.

Discussion

Laser irradiation is a common technique used in endodontics to improve the cleaning, the debridging and disinfection of the root canal system. Many wavelengths and protocols are used. Near infrared lasers are used for the three-dimensional decontamination of the root canal system. Nd:YAG and diode lasers use thermal energy to destroy bacteria. Observations reveal a certain grade of thermal injury to the root canal surface and create a typical morphological damage. Moreover, they are not able to thoroughly remove the smear layer.

On the contrary, erbium lasers are used for their effective smear layer removal while their bactericidal activity is limited to the root surface. The placing of the tip close to the apex and its back movement during the activation process is related to the risk of apical perforation, ledging and surface thermal damage, because of the ablation ability of this wave length. Also a combination of the near and medium infrared lasers has been proposed. A technique, called twinned endodontic treatment (TET), uses the erbium-holmium laser energy first, to clean the root canal surface and remove the smear layer, and the Neodinium:YAG laser second, used in dry mode as the final disinfecting step. All these techniques utilize traditional tips and fibers placed into the canal, close to the apex (1 mm) with all the corresponding thermal disadvantages observed in long, narrow and curve canals. The erbium lasers are also used as a medium of activation of commonly used irrigants (LAI), avoiding the risk of thermal damage, while increasing the cleaning and disinfecting activity of the fluids. PIPS, in particular, reduces all these risks and disadvantages, thanks to the position of the tip in the coronal orifice only and to the use of minimally ablative energy levels of 20 mJ or less.

The findings of our studies demonstrated that PIPS technique resulted in a safe and effective debridging and decontaminating of the root canal system. Our clinical trials showed that PIPS technique greatly simplifies root canal therapy while facilitating the search for the apical terminus, debridging and maintaining patency.

As a result of the efficacy of PIPS, the final size required for canal shaping can be significantly reduced, often to a size 25/04, allowing for a more minimally invasive and biomimetic preparation that can then be obturated three dimensionally.

Conclusion

Lasers are an extremely versatile addition to the dental practice and can be used in many instances instead of the conventional methodologies employed by the vast majority of dentists. Incorporating a laser in the dental practice should be viewed as an investment rather than a cost. When used with a good knowledge of laser physics, training and safety, lasers provide us with a new standard of dental care.

References


Full list of references is available from the publisher.
Simplification at its best

By Thorsten-Simon Eickholt, 3M ESPE, Seefeld, Germany

I’s there a need for another posterior restorative in dentistry? Clearly, the answer is yes. What is desired is a product that offers the mechanical properties of products like 3M™ ESPE™ Filtek™ Supreme XTE Universal Restorative are familiar with, but allows for a more time-efficient placement procedure.

For this purpose, 3M ESPE developed the new 3M™ ESPE™ Filtek™ Bulk Fill Posterior Restorative. The material contains true nanotechnology and is available in five shades. It may be placed in increments of up to 5 mm, but if desired, a layering technique is also possible. In combination with the fact that the new material does not require a covering composite layer and is easily sculptable right after placement, this ensures a fast and easy filling procedure ideal for all kinds of posterior restorations.

Reducing shrinkage stress

Traditionally, a reduction in shrinkage and shrinkage stress has been accomplished by optimizing the filler composition as in Filtek Supreme XTE Universal Restorative. This restorative uses an innovative filler technology with silica and zirconia particles and clusters. The shrinkage inherent to any methacrylate matrix is low in this material and does not compromise its clinical performance when placed in layers of 2 mm.

In order to allow for increments of up to 5 mm in Filtek Bulk Fill Posterior Restorative, the nanofiller technology was adopted, but a different matrix developed. The composite contains a new aromatic dimethacrylate with high molecular weight (AUDMA) and a novel addition-fragmentation monomer (AFM). Due to AUDMA, the polymer matrix developing during polymerization obtains a higher flexibility. AFM changes the polymerization reaction: Typically, light curing causes chains of monomers to form and cross-link with each other, resulting in a polymer network. Those monomers which are closest to the light source react immediately and the chains grow from this point. The increasing rigidity and decreasing volume of the network cause stress to develop at the margins. In contrast, AFM contains an additional reactive site that enables cleavage of the forming molecular chains during polymerization. The obtained fragments are more evenly distributed so that the network relaxes and stress is prevented. Cross-linking again at a later stage, the final polymer structure is obtained.

Conclusion

The uniform network formation and the increased flexibility of the matrix result in a restoration that causes less shrinkage stress even when applied in 5 mm increments.

As a consequence, a tight marginal seal is obtained and the risk of post-operative sensivities is minimized, while superior physical pro-perties are achieved.

This was confirmed in initial tests: Properties such as the

wear resistance and polish retention are similar to those of the proven Filtek Supreme XTE restorative. An excellent handling and 24% faster application time was revealed in a field test with European dentists*. In this test, 150 Western European practitioners put the new product head-to-head against their preferred restorative materials that require different placement techniques. The materials included incrementally placed composites as well as high- and low-viscosity bulk fill materials.

The result: 92% of the dentists would recommend the material to a colleague.

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*Figures adapted from Field Test Analysis with European Dentists conducted by 3M ESPE

Shrinkage stress-preventing mechanism in 3M™ ESPE™ Filtek™ Bulk Fill Posterior Restorative.

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www.3MESPE.com/Filtek
Translucent Full-contour Zirconia...
Innovation in the dental industry

By Ahlam Farah, Syria

B

By being able to Choose the same material for fabrication of every single restoration in one case (whether they were bridges, full crowns or veneers) is always a big advantage, it serves in achieving the accurate matching and harmony among all the restorations in the following dimensions: (Value, Height, Clarity, translucency, depth, etc.). The challenge for the dental manufacturers have been always strong and esthetic-level of the dental restorative material, finally we started testing new generations that combine both, but the question is still: Did we esthetically get to the level of the glass-based material such as (Lithium Di-Silicate), the answer might be no, but perhaps we are close with the TFZ (Translucent Full-Contour Zirconia) for the long span bridges in the posterior region.

The pre-operative situation
35 years old lady, presented to her consultation appointment at the dental studio asking to change her smile.

Her main concern was the excessive yellowish-brownish discoloration in her front teeth, especially the upper ones. Besides the miss mild teeth set up that reflected older age effect on her face (according to her). She was a queen manager in one of the beauty & skin care companies in Dubai, and her overall look was important to her. (Fig. 1a)

Data collection and analyses
We evaluated the patient pre-operatively, went through her dental history, took many photos from different angles, and discussed her expectations and goals.

Intra-Oral Diagnoses
After the dentist diagnosed the case he reported the following: Sever tetracycline discoloration, lack of vitality, poor appearance, besides disproportional dimensions of the teeth proportions, and conflicting smile line with the curvature of the lower lip line. (Fig. 4)

Radiographic exam revealed a need for endodontic treatment for some of the posterior teeth. Preliminary impressions were taken to have a study model for us to be our physical refer- ence where we can draw our lines, straighten long axes, adjust length and do the cosmetic counterpointing, etc.

The need for DSP (Digital Smile Philosophy) in this case:
Lips dynamic

Enrolling the photos we took on our PC screen and digitally redesign the teeth arrangement according to the lips movements and curvature in the means of (Digital Smile Philosophy), was necessary since our patient’s main complaint was the smile. (Fig. 1a)

There for, as a dental team, we should think further than esthetically reshaping each individual tooth. We should think more of relation between each tooth to the neighboring tooth next to it, from one hand, and to the harmony between the entire teeth arrangement and the lips movements, on the other hand. (Fig. 1b)

The Philosophy of redesigning the smile digitally
Through a simple software (power point Or Keynote), we can edit our photos based on our knowledge in the dento-facial esthetic and harmony. To have more sufficient ways of communicating between the clinic and its laboratory on one end, and for our patient to visualize our final outcome whether its meet- ing his/her expectation of the whole treatment or not.

So the dentist will not go over- invasive in his/her preparation of the patient teeth anymore, neither the dental technician will have to guess in creating the shape and measurements of his/her final restorations. But they both will follow a interdiciplinary plan where results are controlled and expected accord- ing to a preapproved-by-patient mock up test. The trick is that we need to make our measure- ments on our PC screen match the real measurements on our patient teeth and their replica of a cast stone model, therefor we develop a digital roller, which measures distances on the PC. This will be our communicating tool between the digital world and the real world.

Then we calibrate our photos according to it (shrink & stretch), for any editing done on the photos from lengthening to shortening etc, will be able to be measured using our digital roller and these measurements can be used by the dental technician to fabricate his/her diagnostic wax-up. (Fig. 4, 5, 6, 7)

Choosing the tooth contour for our ceramic
No line has been proven 100 percent, between the face and tooth contour, and no certain rule has been followed to sim- plify the mission of choosing the fabricated restorative couture.

However, some theories have been put into good use, most of them are as follows:

- The challenge of combining Zirconia to e.max in the same case.
- Explained in details in Lab Tribune page 13C.

Working technique Restriction
Our lab working techniques on to reach adequate harmony among lips, smile and face character.

for characterizing a pressed set of veneers are either staining technique, cut back technique, or layering technique. But in combination cases where we...
have glass based veneers (SiO2) and Zirconia based Full Contour bridges in the same case, the scenario is different, and our working options are minimized to have mostly the staining technique working protocol to conduct simultaneously on both the veneers and the bridges. In order to guarantee that both materials react to light as close as possible to themselves, so shade dimensions (Hue, Value, Chroma) in both materials can almost match. (Fig. 17)

That scenario is valid mostly when the required final shade is one of the bleach shades, then the ratio of translucent enamel is pretty much relevant to the patient desire, but majority of patient who ask for a bleach shade are concerned about showing a high brightness of their smiles rather than showing a natural looking translucency on the incisal third.

Staining technique will prevent us from layering feldspathic ceramic (enamel) on top, which leaves the glass LiS2 exposed, that allows more light and brightness to radiate from the pressed material, at the same time that would lessen the esthetic look of a natural tooth, but the question again is; what does our patient need? And what category of patient he/she is? He/she wants to bring teeth back to their natural look? Or he/she wants bleach teeth with no translucency graduation. (Fig. 18, 19: note the matching, after final cementation, between the IPS e.max press & the Zenostar Zr.

I realized that finally found my robust restorative material for long span bridges in the posterior region that I can combine to the IPS e.max material without any risk of hesitation, thanks to the innovative TFZ Zenostar.

Cementation and follow up: Emax veneers were finally cemented using VarioLink II (Ivoclar Vivadent resin cement-adhesive cementation technique), then Zenostar posterior zirconia bridges were followed using the same VarioLink II base mixed with catalyst, after the cementation surface had been blasted in the lab with AL2O3. Finishing and polishing rubber heads (OptiFine Assortment, Ivoclar Vivadent) were used to remove excess residual cement and to eliminate all occlusal interferences. During the follow up appointment, a final checkup and modifications were made to eliminate all occlusal interferences. (Fig. 20 – 25)

Conclusion

After that outstanding match I had between the IPS e.max press & the Zenostar Zr.

I had between the IPS e.max press & the Zenostar Zr.

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A new method for direct composite restoration of the posterior teeth

By Prof. Luca Giachetti, MD, DMD, MSc Department of Dentistry, University of Florence, Italy

Introduction

The evolution of composite materials and adhesive techniques has considerably changed the approach to restorations in posterior areas. The advantages of adhesive restorations are not only of an aesthetic nature, but, above all, relate to the possibilities of conserving a greater amount of healthy tissue and “reinforcing” the residual dental structure.

However, to exploit these advantages fully, we need rigorous clinical procedures which can limit what has always been the main flaw of composite materials: the polymerization shrinkage and the resulting stress which is responsible for most clinical failures.

Manufacturers have focused their efforts on producing materials which are ever easier to use and which, at the same time, are able to minimise their associated problems.

The recent introduction of the SonicFill™ System follows this direction. SonicFill combines the attributes of a low viscosity composite and a universal composite. By activating the composite with sonic energy, it is possible to fill the cavity and adapt the low viscosity material easily, and then compact and model it while the composite changes its consistency until it reaches a higher viscosity.

The manufacturer claims that it has the advantages of being:

Fast: working time is reduced; it is possible to carry out single increments to an individual maximum thickness of 5 mm.

Reliable: reduced shrinkage and good adaptability to the cavity walls due to the low initial viscosity.

Easy: it is possible to deliver the material using a small-diameter cannula and foot switch control.

We present a clinical case below in which direct restorations have been produced with SonicFill on 3 elements of the 1st quadrant.

Clinical Case

Male patient, with an acceptable level of oral hygiene. In the maxillary right posterior quadrant, several deteriorated amalgam restorations are present with signs of marginal infiltration compatible with the age of the restorations, and signs of wear and tear in the zones of interocclusal contact. Tooth 1.5 has primary decay on the distal aspect of the tooth. The treatment plan was to replace the old amalgam restorations and to treat the primary caries with direct composites.

1. Initial case: 1.6 old amalgam with mesial cavities to be replaced, 1.5 primary distal decay, 1.4 old amalgam to be replaced

2. Isolation of the operative area with a rubber dam stabilised with a universal SoftClamp

3. Clinical situation after removal of the amalgam restorations. The contiguous elements are protected with metallic matrices before the marginal ridges are broken down

4. Access to the approximal cavities

5. Cavity cleaning, removal of demineralized tissue

6. Finishing of the margins with SonicSys inserts

7. Sectional metallic matrices contraposed on 1.6 and 1.5 stabilized with a wooden wedge, MetaFit All-in-One matrix stabilized with a wooden wedge on 1.4

8. Matrices in situ, the adaptation at the level of the cervical floor can be seen


10. Application of the Self-Etch OptiBond XTR – Bonding Adhesive System

11. Application of a thin layer of low viscosity Premise Flowable composite

12. Complete filling of the OM cavity of 1.6 with the SonicFill composite

13. Adaption of the material in the cavity with the CompoRoller oval tipped instrument and modelling with the point shaped tip

14. Application of the SonicFill composite in the occlusal distal cavity to the oblique ridge

15. Modelling the SonicFill composite with a Suter DD1-DD2 instrument

> Page 13
Conclusion

The possibility of filling cavities to a depth of up to 5 mm with a single delivery effectively speeds up the work of performing composite restorations. The SonicFill composite presents good marginal adaption and is non-sticky. Once the sonic vibrations stop, it takes on an ideal consistency for modelling, and easily maintains the imposed shape. From an aesthetic point of view it is perhaps a little translucent to allow a greater depth of polymerization; however, it is possible to apply Kolor Plus tints to make the restoration look natural. Ultimately, if the long-term controls show that the integrity of the margins is maintained, we will actually be able to confirm that we have accomplished a significant step towards simplifying direct restoration procedures with composite materials in posterior areas.

The products that appear in conjunction with this article are for illustrative or informational purposes only. Their inclusion does not denote endorsement by the author of this article.

About the Author

Prof. Luca Giachetti graduated in Medicine and Surgery in 1983 and specialized in Odontostomatology in 1986 at University of Florence Medical School. MSc in Dental Materials in 2009 at University of Siena Dental School. Chair of Dental Materials and Restorative Dentistry, University of Florence Dental School. Director of post graduate courses in aesthetics and adhesive dentistry, University of Florence Dental School. Dental Chief of Staff of Conservative Dentistry, Careggi Hospital-University, Italian NHS, Florence. He is member of the faculty in the International PhD program: “Biotechnology and Dental Biomaterials” at University of Siena Dental School. Associate Fellow in Education & Development, Warwick Dentistry, The University of Warwick, Coventry, UK. He has lectured at congresses and symposia and published on dental adhesives and composites in international dental journals. He runs a private practice in central Florence.

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Jordan is a Scandinavian brand of oral care products that are distributed globally. Depending on the region they can be found in food, drug or pharmacy outlets. The company was founded in 1837 and started production of toothbrushes already in 1927. Today Jordan is the market leader in toothbrushes and dental floss and sticks in the Scandinavian markets and has a strong presence in many markets worldwide, including the United Arab Emirates.

Jordan products are made with quality, safe materials and are designed for performance and comfort. Motivating usage is important to Jordan and encouraged in all their ergonomically designed products. Jordan has a range of products to suit the different physical and aesthetic preferences of the global consumer.

Jordan's Step by Step range of toothbrushes has been the best-selling children's brush in Scandinavia, and many other markets, since the launch in 2006. GeriiljaWorks designed the two toothbrushes for children aged 2 years and up. “For us the development of the brushes was a fun challenge. In addition to making dental hygiene enjoyable, it was especially important to maintain optimal user-friendliness for both parents and children,” says Markus Hey-Høyer of GeriiljaWorks

The iconic shape of Step 1 has been an international breakthrough in children's toothbrush design. It is designed for both parents and babies to hold and navigate around the mouth. “Playful design that really works is fundamental in our mission to create good brushing habits that will keep teeth clean and healthy for life,” says Michelle Wentworth (International Marketing Manager for Jordan).

“We know that one in five five-year-olds, along with over half of all 12 year-olds, have cavities. While the authorities have put the spotlight on diet and sugar consumption among children, Jordan wishes to put good routines for dental care on the agenda. By introducing toothbrushes that are carefully adapted for each age group - both in terms of functionality and motivation - Jordan seeks to inspire children and their parents to improve their children’s dental health,” says Mrs Wentworth.

Jordan’s Step series is a range of toothbrushes specially developed to best meet the challenges of children from 0.6. Children undergo extreme changes both physically and emotionally and the different toothbrushes are designed to perform well and also to teach children important oral care habits along the way. For example Step 2 is designed for children aged 5-5 and encourages children to brush for 2 minutes with its built-in timer.

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2005 Prize for good design - Step by Step 0-2 years

Red Dot Award – Step 1 toothbrush

“The iconic shape of Step 1 has been an international breakthrough in children’s toothbrush design. It is designed for both parents and babies to hold and navigate around the mouth. “Playful design that really works is fundamental in our mission to create good brushing habits that will keep teeth clean and healthy for life,” says Michelle Wentworth (International Marketing Manager for Jordan).

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For more information
www.jordan.no
enquiry@jordan-co.ae

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For Jordan

By Dental Tribune MEA

Dubai, UAE: Sirona in collaboration with Centre For Advanced Professional Practices organized the first of its kind, CEREC DESF Fest last September in Dubai. Dental Tribune MEA interviewed Dr. Amro Adel - Area Manager GCC & Pakistan, Country Manager Saudi Arabia for some feedback on the event and the plans for Sirona in 2015.

**Dental Tribune MEA: Dr. Amro, congratulations on yet another successful year. The highlight of the year must have been the CEREC Desert Fest. How do you reflect back on this unique event for Dentists & Dental Technicians?**

Dr. Amro Adel: CEREC Desert Fest in Dubai was a dream project to work on together with the successful collaboration of CAPP. It took us 5 years to decide the concept and it proved its worth. It became a concept of bringing a variety of CEREC expertise from various parts in the world to Dubai to present their experience and share the knowledge of CAD/CAM & Digital Dentistry. Our target group were Dentists and Dental Technicians from the region and we invited current and future users to register. CAPP was our trusted partner due to our long lasting partnership in the area over the past decade. They have the right experience in bringing the latest education in dentistry to the end-users. We have cooperated with CAPP since the 1st CAD/CAM & Digital Dentistry Infr Conference 10 years ago in Dubai. The Desert Fest is the first step in the foundation of bringing a concept of CEREC events in the region on yearly basis. This year was the CEREC Desert Fest, in the years to come we will showcase
A decade ago Sirona took part in the 1st CAPP event in the region, what was it like?

During the 1st CAD/CAM & Digital Dentistry Int'l Conference we started with 180 delegates; one old model CAD/CAM machine without a stand and in 10 years time Sirona is the biggest company representing the topic of CAD/CAM & Digital Dentistry in our region, the biggest hotels in Dubai – Jumeirah Beach Hotel. We will keep on going, continue to improve and deliver the best, we learn from our mistakes and we listen to the feedback of our partners, grants and clients to bring them always the latest in dentistry. It is my pleasure to see that the CEREC users in the region welcomed the topics we have offered and that they are focusing more on advanced courses and hands on showing demand for knowledge. They are interested to take advantage of CEREC and help their practices grow while providing top notch quality to their patients.

Dedicated practical courses are in demand for dentists and dental technicians. How will you supply this?

At Sirona it is always important for us to reach the needs of the client and focus on showing potential user how they can benefit. For these reasons we are planning to have beginner and advance courses throughout the year during the main events where we are present such as the CAD/CAM & Digital Dentistry Int'l Conference in May as well as the Dental Facial Cosmetic Int'l Conference in November, both in Dubai. This was the feedback from the CEREC Desert Fest event. The thought behind the concept was taken during the CEREC Desert Fest. We brought together several school concepts including American School (Dr. Todd Ehrlich, USA and Dr. Daniel Vazquez), the German school (Prof. Wael All, Germany and Dr. Bernd Reiss, Germany) as well as the Czech school (Dr. Josef Kunikela, CZ) who all provided their experience and knowhow through their panel show presentations and hands-on workshops. There are different ways in approaching the way the CEREC software runs and in different parts of the world this is presented differently. Starting with the American approach delegates were able to understand how fast they can enjoy a return on their investment with facts including hints and tips. Followed by the German approach which was more focused on understanding the software in a professional way and making sure you use all possibilities of the software and understand the science behind the software which was ‘Made in Germany’. We also managed to bring the President of the Czech Society of CAD/CAM Dentistry who delivered a fantastic concept on Smile Design sparking up interests and discussions on designing anterior cases to improve patients function and aesthetic. Dental Technicians also enjoyed a full day program with which took place last November 2014.

Sirona trusted and will always trust the MEA region as one of our stable markets especially the GCC & Saudi. As we had since 8 years our scientific and training facility in DECC, Dubai. We are in the process of opening a Sirona UAE office as part of our support to the GCC region, the office will be a Sirona Direct sales & service company and we hope that this will be completed by February 2015. This will be the first direct sales office for Sirona in the region which indicates how important this region for us.

Sirona recently released the new InLab MC X5: Dental Lab. This promises to be a game changer?

Mohammed Al Zuubi, Canada who presented how the InLab system works again with basic and advanced techniques of designing dental restorations.

The MCX5 will definitely be a game changer, the Dry and wet milling and the 5 Axis mechanism will deliver a new concept for a CAD/CAM Lab users. The trust in the unit by our customers in the GCC Region was appreciated by lots of orders yet the unit is still in the first phase of production after the launch for us.
From the royal city of Versailles, Dubai’s exclusive first class dental clinic - Versailles Dental Clinic

By Dental Tribune MEA

A s one of the most successful and recognized Doctor of dentistry in France, what made you decide to expand your dental business in Dubai?

I am originally from Versailles, the royal city of France. I had opened several dental clinics since 1987 they were very successful I think due to the fact that I am a passionate dentist ready to serve my patients with the best technologies, competences and respect. Dubai is a destination I know quite well as I was visiting UAE for more than 20 years for holidays, the idea to move here it looked to me as a new professional challenge.

Versailles Dental Clinic was established here in 2007, we have had very successful records so far with patients travelling from all over the world for their dental treatments. Thanks to that demand, I have developed a unique approach of full mouth reconstructions, smile make-over in short time span, to suit our travelling patients. I call it “ONE SESSION DENTAL SOLUTIONS” “reconstruction of a full tooth in one appointment only.”

We have patients from Russia, Kazakhstan, Uzbekistan, New Zealand, U.K and Qatar to name a few.

Versailles Dental Clinic is becoming the international indispensable hub for patients seeking the highest quality of dental treatments in the shortest possible time, painless, cosmetic and efficient.

With the fast growing economy of Dubai, competition is arising everywhere aiming to be the best of the best dental institution in the country; what makes you surpass all your competitors and be one of the most prestigious dental institution in the country?

The unique “One Session Dental Solutions” (OSDS VERSAILLES LABEL) approach, allows me to do treatments such as Root Canal Treatment, Core Build Up and Crown in one visit only, compared to 3-4 visits in other clinics. Besides that, here at Versailles Dental Clinic, we are really from Versailles from France, and genuine French doctors, National French board certified and really experienced. Our patients trust is a huge value for us.

Another thing to point out in that we are never compromising with quality; our treatments are offering the maximum of safety and guarantee to our patients.

My family and I are based in Dubai, Versailles Dental Clinic has an emergency personalized service in Dubai, basically our patients can reach us any time.

We pay great attention to patient service and we always try to speak in patient’s language. Our Russian/French speaking patient manager will assist the patient from the first visit, to the dental room to the follow-up appointments.

Dr. Caron, you already succeeded in your career in France being an innovator of dental practice, as you move forward to UAE how do you envision yourself in the market?

Our patients are fully informed during their consultation; we use the intraoral camera that allows us to show each tooth on a computer screen, it is very beneficial for the practitioner, to be able to provide the most accurate diagnosis and for the patient that can see along the way what exactly his concerns are. We are happy to increase the awareness of our patients about prevention and treatments, and all their questions are always welcomed and answered with transparency.

For more than 27 years in the dental service, starting from Versailles - France and now to Dubai, UAE; as a pioneer, developer and innovator of a new and improved dental practice and service, what should we look forward for VERSAILLES DENTAL CLINIC DUBAI?

Seamless, painless, short and efficient treatments done in one appointment only with 100% patient satisfaction. What do we expect from a VERSAILLES dental clinic service? Do you have special or new dental service you want to introduce to the market in UAE?

You should expect the patient satisfaction with the greatest smile from Versailles dental clinic! We are introducing the most efficient and fast communication tool system: “Versaillesdentapad”, which is a new app that allows the patient to see how his smile will look like at the end of the treatment. From the concept of the treatment to its realization and finally with the result. It is a product designed in France and launched just a few weeks ago.

What dental treatment or service can you offer to our tourist reader as well, for fast and effective dental treatment/service?

Broken tooth, tooth ache, cosmetic issue? And of course a flight to catch or a meeting impossible to miss...

ONE SESSION DENTAL SOLUTIONS, as explained earlier, is the right solution in case of any needs of a full dental treatment in one immediate appointment only.

Our call center is used to busy schedules of business and leisure travelers and can find the best booking to provide the needed services in a record time.

As a first class dental service provider in Dubai, how do you maintain your standards and services in providing your clients a well-satisfied and efficient service?

We do not have clients, but patients. As leading dental clinic in our Gulf Region, we are working with high European standards of sterilization, same as in our clinics in France. We receive yearly awards as highest quality dental clinic at all levels. Always focus on infection control management, all our staff is constantly assessed and trained in all the different aspects of oral hygiene.

We only work with highly qualified staff and test them on random basis to ensure the consistency of the quality of their daily tasks and service.

I am a passionate dentist ready to serve my patients with the best technologies, competences and respect

About the Author

Dr. Dominique Caron was born in France and studied Dentistry at the University Paris V. He founded the first Versailles Dental Clinic in 1987 in Versailles, France. He received the prestigious Médaille de Paris in recognition for his work in new dental techniques and adherence to the dental code of ethics. Dr. Caron is also the former General Secretary of the French Academy of Dental Surgery located in Paris. Dr. Caron established Versailles Dental Clinic Dubai in 2007 in Dubai Health Care City. Versailles Dental Clinic's vision is to be globally acknowledged as a leading center for advanced dentistry in the 21st century.

My family and I are based in Dubai, Versailles Dental Clinic has an emergency personalized service in Dubai, basically our patients can reach us any time. We pay great attention to patient service and we always try to speak in patient’s language. Our Russian/French speaking patient manager will assist the patient from the first visit, to the dental room to the follow-up appointments.

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Versailles Dental Clinic

Dr. Dominique Caron, Medical Director & Dental Surgeon, France

Veronique Caron, General Manager, France

 Lyme Dental Clinic
Perfect White leads the way for high stain removal and low abrasion whitening toothpastes

By Chris Dodd

Chris Dodd, Managing Director of Purity Laboratories, discusses the attributes of a safe whitening toothpaste.

As dental professionals, you recognise the importance of your patients avoiding highly abrasive whitening toothpastes as they can damage their teeth and gums, removing the lustre of the teeth and dulling a beautiful smile. By recommending a low abrasion whitening toothpaste, you can ensure your patients protect their tooth enamel while striving to achieve and then maintain their white smile for longer.

It is a well-known fact that the abrasiveness of toothpaste is measured according to the RDA (Relative Dentin Abrasivity) value, and any value over 100 is considered to be "abrasive", something which is unfortunately often not included in marketing or promotional information supplied with toothpaste products, thus masking a common problem.

Interestingly, a USA-based independent testing laboratory (July 2012) tested the abrasion levels of 15 toothpastes. The results confirmed that Beverly Hills Formula’s whitening toothpaste is less abrasive than other leading brands of both whitening and regular toothpastes. In fact, Beverly Hills Formula Perfect White scored as low as 95 on the Abrasivity Index Table, whilst some leading competitors displayed levels as high as 130.

To support these abrasion results, an invitro laboratory study found that Beverly Hills Formula whitening toothpastes remove stains in just one minute. Beverly Hills Formula Perfect White (coded as “PLMO/1x1158 Stain Removal” in the study) toothpaste proved effective at removing stains with almost 91% of stains removed over a five-minute period. Meanwhile, other leading brands of whitening toothpastes and toothpolishes scored as low as 41%, a remarkably low percentage, considering water alone removes 48% of staining (2).

References
1. Research conducted on behalf of the British Dental Health Foundation by Altomik Research, February 2013. Samples size: 2,044.

Contact Information
Purity Laboratories Ltd.
Beverly Hills Formula
www.beverlyhillsformula.com

RDA Certificate 2012
The Hall Technique: The novel method in restoring the carious primary molar that is challenging old concepts.

A new tool in the general dentist’s toolbox?

By Dr. Iyad Hussein

Introduction

Primary molar dental caries in childhood is a disease of epidemic proportions that affects all modern societies. Despite a World Health Organization (WHO) pledge in 1981 to render 50% of 5-6 year old children caries-free by 2000 (1), many developing countries remained off target to date. In the UAE, a survey showed that less than 18% of 5 year old children were caries-free (2). In comparison, 45% of 6 year-old and 60% of 3 year-old children in Sweden were noted to be caries-free (3, 4) and recent surveys in England showed that 80% of 5 year old were free from obvious caries (5). The size of decay as a problem in a society often expressed as “dmft” (decayed, missing & filled teeth) and is well established as the key measure of caries experience in dental epidemiology. The UAE regions dmft index ranged from 3.8 in Ajman to 6.6 in Dubai (2).

whilst the England dmft figure average was a mere 0.48 (5). This highlights countries/social inequalities where primary dental caries is concerned.

Conventional management of the carious primary molar

Primary tooth decay management represents a challenge for those who dentally care for children, whether they are general dental practitioners (GDPs) or specialists in paediatric dentistry. For the past 5 decades, the dental literature in the USA and Europe had advocated treating the deep carious primary molar in using the conventional “drill and fill” philosophy. That is, give local anaesthesia (LA) to the child by injection to anaesthetise the tooth, drill the carious tissue out (often after placing a rubber dam-Figure 1) using a high and slow speed drill (Figure 2), and fill the prepared tooth with a restorative material (often a preformed stainless steel crown or SSC) after carrying out pulp therapy (Figure 5). Although aesthetic crowns are available for primary teeth, they are very expensive and the SSC remains the crown of choice for the carious primary molar (6,7).

This relatively complex treatment is demanding for all parties involved; the dentist, the parent but especially the child (9). Even in very cooperative children the skills of a specialist paediatric dentist are often required to achieve such treatment. It is well known that the larger proportion of child patients are seen in the general dental practice (GDP) services rather than secondary dental services (8). Whilst there may be GDPs with a special interest in children’s dentistry, many find managing such young children a major challenge, and many patients go untreated (8). Whilst all paediatric dentists agree that SSCs are the restorations of choice for multi surface caries in the primary molars (7), the conventional doctrine of their placement (i.e., using LA and drills) has been challenged by less invasive techniques such as the “biological approach” which is embodied by the “Hall technique” (8-10).

The Hall technique: “Sealing in” the caries

In 2007 a new technique took the paediatric dentistry world by storm. It recommended a simple way in managing early enamel and dentinal decay in the primary molar using a SSC; it was named the Hall technique (8). This technique involved no local anaesthesia, no rubber dam, no drilling and took place in a child friendly play manner. In essence there was no dental caries removal at all from the carious lesion. The technique relied on sealing the carious lesion in situ cutting off its supply of sugary substrate, thus altering the lesion’s bacterial plaque ultimately leading to the arrest of the caries process in the tooth. The Hall technique involves the

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A - Hall technique: Appointment 1:
1) Case selection: Diagnosing asymptomatic early enamel and dentine caries in a primary molar, clinically and radiographically (using bitewings). Bitewings may typically show approximal lesions that are not visible clinically but are diagnosed radiographically (Figures 4 a & b). There should be a clear radiolucency band between the carious lesion and pulp of the tooth intended to be restored with the SSC. Hall technique. There should be no signs or symptoms of pulpal pathosis; the lesion should be detected prior to the development of symptoms (See Table 1).
2) Fitting orthodontic separators: Placement of two elastic orthodontic separators mesially and distally on the tooth intended for restoration with a SSC Hall technique (see Figure 5).

B - Hall Technique: Appointment 2:
1) Removal of separators: After 3-5 days after the first appointment, the patient returns for the removal of the orthodontic separators. Space is created mesially and distally that will negate the need for crown preparation (see Figure 6).
2) Stainless steel crown selection and placement: The patient is sat up in the supine position and the operator selects the correct SSC in terms of tooth number and size. After selecting the correct SSC, it is tried passively on the tooth to assure that it fits with gentle pressure applied to the SSC over the contact points, but not completely through. For safety purposes the crown is stuck to the operator’s finger, while trying out the size, using an adhesive tape/elasticoplast. The SSC should not be too loose or too tight. The crown should “spring back” from the contact points while trying it on the tooth to test its fit. After crown selection, the crown should then be filled with a self curing glass ionomer cement and positioned over and on the tooth. The operator then digitally presses the crown through the contact points so that the crown flexibly “clicks” on the tooth and fits snugly. The patient is then asked to bite on a cotton wool roll to finish off its correct positioning (see Figure 7). The excess of the glass ionomer cement is wiped off. The crown should be level with the occlusal plane and blanching of the gingivae will be noticed buccally and palatally indicating an adequate seal (see Figure 8). The patient may feel a little tightness, however that and the gingival blanching disappear after a while. Occasionally the bite may be raised by a milimetre, however dento-alveolar complications resolves this issue within a week or two.

Multiple SSCs using the Hall technique could be placed in one patient over several appointments without any local anæsthesia or drilling (see Figure 9). It is possible to place two SSCs using the Hall technique in one appointment. This is possible in a) contra-lateral primary molars in the same arch, for example placement of two SSCs on upper left teeth 55 and 55 or lower Ds (74, 84), b) diagonal teeth in opposing arches, for example, placement of SSCs on upper tooth 56 and 75, or placement of SSCs on 65 and 85.

C - Hall technique:
Follow up appointments: All teeth treated with the Hall technique should be followed up clinically and radiographically (see Figure 11) following the same protocols as conventional treatments. The tooth should be assessed for pain, tissues, swelling and radiographically for signs of interradicular radio-facucy or root resection.

Discussion
The Hall technique was named after Dr Norna Hall, a Scottish dentist who worked as a salaried GDP in a remote high dental caries risk area (Scottish Western Isles) north west of the UK. As she faced a high proportion of children with dental caries (dmdc of Scotland was around 2.54 at the time), and was not a specialist in paediatric dentistry, she thought “outside the box” and used SSCs to “seal in” dental caries with no preparation and no anaesthesia or drilling (see Figure 10). This technique caught the attention of the team of paediatric dentists and clinical researchers at Dundee Dental School in Scotland (11). They took an interest in Dr Hall’s novel work; she had audited her own work) as they were facing very high levels of dental caries themselves. Subsequently a pilot trial by Evans et al was published online in 2000 (18). This prospective controlled study assessed 40 patients who were fitted with SSC crowns using the Hall technique from the patient, caregiver and dentist point of view. It was deemed a success as the study reported very high levels of satisfaction. In addition, the team of Dundee Dental School researchers shared their findings with The British Society of Paediatric Dentistry UK national conference meeting in Edinburgh (UK) in the same year (2000) to the astonishment of its audience (the author of this paper was present that day and recalls the reaction). Because the initial reaction to this technique by other paediatric dentists in the

UK was profound (12), the team of Dundee University researchers (Tomes et al) undertook it upon themselves to investigate this technique by employing the most robust methods of evidence-based dentistry; namely a prospective randomized controlled clinical trial and first published their results in 2007 (8). This study formed the pivotal event that made this technique a “school of thought” in paediatric dentistry by its own right. Because of its importance of this study, it will be discussed further below.

The 2007 study (8) was a prospective split mouth randomized control study that recruited 152 child patients aged between 5-10 all of whom had two matched dental caries lesions. Each child acted as his/her own control. The two lesions each child had were similar to the lesions highlighted in the example given above (Figure 4a); there were no clinical or radiographic signs of pulpal pathosis. One lesion was randomly treated using the Hall technique and the other was randomly treated conventionally (mostly by glass ionomer cements). Seventeen GDPs treated these patients under the auspices of the paediatric dentistry team at Dundee University.

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*As compared to Damon CLEAR, data on file. Standard torque, upper 3-3 brackets.
The results were an outstanding success rate of 98% for the Hall SSC when compared to the control restorations used in the study. This was in line with the findings of previous RCTs (23). The authors concluded that "the Hall technique is still the only alternative approach that offers significant advantages over the conventional dental caries control methods used in general dental practice by GDPs, where most the children are treated."

**Table 1. Indications and contra-indications of the Hall technique.**

The Hall technique is indicated for the following cases (24):

- **Indications:**
  - Class II lesions, cavitated or not, of 3 years old or older.
  - Teeth that require retrograde treatment.
  - Teeth that have been restored with a SSC when compared to the conventional school of thought.
  - Children with caries present on the buccal, occlusal, or lingual surfaces.
  - Patients with a high risk of caries recurrence.

- **Contra-indications:**
  - Teeth with caries that extends to the pulp.
  - Teeth with severe root caries.
  - Teeth with pulpitis.

The authors concluded that "the Hall technique is still the only alternative approach that offers significant advantages over the conventional dental caries control methods used in general dental practice by GDPs, where most the children are treated."

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  - The International Association of Dental Research
  - The American Academy of Pediatric Dentistry
  - The Australian Dental Association

**References:**


By Dental Tribune MEA

Doha, Qatar: Dental Tribune MEA visited the 3rd Qatar Dental International Conference on 11 – 12 December 2014. We find out more from the President of Qatar Dental Association – Dr. Mohammed Al-Darwish on the developments in Qatar.

Dental Tribune MEA: How do you reflect back the time since Qatar Dental Society was established in 1997?

Dr. Mohammed Sultan Al-Darwish: Before 2008, we dreamed to have an organization covering all dentists in Qatar under one umbrella. We dreamed to have a dental conference in the country. We dreamed to have a dental society similar to our neighboring countries. Two groups of 20 dentists held a small meeting and after a 3 hours discussion on all the challenges, the decision was to establish a dental society in the country. Now, after 6 years we reach some of the targets we had set ourselves.

As President of the Qatar Dental Society, how have you seen dentistry develop in Qatar during your current term as leader of the QDS?

When I started my term as the first president of Qatar Dental Society, the number of dentists in Qatar were 657. Now in 2014 we reached 1228 dentists. We organized the first, second and third Qatar International Dental Conference. Also, more than 12 small dental symposiums, workshops and seminars have been organized.

In 2009 you organized the First Qatar International Conference, in 2011 you organized the second. How important is it for the Qatar Dental Society to have your annual conference? What has improved since last conferences?

By organizing the conferences, seminars, workshops and symposiums we keep our dentists updated with the new dental technology. Also, all government sectors, such as Hamad Medical Corporation, Aspetar, Qatar Petroleum, Dental Services Care Corporation, Qatar Civil Aviation, Ministry of Education, Supreme Council of Health in Qatar decided that a dental conference should be organized every year. We are in the preparatory stages of making this happen.

Are there plans for a Dental University to open up in Qatar any time soon?

Yes, there is a plan to open a dental school in Qatar, and now we are in the preparatory stages of making this happen.

What advice do you have for the young generation of dentists in Qatar?

Work hard, continue your study with an advanced program and master degree, involve yourself in dental researches and do not forget to attend dental conferences and workshops to keep yourself updated with the new dental technology.

Are the number of dentists in Qatar increasing?

Yes, the number of dentists in Qatar increasing? There are a majority of dental clinics in Qatar who updates their knowledge about the new trends and technologies. Digital Dentistry has a strong influence in Qatar. Many dentists have started to use CAD/CAM and dental laser in their clinics. Regional Dental Associations, Societies and Universities attending the Event

Qatar Dental Society would like to thank Dental Tribune MEA/ CAPP for participating in the 3rd Qatar Dental International Conference.

Regional Dental Associations, Societies and Universities attending the Event

Dr. Mohammed Sultan Al-Darwish distributing the trophies

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Vice Chair, Oral Health Group, World Federation of Public Health Associations.
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smalsultan79@hotmail.com
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Date of preparation: June 2014.

Ref: CH-SAUC/CH-PLD/0008/14c
Modern implants from a different angle

By Safa Tahmasbi DDS, MS (USA) Prosthodontist, Costa Nicolopoulos BDS, FFD (SA) Oral & Maxillofacial Surgeon

Background
With the success of dental implants, the profession of dentistry has moved into applying innovative ideas that have decreased treatment time and amplified the quality of patient’s lives. While integrating into modern dentistry, implant treatment has shifted direction from being surgically driven to prosthetically driven. Amongst other developments in improving all aspect of implant dentistry, angled implants were first introduced in the early 1990’s and since then there has been ample research and clinical studies to assess and support their success.

Implants were originally tilted in a bodily fashion to bypass certain anatomical structures that otherwise hindered clinicians from placing them in areas such as maxillary sinuses, inferior alveolar canal, the mental foramen, and mandibular lingual canines and maxillary buccal canines. Procedures such as nerve repositioning, various grafting procedures, distraction osteogenesis, ridge splitting and many more not only lengthened treatment time, but also increased patient morbidity during implant rehabilitation cases. In addition to bypassing the anatomical structures, the tilting of posterior implants in a distal manner results in an increase in the leverage of the prosthesis thereby allowing better load distribution, and reducing the cantill of the restorative. With time, tilted implants became an effective and safe alternative to major augmentation procedures such as maxillary sinus grafting procedures and ridge augmentation procedures.

Initially there were negative speculations regarding the hard and soft tissue response around tilted implants as opposed to axially straight implants. However various in vitro and in vivo studies have proven no apparent long-term advantage of angulated as compared to angled and straight implants. Kreekmanos et al in 2000 followed up forty-seven consecutive patients with tilted implants for forty months and showed no significant difference between tilted and non-tilted implants. A comparative 3D finite element stress analysis conducted by Cases et al in 2008 showed no indication that angled implants create stress-induced problems compared to straight implants. A meta-analysis performed by Montel et al in 2012 evaluated the outcomes of upright and tilted implants supporting full arch restorations. The immediate rehabilitation of edentulous maxillae, after at least 1 year of function. No significant mean difference between tilted and upright implants was found with regards to bone loss. Rosén et al in 2013 retrospectively evaluated the surgical effect of tilted implant in the severely resorbed edentulous maxilla as opposed to bone grafting and conventional prosthetics to restore the posterior maxilla. In a ten-year study patients with tilted implants showed acceptable alternative to the more demanding grafting techniques.

Angled abutments
Furthermore while angled implants improved load distribution, reduced augmentation procedures, lessened cost, treatment time and eliminated cantill in many cases they did necessitate the use of angled abutments to achieve a parallel path for the draw of the final prosthesis. Custom or prefabricated abutments were necessary to redirect the screw access holes in a common path of insertion to aid in the fabrication and installation of the final prostheses. In addition these abutments were also used to redirect the screw access hole in the lingual direction to aid with esthetics of the final restoration. In cases of severe angulated abutments the tension is limited to the use of cemented restorations with the use of custom made abutments (Figure 2).

Although these abutments are widely used today, they do present certain disadvantages that warrant mention. Firstly the connecting surfaces of custom made abutments may have casting imperfections between the areas in contact with cement and final finish. Secondly if used in cement retention restorations, they promote the use of cements that can cause untreatable peri-implantitis and peri implant mucositis. Thirdly, having of the custom abutment decreases the abutment and prosthetic interface that can attract bacteria and biofilm accumulation. Consequently if used in cemented restorations, they promote the use of cements that can cause untreatable peri-implantitis and peri implant mucositis. Therefore, using of the custom abutment decreases the abutment and prosthetic interface that can attract bacteria and biofilm accumulation. Consequently if used in cemented restorations, they promote the use of cements that can cause untreatable peri-implantitis and peri implant mucositis.

The difficulty that arises with implants in the esthetic area is related to anatomic limitations and the higher resorptive properties of the buccal plate. The anatomic limitation is the common buccal concavity associated with the pre maxillary region. The anatomic limitations of the anterior maxilla often require either an angled implant or an anatomic abutment. The use of angled implants allows the operator to place an implant in the extraction socket of an anterior maxillary tooth without pressure on the buccal plate and simultaneously avoiding buccal plate perforations. The placement of an implant close to the buccal plate will lead to implant thread exposure after initial healing, not to mention the inevitable use of custom made abutments and cemented restoration to correct the severe facial angulations. Consequently by avoiding the use of angled or customized abutments the inflammation response due the micro gap / cement that may ultimately lead to crestal bone loss over time is eliminated. Lastly, facial inclination of an implant makes the facial surface of the connecting abutment thinner than usual and hence allows for fractures and prosthetic complications. The Co-Axis angle correction allows for implant placement in the available bone and hence the screw axis hole emerges from the palatal direction indicating the implants to be centered within the alveolar bony. This angular correction allows for the placement of the implant within the bony housing and hence allowing for a minimum of 2mm of buccal bone that will ensure the stability and firmness of the gingival position in the esthetic area. (Figure 4)

Deciding on the Angle
This tapered body implant is available in 12°, 24° and 36° degrees in length, with 4, 5, 6 and 7mm diameter and 8.5mm to 14mm in length. It is currently available in the external hex, Tri-nex and internal octagon connections. In extreme cases for even higher angle correction, the Co-Axis implant can be combined with a 17° or even the 50° angled abutment. With various angulations available one can make a decision of the angle needed by the use of angled abutments. The use of angulated abutments facilitates the avoidance of anatomical limitations, shortening of cantill, and enables the use of screw retained restoration without the need of angled abutments. The use of angulated abutments is hence not necessary since Co-Axis Implants correct the angulation within the body of the implant.
firmed, then the site is enlarged to appropriate implant diameter & length and the implant with the appropriate built in angulation is inserted(Figure7). The angle correction of the implant is therefore at a sub-crestal level and prosthetic space is not utilized by an angulated abutments.

**Conclusion**

Today more clinicians are advocating the use of angled implants. This leads to less grafting procedures that not only minimizes the overall treatment time, but also reduces the cost and diminishes the patient’s morbidity associated with grafting procedures. Co-Axis implants also allow early or immediate loading protocols that would otherwise not be possible with conventional procedures. Therefore, the use of native bone, the avoidance of expensive anagulated abutments, decreased patient morbidity, reduced cost, benefits of immediate loading, likelihood of screw retained restorations, and elimination of long cantilevers are all advantages of using Co-Axis implants.

**References**

8. For more information call 04 388 1313 or visit www.drrozedentalclinic.com

**About the Authors**

Dr. Costas Nicolopoulos BDS, FFD (SA) MFS
Oral & Maxillofacial Surgeon
Dr. Costas BDS qualified as a dentist in 1984 receiving his dental degree cum laude from the University of Witwatersrand, Johannesburg, South Africa. He graduated top of this class with rank order No.1 and received numerous awards including the Gold Medal of the Dental Association of South Africa for the most outstanding graduate. In 1990 he completed his 4 year full time postgraduate Maxillo-Facial & Oral Surgery training at University of Witwatersrand, South Africa and was awarded FFD (SA) MBDS. Since 1999 he is in full time specialist Maxillo-Facial & Oral Surgery private practice concentrating on immediate loading rehabilitation of dental implants. To date he has placed over 50,000 dental implants. He has also presented as a key lecturer at numerous international implant congresses.

Dr. Safa Tahmasebi D.D.S, MS Cert. Prosthodontist (USA)
Dr. Safa Tahmasebi Completed his Bachelor’s degree in Biology and a minor in Biochemistry at Saint John’s University Queens New York in 2004 with a full scholarship based on academic performance. In 2005 he joined State University of New York at Buffalo School of Dental Medicine where he attained his Doctor of Dental Surgery and qualified as a Dentist in 2006. He joined the Albert Einstein Medical Hospital of Montefiore in Bronx New York where he completed one-year hospital dentistry fellowship. In 2015 he completed three and half year full time training in prosthodontics and surgical training with a masters degree in prosthodontics at the West Virginia University School of dentistry. During this time He was an adjunct clinical instructor to the undergraduate programs at the WVU University. In 2015 he joined the SameDay Dental implants Bränemark Osseointegration Center (BOC) Dubai as a full time prosthodontist specializing in full mouth rehabilitation, immediate loading and Smile reconstruction.

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For more information call 04 388 1313 or visit www.drrozedentalclinic.com
Sinus lift with simultaneous implant placement

Piezosurgery offers the patient a gentle treatment with less complications and time saving benefits.

By Dr. Peter Hentschel

Osteoconductive bone augmentation may be required to address maxillary bone height deficiencies. The success rate of simultaneous implant placement is above 95% (Fig. 6). The autologous bone substitute is used to stabilize the sinus membrane during the surgical process (Fig. 2).

For augmentation of bone height, guided bone regeneration (GBR) can be achieved using piezoelectric drilling (Fig. 1). The use of autologous bone substitutes (e.g., Compact Bone B, biphasic Calciumphosphate, Compact Bone S, biphasic Calciumphosphate) offers good handling properties in combination with a prolonged barrier function.

Complications. In opposite of app. 25% perforations with bone milling devices the use of piezosurgical devices can lead to perforation rates of 5%.

At external elevation and sinus augmentation a second surgical can be avoided by simultaneous implantation in case of 5 mm bone height. During the elevation of Schneiderian Membrane with sandwichtechnique autologous bone and bone substitute materials are used (Kamikawa et al. 2000). To resist the respiratory pressure non-resorbable bone substitute material (eg. Compactbone B, bovine Bone) or the cranial bone lid are placed next to sinus membrane.

The during the procedure gained autologous bone can be placed alone or in combination with a bone graft material (eg. Compact Bone S, biphasic Calciumphosphate) around the placed implant. Sinus Elevation with simultaneous implant placement is indicated with up to 97.9% survival rate in after years (Fefeg et al. 2000).

Guided Bone Regeneration (GBR) as state of the art method for bone grafting uses in most cases biodegradable membranes. Resorbable membranes offer several advantages beside the easy handling, as no need for a second surgical procedure for removal or minimization of complications, e.g. soft-tissue dehiscences.

Fig. 1. Autologous Bone

Fig. 2. Pre-clinical situation

Dentegris Precision Implants made in Germany

Hard and Soft Tissue Regeneratives

Fig. 3. Piezosurgical Preparation

Fig. 4. Release of Schneiderian Membrane

Fig. 5. Preparation of Implant Tunnel

Fig. 6. SL-Implant in Situ

Fig. 7. Bone Protect Membrane in Situ

Fig. 8. Grafting with Bovine Bone

Fig. 9. Covering of Sinus Membrane with Bone Protect Membrane

Single tooth rehabilitation with implant is the appropriate method instead of conventional use of bridge. In the reported case the situation is aggravated by the lowered sinus and lateral limitation by intact adjacent teeth. For lateral one-stage sinus lift we are using the special designed Sinus-Lift implant for increased primary stability (SL Implant; Dentegris, Germany).

The improved stability is based on micro threads with increased contact in neck area. The autologous bone is gained during surgical procedure within piezo assisted window preparation and drilling process (Fig. 1).

Fig. 10. X-ray Post-OP

Fig. 11. 12 month Post-OP

For filling of horizontal-cranial space and stabilization of bone lid a bovine bone graft is used (Compact Bone B; Dentegris, Germany). Bovine bone has been used in dental surgery for decades and is well known for stable and reliable results.

To ensure the barrier and to stabilize the particulated bone grafting material a pericardium membrane with a resorption time of 16-24 weeks is used (Bone Protect Membrane; Dentegris, Germany). The pericardium membrane offers very good handling properties in combination with a prolonged barrier function.

Case Study

The patient (36 y.f.) was showing an alveo lost tooth in 15 (Fig. 2). Patients request was aesthetic and masticatory rehabilitation which was suggested by one- stage lateral sinus elevation.

Based on diagnostic planning piezosurgical window preparation in 15 (Fig. 5) was performed after local anesthesia and peristomal flap. By choosing a round-oval lid design sharp edges can be avoided which reduces the risk of perforation.

After release of the sinus membrane (Fig. 4) the implant tunnel was prepared (Fig. 5) and the Implant (SL Implant; Dentegris, Germany) placed (Fig. 6). Simultaneously the surrounded space was covered with a rehydrated Collagen Membrane (Bone Protect Membrane; Dentegris, Germany) as protections of the Schneiderian membrane (Fig. 7). Autologous bone was mixed with Compact Bone B and placed in the sinus for stabilization (Fig. 8).

After control of primary stabilization particulate materials was filled laterally and covered with pericard membrane according to GBR standards (Fig. 9). The flap was readapted and closed, controlled by X-ray shows axial positioning and augmentation of sinus maxillaris (Fig. 10).

Reentry after five months was accompanied by full ceramic crown and results in aesthetic and harmonic rehabilitation (Fig. 11).

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RITTER IMPLANTS SYSTEM

By Ritter Implants

Founded in 1887 by the German Frank Ritter in New York, Ritter is one of the oldest prestige brands of finest dental equipment worldwide. Due to innovative ideas and a great entrepreneurial spirit, Ritter produced the first dental units already more than 125 years ago.

Today Ritter products are more than ever an essential element in dental practices worldwide. Users appreciate the Ritter product range for the high-quality aspects and the reliability - Made in Germany. Due to their functionality and user orientated construction, Ritter dental units contribute constantly to an optimized workflow of today’s modern dental practices.

In the course of the last years, Ritter has started to write a new success story with the launch of an innovative, state of the art implant system. The Ritter Implant Ivory Line provides Two Piece Implants (Implant plus separate Abutment) as the QSI Spiral Implant and TFI Twin Fissure Implant as well as One Piece Implants (Implant and Abutment already connected) called Mono Compress Implant MCI. The system contains logically reduced and clearly arranged components of tools and abutments with the best features for all clinical cases. Due to the super Nano-Surface, a quick and reliable Osseo-Integration is guaranteed. Clever and easy handling is provided by self-tapping threads and a coloured system of drills and implants according to their diameters.

All Ritter Implants and Accessories are made by high modern CNC manufacturing machines. A combination of advanced machining and hand-finishing create the most accurate tools possible for the marking of ceramic drills.

The Ritter brand stands for high quality, state of the art technology and innovative products Made in Germany. Our credo is to always provide customers and clients with the best services and prices combined with the most comprehensive dental solutions in the market.

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*** Exclusively distributed by Henry Schein Middle East ***
A big scientific date. A historical event. An international agora.

By Medicon

A new, progressive, engaging and exclusive Congress, which represents the whole world of dentistry. This Congress will be open to debate with the big citizens audience on prevention topics and health care, especially the dental care, which aims at recommending practical solutions and at opening up new horizons for the general qualifications of all professionals for an efficient, precise and motivated assistance.

The involvement of both the Italian and the International press shows an unusual interest for all the issues related to the dentistry throughout the world. With great satisfaction the organizers announce the exceptional participation of Scientific Associations, Universities, Hospitals, No-Profit Organizations that will allow not only a discussion, a comparison, a moment of experience but also will broaden the horizons for an evolving, growing and improving world.

As President of ANDI Rome I must attribute this success to a great team work with the same purpose and to an incisive efficiency which make me proud and very satisfied. The involvement of ANDI Lazio, ANDI Naples and ANDI Campania underlines and highlights a desire of unity, collaboration, foresight which will be able to positively affect the future work of everybody in order to promote the "excellence" in the world of dentistry.

On June 18-19-20, 2015 a big event on a scientific debate will be celebrated in Rome between the Mediterranean and Middle East countries, and we hope it will become the starting point for a collaboration for a better future for all of us.

I wish you a great job and see you in Rome!

Sabrina Santaniello
President of Scientific Committee
Gabriele Edoardo Pecora

With great satisfaction we announce the participation of numerous lecturers coming from many worldwide countries and the city of Rome will be a meeting point for networking and sharing, a new project which looks at the future of the dental world.

In particular, in the "International Multidisciplinary Program" every country joining the Congress will be represented by a speaker.

A major knowledge is necessary, as well as a greater integration, a concrete sharing of cultural projects, of operational protocols and of stimulus for research.

This Congress in Rome wants to represent the start time of a collaborative project involving the countries of Middle East and Mediterranean!

Gabriele Edoardo Pecora
President of the Congress
Roberto Pistilli

The large participation of Universities, Hospitals and Professional Freelancers has allowed the programming of a Congress that we cannot define that ambitious. With the support of the most important Scientific Societies, we will have a Prestigious Faculty with speakers of international renown who, with your presence, will make this event the "Main Event 2015".

As President, I extend a warm invitation to participate for living all together an unforgettable experience.

Roberto Pistilli

Editorial Note

More information is available from the publisher.
Intra-bone GPS
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“For more than 125 years, Ritter provides high quality products – ‘Made in Germany’”

By Dental Tribune MEA

Dubai, UAE: Ritter Concepts, one of the oldest brands of dental chairs worldwide is expanding in the region. Christian Findeisen, Export Sales Manager Middle East & Africa at Ritter Concept GmbH elaborates on the region.

Dental Tribune MEA: Christian, during the last 6th Dental Facial Cosmetic Int’l Conference in Dubai we witnessed a new impulse with Ritter. What is the reason for the new fresh look in the MEA region?

Mr. Christian Findeisen: Indeed a lot of changes and new movements have happened within Ritter in the last months. First and foremost Ritter acquired the dental manufacturer EGNER, also based in Germany. This acquisition will strengthen our position in the international dental market and bring innovative impulses into our structure. The EGNER Dental-Manufacturer (formerly known as GIRARDELLI) has been well known and established in the dental market for decades. Origin- ally known for the production of its x-ray film processors, EGNER expanded the product portfolio by newly developed dental treatment units. This merger initiated the process for a new and common orientation in all segments. Consequently we are rethinking the company philosophies, sales strategies, product ranges and market- ing appearance. We intend to combine the long term experience of both companies with a young and fresh approach. The final concept, which will also include product developments and news, will be presented in the early stages of next year.

What is the main strength of Ritter and what can you offer to current and potential customers?

Ritter is one of the oldest prestige brands of dental chairs worldwide. For more than 125 years Ritter provides high quality products – ‘Made in Germany’, for modern dentistry with great innovative aspects. Users worldwide benefit from Ritter’s large experience and reliability. Our products enjoy the reputation of being extraordinary solid, long-living and extremely easy in maintenance and service. Moreover Ritter is one of the last owner-managed companies. This enables us to be more flexible than most of our competitors and to offer individual service and product solutions for our customers.

How do you plan to expand your presence in the MEA region for the coming year(s)?

2014 was an important year for Ritter in the Middle Eastern countries. Personally I started developing the market at the beginning of the year. In June we started our exclusive partnership with Henry Schein, which opened up wide opportunities and a wide network of sales and distribution channels for Ritter. With this strong partner at our side we intend to develop the Middle Eastern countries further and become step by step the main brand for dental chairs and devices in this region. This will certainly also include the enlargement of our Ritter Sales and Service Team within the next years.

How has the partnership with Henry Schein and your new distributor Schein Technolog- ies effected Ritter for the region?

Having started our exclusive partnership with Henry Schein in the course of 2014, we have great plans for the coming years. We are delighted to set up our latest sales and service approach with such a strong and internationally experienced partner like Henry Schein. Our common aim is to provide high-quality dental equipment – made in Germany – at an interesting price-ratio-performance, combined with personal consultancy and comprehensive local services. We believe, that the mix of local background and knowledge of two global companies will be the gateway to success. Henry Schein Middle East LLC is based in Dubai directly. All customer requests can be handled locally, in a quick and flexible way. The technical engineers are special- ized in the installation and serv- ice of dental equipment. Moreover Henry Schein provides a strong network of dedicated Henry Schein distributors in each country. The experienced Ritter Export Managers support all activities continuously. The customers receive a full-service spectrum of care. We already realized a great launch event in Dubai and a wide range of activities and will spread these out widely. Also the upcoming AEEDC in Dubai represents a good opportunity to show our common strengths. We strongly believe that this partnership will create a wide range of synergies and services from which our cli- ents will benefit.

With IDS Cologne coming up, can we expect some novelties from Ritter?

Of course we will present novelties in the fields of dental units, x-ray devices and compres- sor/auction. We are more than proud to show our new and modern dental unit ARIA SR with outstanding design oppor- tunities and convincing qualitative aspects for everyone. More detailed information about the new products will follow as soon as possible. And the charming thing is, that we will already present them for the first time at the AEEDC in Dubai in Feb- ruary. This means, that the Mid- dle Eastern countries will be one step ahead.

What do you expect from Dental Tribune as your Media partner for the coming years?

We are very excited with the platform Dental Tribune MEA offers to Ritter and Henry Schein. Our expectation is that together we will be able to satisfy the needs of the dental professionals in the MEA region and bring forward the latest education, science, latest technologies and support needed to enable all stakehold- ers to benefit together with the end goal being top quality and sustainability.

Contact Information

Christian Findeisen,
Export Sales Manager Ritter

Diplomate American Board of Prosthodontics

Jonathan L. Ferencz, D.D.S.

The introduction of colored, highly translucent zirconia like Zirlux FC2 allows laboratories to deliver extremely aesthetic restorations to their dentists which is ultimately what gives the patient something to smile about.

Jonathan L. Ferencz, D.D.S.
Diplomate American Board of Prosthodontics
“The Henry Schein plan and strategy is to cover all the requirements for the end users in the Middle East”

Dental Tribune MEA

By Dental Tribune MEA

**Dr. Ghassan N. Hussein, Sales & Marketing Director (Henry Schein MEA)**

By Mark Anthony Limosani, D.M.D., M.S., F.R.C.D.

**Case Overview**

A 47-year-old female taking Forteo (Teriparatide) for the treatment of osteoporosis was referred to my office by her general dentist because of her history of ongoing low grade discomfort associated with the UR quadrant and more specifically tooth #5. Her dental history revealed previous root canal therapy was completed on tooth #5. She didn't recall when, but was confident it was greater than five years prior to presenting to my office.

Clinical examination revealed a slight buccal swelling associated with the tissue buccal to tooth #5. No sinus tract was evident. The patulation of the temporals and masseteric area was not painful. The tooth was non-responsive to electric probe and there was no spontaneous pain.

Figure 1: 2D periapical radiograph of previous RCT on tooth #3

In Henry Schein Middle East we cover now all the requirements for the end user in dentistry through the following lines:

- General consumables, dental materials and instruments (Henry Schein private label line including over 8,000 products - www.henryschein.com)
- Orthodontic line of products (Ortho Organizer, Class One and Maxel - www.orthoorganizers.com, www.maxelortho.com)
- Lab materials (Zahn Dental and Pentron Ceramics - www.zahnental.com)
- Handpieces and small equipment (BA International - www.bis-international.co.uk)
- General spare parts and services (Handpiece Headquarters - www.handpieceheadquarters.com)
- Dental Units, general equipment and Furniture (Ritter Concept - www.ritterconcept.com)
- CAD/CAM systems - o Clinical: PlanScan, PlanMill and X-Ray Cone Beam systems (Planmeca - www.planmeca.com)
- Dental Management Software (Software of Excellence - www.soedental.com)
- Dental laser and specialized material (CAO group - www.caogroup.com)

We continue to add more companies to deliver the large variety that the end users are demanding for. Our goal is to be able to supply a full chain of solution to our customers.

By Dental Tribune MEA

**What is your impression of the level of dentistry in the MEA region?**

The level of dentistry in the region is growing very fast in all divisions and branches. This area is considered to be an entry point for other regions in the world and this is the main reason why Henry Schein puts wide attention and investment to support and service dentistry in the MEA region.

**What impact has digital dentistry had in the MEA region?**

Digital dentistry becomes a vital topic in the Middle East market and Henry Schein places it as a high priority in their profile. With this being said, Henry Schein has launched the only complete CAD/CAM clinical and Lab system in the market from Planmeca and Ziran Dental with Zitrax complete CAD/CAM consumable solutions along with the dental management software from SOE and the cone beam system from Planmeca.

**How important is Education for Henry Schein Middle East and what are your plans for the coming year?**

Henry Schein is considered a leading company in the education line along with supplying most of the universities around the world with the basic and high scientific required materials and equipment. We are preparing a full education program to cover the following subjects:

- Cosmetics and Prosthodontics
- Orthodontics
- Surgery and Implantology
- Endodontics
- CAD/CAM Technologies

With a certified degree supported by a well-known University in the scientific field, we are planning to announce the details of this launch during the upcoming AEECD 2015 for the first time.

By Dr. Ghassan N. Hussein

**How do you reflect back on dentistry and your involvement for the MEA region over the last few years?**

**Dr. Ghassan N. Hussein** joined the Henry Schein team in October 2010 and immediately we established the Henry Schein private label and exclusive brands (the company name of Henry Schein private label and Henry Schein places it as a top companies to be able to serve the end user). We signed an exclusive distribution agreement in the Middle East with Ritter concepts (for their dental units and equipment) and with Air Techniques (for their air compressor and suction phosphoric plate scanners) as well as with Planmeca for their CAD/CAM clinical system and Cone Beam which we are very proud of. We are planning to add more companies in the coming years.

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**INDUSTRY**

**CS 8100 3D Extraoral Imaging System CBCT provides clarity of prognosis**

By Dental Tribune MEA

**What is the Henry Schein plan and strategy in Middle East is to cover all the requirements for the end users with the best scientific and economic solutions. This is why we keep adding to our profile the top companies to be able to serve the end user.**

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**How important is Education for Henry Schein Middle East and what are your plans for the coming year?**

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By Dental Tribune MEA

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and furcal defect (blue arrow) on #3
unaddressed MB2 canal (yellow arrow)

Figure 3: Axial view with finding of an aspect of the P root of tooth #3
narrow bony defect associated with the MB
with attenuation patterns suggestive of a

Figures 4 & 5: Operating microscope intraoral photographs of the

The PA radiograph (Figure 1) demonstrated that tooth #5 had previous root canal treatment. Probable radiolucent findings were associated with the apical portion of the MB and P roots. The root canal filling material associated with all three roots appeared underextended and underfilled. A decision was made to take a cone beam computed tomography (CBCT) scan in order to obtain more valuable diagnostic information.

Findings
The sagittal slice demonstrated attenuation patterns suggestive of a narrow bony defect associated with the MB aspect of the P root of tooth #3. The axial slice demonstrated the high likelihood of an unaddressed second MB canal as well as a furcal defect involving the MB and palatal roots. No radiolucent findings were associated with the apical portion of the MB root.

Treatment Plan
My endodontic diagnosis for tooth #3 was a previously endodontically treated tooth with an acute apical abscess. The differential diagnosis associated with the etiology of bone loss was assessed as follows: 1) A crack extending from the MB root to the P root 2) A second mesiobuccal (MB2) canal that was unaddressed during the initial therapy that was causing persistent periodontitis.

The patient was given the option to have the tooth extracted or to re-access the pulp chamber in order to investigate the presence of a crack or missed canal. She agreed to access the tooth, where upon a crack was discovered (Figures 4 and 5), extending from the MB canal through the palatal root.

Mark Limosani

Dr. Limosani received his D.M.D. degree from the University of Montreal in 2007. He attended the specialty program in Endodontics at Nova Southeastern University where he also received his master’s degree in dental science.

Dr. Limosani is a Fellow of the Royal College of Dentists of Canada and a diplomate of the American Board of Endodontics. He is currently on staff at Miami Children’s Hospital and teaches at the AEGD residency program at Community Smiles.

Dr. Limosani has lectured locally and internationally on dental traumatology, restoration of endodontically treated teeth, restoratively minded endodontics, diagnosis and treatment planning and cone beam computed tomography (CBCT) use in endodontics.

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About the Author

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The ARCTICA System's further possibilities. 

By Mrs. Esther Moll

The DentalDataBase user interface (Figure 1) shows all individual steps, from order creation, scanning, design to data transfer to the milling machine. To illustrate the rapid and simple realisation of a design, the description of the “step-by-step wizard” contains the time code. Tooth 21 is to be supplied with a crown. Design inputs are the current situation (Figure 2) and the mirror tooth 11. The impression of the current situation is taken and the scanned data are stored. The tooth is prepared, the impression is scanned.

02:25 p.m. - Data are stored.

02:26 p.m. - Data of the prepared 21 and the impression of the current situation is uploaded. The crown is positioned on the prepared stump (Figure 5).

02:27 p.m. - The step-by-step wizard leads to the next step of the process. The preparation line is created by the software via “1-click” (Figure 4).

02:28 p.m. - The software shows the calculated restoration shape (stump, Figure 5). This proposal by the software could still be individualized or changed.

02:29 p.m. - Mesial and distal contact points (Figure 6) are set.

02:30 p.m. - The software has positioned the database tooth (Figure 7).

02:30 p.m. - The step-by-step wizard offers to adapt the database tooth (white) to the situation (turquoise). The process step in the box (right) is called “Adaptation of model teeth”. The software calculates the correction (Figure 8).

02:50 p.m. - Adaptation of the design is complete (Figure 9).

02:51 p.m. - This process step (Figure 10) would allow additional changes or corrections. Proceed to the next process step with the “Continue” button.

02:51 p.m. - The system offers to trim the antagonist (purple) (Figure 11). Contact points to the adjacent teeth can be created or reduced.

02:55 p.m. - The MultiCAD software package now calculates the anterior tooth crown, compiles the data and generates the milling data (Figure 12).

From now on the order for milling the crown can be issued. Access the “KaVo Software Suite” via the “CAM” button in the DentalDataBase. This controls the engine. Use the start menu to select fabrication job and tool magazine and completes the order (Figure 13).

The design of a single crown can be done in five minutes – and this despite the five-axis technology, which is capable of fabricating even complex shapes. We are working on process optimizations that could lead to process times of ten minutes.

In the interview below with KaVo’s dental technician Esther Moll discusses the ARCTICA System’s further possibilities.

By KaVo

Dental technician Esther Moll has been an application technician at KaVo Dental since 1 October 2007 and works with KaVo Everest or KaVo Arctica. During product pilot phases, she acts as expert contact person for validations, correction of bugs, software tests, etc. In addition, she complains manager and works for international support. On the occasion of her user report, DZW spoke to Esther Moll about the particularities of KaVo’s Arctica System.

Q: Ms Moll, for a crown design to take barely ten minutes as described in the example, is this achievable for absolute Arctica professionals only?

Esther Moll: Anyone who has sufficient knowledge to define a crown by its key anatomic features can do that. With a little practice “simple” individual crowns can be done in five minutes – and this despite the five-axis technology, which is capable of fabricating even complex shapes. We are working on process optimizations that could lead to process times of ten minutes.

A: How much space will I have to allow for an Arctica system in my lab? Is a tabletop sufficient?

Yes, a big advantage is its size - half a technician's bench is easily sufficient. The Arctica-Engine's dimensions of 50 1/2 x 25 1/4 x 25 inch (775 x 590 x 584 millimeters) and its installation depth of 20 3/4 inch (524 millimeters) are indeed very compact.

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Oral health benefits of chewing gum

By Michael J.V Dodds, BDS, PhD, Wm. Wrigley Jr. Company
Excerpt from paper originally published in the Journal of the Irish Dental Association

The use of sugar-free gum provides a proven anti-caries benefit, but other oral health effects are less clearly elucidated. Oral health, particularly caries-reducing, benefits of sugar-free chewing gums have been well documented in many studies and reviews. In addition, chewing gum is increasingly being viewed as a delivery system for active agents that could potentially provide direct oral care benefits. Chewing sugar-free chewing gum promotes a strong flow of stimulated saliva, which helps provide a number of dental benefits:

- The higher flow rate promotes more rapid oral clearance of sugars;
- The high pH and buffering capacity of the stimulated saliva help neutralise plaque pH after a sugar challenge;
- Studies have shown enhanced remineralisation of early caries-like lesions and ultimately prospective clinical trials have shown reduced caries incidence in children chewing sugar-free gum.

Scientific evidence shows that chewing gum has a place as an additional mode of dental disease prevention to be used in conjunction with the more traditional preventive methods.

Benefits of chewing sugar-free gum

Oral clearance and saliva stimulation, plaque pH neutralisation

The major benefits of sugar-free chewing gum are mediated through oral physiology: stimulation of the salivary glands to produce a strong flow of saliva (a 10-12 fold increase over unstimulated saliva) is elicited by a combination of masticatory and gustatory stimuli. Although saliva flow rates are highest during the first five to seven minutes of chewing, when the sweeteners and flavour release is maximal, a two-fold increase in flow rate (over unstimulated flow) is maintained for as long as the gum continues to be chewed.

One of the immediate short-term effects of this enhanced saliva flow is the increased clearance of sugars and food debris from the oral cavity. The higher flow rate, pH and buffer capacity of the stimulated saliva help neutralise acids found in the mouth, and in particular help raise the plaque pH. The short-term neutralisation of plaque pH out of the demineralisation danger zone can also be supplemented by medium-term benefits, as it has been shown that frequent chewing increases baseline (unstimulated) saliva flow rate and increases the resting plaque pH and subsequent ability of the plaque to form acid from sugar. Some studies have suggested that chewing gum is better tolerated than artificial saliva for symptomatic relief of xerostomia. Remineralisation and clinical caries reductions

In addition to the pH neutralising effect, the increased rate of delivery of soluble calcium and phosphate ions from the stimulated saliva helps to remineralise surface enamel lesions, as shown in a number of in situ remineralisation studies. Clinical studies conducted in children who chewed gum at least three times daily for two or three years show that they have significantly lower rates of decay than children who do not chew gum. Furthermore, these caries-reducing effects have been confirmed by systematic reviews. Indeed, the American Dental Association has recently provided clinical guidelines for the use of sucrose-free polyl chewing gums in high caries-risk children and adults.

Extrinsic stain reduction

Chewing gum can reduce extrinsic tooth stain, either by removing existing stain or inhibiting its formation, whilst the addition of specific active agents (typically polyphosphates) may provide additional efficacy. Furthermore, these caries-reducing effects have been certified as safe for teeth by appropriate plaque pH testing; thus, while their inherent sweetness helps stimulate saliva, their rate of metabolism and acid production by the oral (plaque) bacteria is slow and does not cause an effective drop in the plaque pH, so the net effect is an increase in the plaque pH. There has been considerable research to test whether certain polysols show superior efficacy, but a recent systematic review stated it was not possible to distinguish between benefits derived from chewing versus those associated with specific polysol effects.

Calcium and Phosphate salts

There have been many attempts to improve the inherent remineralising effect of chewing gum-stimulated saliva through the addition of specific active ingredients. See an overview of some of these actives below.

Specific polysol effects

Sugar-free gums are usually sweetened with polysol (sugar alcohol) sweeteners, such as sorbitol, mannitol, xylitol, or maltitol. These polysols have all been certified as safe for teeth by appropriate plaque pH testing; thus, while their inherent sweetness helps stimulate saliva, their rate of metabolism and acid production by the oral (plaque) bacteria is slow and does not cause an effective drop in the plaque pH, so the net effect is an increase in the plaque pH. There has been considerable research to test whether certain polysols show superior efficacy, but a recent systematic review stated it was not possible to distinguish between benefits derived from chewing versus those associated with specific polysol effects.

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Potential negative effects of chewing gum

It is worth acknowledging that there are some concerns over chewing gum use, including its potential to be a choking hazard in young children, be subject to littering, and exert a laxative effect. Consumers should be reminded not to give gum to children younger than school age and to dispose of chewed gum responsibly. The laxative threshold of most polyol sweeteners used in gum is typically more than 15 g/day, which would require consumption of 10 or more sticks of chewing gum per day to achieve.

Conclusion

The scientific evidence supporting the non-specific benefits of chewing sugar-free gum has been reviewed and endorsed by key dental organizations across the globe including FDI (World Dental Federation), the ADA (American Dental Association) and the EFSA (European Food Safety Authority). Traditionally, preventive dentistry has focused on sugar restriction, plaque removal/oral hygiene, fluoride usage, fissure sealants and education. More recently, these approaches have been modified by improved diagnostic methods to allow early identification of disease, together with an accurate assessment of disease activity. There is an opportunity for chewing gum to be considered as another preventive modality to provide an additional layer of prevention by helping maintain the oral ecology in high and lower risk individuals and populations. Whilst it is not the intention of this article to provide clinical guidelines for the use of sugar-free chewing gum, the aim is to inform practitioners so they can accurately answer his or her patients’ questions regarding this topic and be able to provide appropriate guidance about chewing sugar-free gum and it’s oral health benefits when used as a complement to usual oral care regimens. While chewing gum may not be a treatment for oral diseases, by helping generate a healthy flow of saliva, it may help offset the perturbations in the oral ecology that lead to clinical disease states.

References


Full list of references is available from the author.

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Impression of multiple implants using photogrammetry: Description of technique and case presentation

By David Peñarrocha-Oliva, Raúl Palacios, J. P. Fanado, Le- ticia Bagán, Beatriz Giménez, María Peñarrocha

Abstract

Aim: To describe a technique for registering the positions of multiple dental implants using a system based on photogrammetry (PICabutments®). A case is presented in which a prosthetic treatment was performed using this technique.

Study Design: Three Eurotechni- kal® dental implants were placed to rehabilitate a 55-year-old male patient with right posterior maxillary edentulism. Three months later, the positions of the implants were registered using a photogrammetry-based system (PICabutments®). After processing patient and implant data, special abutments (PICabutments®) were inserted onto each implant. The PICabutments® was then used to capture impressions of the positions of the implants, automatically taking 150 images in less than 60 seconds. From this data, a master cast was obtained describing the relative positions – angles and distances – of each implant. Information regarding the soft tissues was obtained from an alginate impression. The cast was scanned. A Cr-Co structure was obtained using the photogrammetry technique. This cast fit was verified in the patient’s mouth using the Sheffield test and the screw resistance test.

Results and Conclusions: Twelve months after loading, peri-implant tissues were healthy and no marginal bone loss was observed.

The clinical application of this new system using photogrammetry to register the positions of multiple dental implants facilitated the rehabilitation of a patient with right posterior maxillary edentulism by means of a prosthesis with optimal fit. The prosthetic process was accurate, fast, simple to apply and comfortable for the patient.

Key words: Dental implants, photogrammetry, dental prosthesis technique, CAD/CAM.

Introduction

Dental implants are one of the most widely used therapies for the rehabilitation of partially or completely edentulous patients. It is scientifically proven that achieving proper passive fit of the implant-supported prosthe- sis improves the long-term prognosis of this therapy (1,2).

The classic system for fabricating implant-supported prosthe- ses is based on making casts and, after placement of the implant analogues, subsequent casting in plaster to make im- pression pieces, and the screw resistance test. In order to achieve an adequate passive fit of the implant-supported prosthesis, it must be obtained a correct registra- tion of the three-dimensional position of the implants (6).

Conventional impression tech- niques use abutments that, screwed onto the implants’ prosthetic platforms and en- compassed by setting material, should register and transfer the spatial position of the implant. These methods involve time- consuming clinical work and the use of impression materials and techniques that often fail to achieve a perfectly accurate master cast. Moreover, these techniques are generally un- pleasant for the patient (7,8).

The literature reflects an increasing application of digital techniques at different stages of dental implant therapy (9). At the stage when impressions are taken, intraoral scanners are being introduced into clinical practice. The technique avoids the need for registering implant positions with impression mate- rials and plaster model board so as to avoid the slightest dimensional errors that can cause unsatisfactory results when it comes to reproducing intraoral dimensions (7,10-11).

These instruments are a prom- ising alternative for obtaining direct intraoral impressions in a fast and comfortable way for the patient. However, they are not indicated for rehabilitation re- quirings more than 5.4 pieces.

Photogrammetry is a novel op- tion for reliable, direct intraoral registration of the positions of multiple implants, in a tech- nique for determining the geo- metrical properties of objects and their spatial arrangement from photographic images. Its most important feature is the precision with which it can measure objects without direct contact.

Photogrammetry is useful in many sciences and fields. It has been mainly applied to topo- graphy, but there are many non-topo- graphic applications, including different areas of medicine such as radiology (to improve accu- racy), surgery (neurosurgery, plastic surgery, sinus surgery) or rehabilitation (12).

In dentistry, photogrammetry has been used to study the shapes and positions of teeth, dental arches and maxillary and man- dibular bones. In orthodontics, it allows the three-dimensional analysis of the variations of the palate while performing rapid palatal expansion techniques and evaluating the achieved dental movement (15-18). Re- cently, its application in dental implant surgery planning has also been reported (19).

In the field of implant dentistry, it has been used to check the ac- curacy of other impression tech- niques, by analyzing the differ- ences between models obtained using different techniques and materials (20). As long as 1999, Jent and Bick (21) pro- posed photogrammetry as an alternative to conventional im- pression techniques and stated that then no development of this applica- tion has been reported.

The most important quality of this technology - measurement accuracy - is the key to success in implant impressions. Therefore, its application may be a very useful technique that will improve dental implant therapy.

The aim of this report is to de- scribe this technique applied to register the position of multiple dental implants using a system based on photogrammetry. A case is presented in which a prosthetic treatment was per- formed successfully using this technique.

PICabutments®

The PICabutments® (PICDental, Madrid, Spain) is a stereomacro- camera that records implant posi- tions in the mouth by means of photogrammetry. It comprises two CCD cameras specially de- signed for positions with impression mate- rials use, which accurately determine the position of the implants by means of the identification of abutments screwed on implants with unique individual coding (PICabutments®, PIC Dental). The camera has an infrared flash that constantly illuminates the scanned object while elimi- nating the shadows that occur with ambient light. The PIC- abutments® automatically takes every 10 extraoral pictures per sec- ond with an error of less than 10 mm. By triangulating the angles and distances between implants are interconnected and treated as a unit.

System software calculates av- erage angles and distances between implants from these photographs, obtaining an ac- curate relative position of each implant. This technique is used in the PICabutments® (PIC-Dental), which contains all the information on the patient’s face, with complementary test of the pas- sive fit® from the PICfile® vector file and digital zoom objects.

This information was automatically compiled into a vector PICBile® (PIC-dental). The healing abutments were placed and an alginate im- pression was taken and cast in plaster. The implant model was scanned with a 3D scanner in open STL format to obtain infor- mation regarding the patient’s soft tissues (Fig. 1). This infor- mation was then introduced in the CAD software together with the PICbile®.

The PICabutments® and the digitized plaster model were aligned with the Exocad® software (Exocad GmbH, Darmstadt, Germany) using three-point registration and subsequently improved alignment by Best-fit® (Fig. 1). This process transferred the relative position between im- plants to the digital model which provided the shape of the soft tis- sues, thus leaving the surfaces of the future prosthesis in rela- tion to the patient’s gingiva (Fig. 1).

A model of the antagonist arch was also scanned and centered in the CAD software to provide occlus- al references, and the prosthetic structure was designed using Exocad® (Exocad, Gmbh) in STL format (Fig. 2).

The design was sent to be machined in chrome-cobalt (Cr-Co) by a five- axis milling machine (Fig. 2). To build a working model, the digital model was processed providing the specific geome- try of the implant connections (Fig. 2) and it was manufactured by means of stereolithography using a 3D printer (Objet 2600, Eden, Israel). The model was processed in a manner that al- lowed the addition of false gum for further work in the labora- tory (Fig. 2). Once the internal structure of the implant-supported fixed partial denture had been fabricated, its passive fit was checked in the patient’s mouth. The Sheffield and one-screw tests were used: a distal screw was placed at the screw at 14 in this case - and a peripical radiograph was ob- tained to check the correct pros- thetic settlement on the other two implant connections (Fig. 2).

The screw resistance tech- nique was used as a subjective complementary test of the pas- sive fit. Distal screws at 14 and 17 were screwed with a torque of 10 Ncm and then a medial screw was introduced verifying that the tactile sensation was soft and presented no resistance to screwing. After these verifica- tions, the Cr-Co structure was sent to the laboratory to have the ceramic loaded.

The prosthesis, once finished, was screwed onto the implants (Fig. 3), with 25 Ncm torque. Occlusal adjustments were performed and the correct set- tlement on the implant connec- tions was verified with a radiograph (Fig. 3). A follow-up plan was established and twelve
Photogrammetry has been used in vitro research to test the reliability of other impression techniques (20). As early as 1999, Jenot and Flack (21) described its use for registering implant positions by photogrammetry for the purposes of implant dentistry. The present article describes a new system for registering, simply and precisely, the positions of multiple dental implants (22). Photogrammetry allows the registering of the exact three-dimensional locations of the implants, transferring all the information required to fabricate the prostheses directly from the patient’s mouth to a computer file. The technique avoids the inconvenience of conventional impression techniques. There is no need for impression abutments, implant positioning devices, body analogues, trays and impression materials. The PIC-camera measures angles and distances between prosthodontic attachments placed on the implants, allowing the patient total freedom of movement and the presence of blood, saliva or any other organic or inorganic residue does not affect measurement accuracy. Avoiding so many procedures and materials and the possibility of error saves time – both the number of visits to the clinic and their duration – economic cost and patient discomfort in comparison with conventional impression techniques. The information that makes it possible to detect discrepancies (28). Registering implant positions with the PIC-camera improves patient comfort in comparison with conventional impression techniques. The technique avoids the introduction of impression materials which must be kept in place in the mouth for an average setting time of 8-9 minutes and can provoke nausea and discomfort. Furthermore, the photogrammetry procedure can be interrupted if necessary and taken up again later on.

The clinical application of this novel photogrammetry system for registering the positions of multiple implants allowed the treatment of a patient with extreme maxillary free-end edentulism with a prosthetic solution. The technical advantage of introducing sub- jectivity into the evaluation, but is considered a precise way of detecting discrepancies (28). Registering implant positions with the PIC-camera improves patient comfort in comparison with conventional impression techniques. The technique avoids the introduction of impression materials which must be kept in place in the mouth for an average setting time of 8-9 minutes and can provoke nausea and discomfort. Furthermore, the photogrammetry procedure can be interrupted if necessary and taken up again later on.

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Full list of references is available from the publisher.
The quest for excellence—business as usual?

By Fiona Stuart-Wilson

Most people owning or running a practice like to think that they are providing excellence in their clinical care and justifiably proud of what they do. However in today’s increasingly competitive clinical environment, it is necessary to exercise its right of choice, clinical excellence and efficiency are no longer enough. Excellence has to be a thread throughout all of the management and operational activities of the practice. It also has to involve the embracing of change. Excellence is not about maintaining the status quo and carrying on with business as usual. In today’s world and with our local environment, doing that could mean that you are running your practice slowly into the ground.

Any quest for excellence needs a leader and as the owner or manager of the practice you are in the position to make changes and take action to improve the business. The key to excellence is not to where you want to go, but it’s not just what you do that is important but also the way that you do it.

First you need to think about exactly what you are trying to achieve and develop a very clear image as to what the successful practice you are striving for actually looks like and feels like to work in. A surprisingly large number of practice owners do not give this great consideration. You could start by thinking about what ideally you would like patients to say about your practice if they were talking to other people about it. That done, you must then crystallise this picture into meaningful, measurable and realistic goals across the key business areas of your dental business.

Next you need to tell your staff and others who work with you what these goals are. You also need to be enthusiastic about them, for if you are expecting them to follow your lead and work at explaining your goals in a motivating and compelling way. It is important for your team to be completely clear about what successful looks like for you. They will be delivering your ideas.

Now you can start to examine the systems and procedures you have in place to achieve your goals – not as the case may be. You may have had these systems for some time. They were designed to get you where you are now, and not necessarily to where you want to go, so they may need to be changed or updated. It does not mean they are wrong or inherently bad. It simply means that the world has moved on and we and our systems need to move with it. Take each aspect in turn. Ask yourself the following questions for example:

- What are your patients’ expectations of their care, and how will you meet these expectations?
- How effective is your marketing strategy at attracting the right patients for the practice you want to have?
- Are you investing in the right equipment and technology to attract these patients?
- Are you charging the right fees to allow you to retain your clients and demonstrate in yourself the enthusiasm and determination you expect from the mistakes we make.
- What are your staff’s performance standards and how do you ensure they are achieved?
- How do you ensure that your team deliver their work to the right patients for the practice and do this consistently?
- Are you charging the right fees and do you have a better understanding of your patients’ needs and desires?
- Are you making the right decisions about where to allocate your resources?
- Are you making the right decisions about how to allocate your resources?
- Are you making the right decisions about how to make your practice look like the success you want it to be?
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Diagnose the problem: Who are your no-shows?

One traditional way of counter- ing broken appointments is by over-scheduling. This, however, does nothing to curb the problem, and it creates others in its wake. A day with fewer no-shows than expected, the doctor will fall behind.

What’s worse, longer wait times in the office due to the unpre dicted no-shows, so practice tend to encourage no-shows. Research suggests that patients who are more reliable feel a greater temptation to skip.

To get serious about fixing the no-show problem, first diagnose the causes. For example, the longer the out the appointment time, the greater the chance of a patient missing it.

Forgetfulness, too, is a leading cause. No-show patients tend to be younger and male. Elderly health affected patients also are more likely to skip, partly to transportation problems and partly due to health problems.

To get a picture of what’s happening in your practice, check all no-shows over the past three months. Produce a table with columns for patient gender, age, insurance status (if applicable), day of the week the appointment was made for, morning or afternoon appointment, new or established patient, area of residence, and physician—any variable you’d like to explore. You may discover that most no-shows are new visits in the afternoon, or occur with a cold, which ensures that the patient to ferret out any obstacle and don’t show forever) at hospital, it’s bad for roughly 35 percent to 15 percent. Some other practices in the States collect only 41 percent of their no-show fees. Some practices complain that they’re not reim bursed for lost time in the waiting room. However, after two years of applying this policy, they achieved their primary goal, re ducing the no-show rate from roughly 35 percent to 15 percent. Practices are serious about no-shows, although they give patients the benefit of the doubt about their first miss if they have a reasonable excuse. But the penalty has definitely raised patients’ awareness about their responsibility.

While no-show charges remain controversial, virtually everyone agrees that practices are entitled to drop patients who repeatedly blow off appointments.

One sound approach is to dis miss a patient after three no-shows within a given period, say, six months. Record the first no-show in the chart and send a letter or email asking him to reschedule. A second violation triggers a second, louder ter. After the third skip, the dec ision to terminate should fall to you, the doctor—not the office manager. You may want to con tact the patient to ferret out any extenuating circumstances that would warrant leniency.

The best policy, however, is pre venting no-shows in the first place. Face it—nobody really likes going to the doctor. By help ing patients overcome barriers to keeping appointments, you’ll spend less time and energy be ing a medical truant officer.

Discharging no-show patients

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Contact Information

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heikal@heikal.com
New A-dec 400 highlighted by radius positioning and style

By A-dec

A-dec 400 combines versatility with elegance. Emphasizing flexibility, efficiency and enhance doctor access to the patient, A-dec 400 satisfies the need for less complexity and more style at a competitive price point. It’s a solution that complements other A-dec product lines, such as A-dec 500 that satisfies the need for less complexity and more style at a competitive price point. A-dec 400 gives dental

The new A-dec 400 gives dental

teams an option for a truly am

iduous configuration to ac

 commodate doctor preferences. The Radius delivery and support modules quickly and easily ro

tate around the chair for com

plete left/right compatibility.

To elevate treatment room pro

ficiency and enhance doctor access to the patient, A-dec 400 optimizes ergonomics with an ultra-thin backrest and positioning of controls and ancillaries, while eliminating unnecessary movement. “Our approach is to help doctors maximize productivity without sacrificing patient comfort,” says A-dec Project Chief Tom McCleskey. “With A-dec 400, doctors get exceptional aesthet

ics with features that make it a

versatile investment.”

The new A-dec 400 is also de

signed with well-placed mount

ing locations for the delivery system and support-side mod

tules. Doctors are able to Radius

mount a monitor, light, control, cuspidor, and assistant’s arm. The front-mounting location off

fers flexibility for limited space, while also providing excellent ergonomics for operators who prefer side delivery.

Aside from mounting locations, doctors are able to choose from A-dec’s three dental light offer

ings and specify factory-installed cuspidor, and assistant’s arm.

The front-mounting location of

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In 2012 CAPP joined a global family of 95 publishers by becoming the proud owner of the Dental Tribune Middle East & Africa edition, and since then we have been delivering 6 print publications to over 20,000 Dental Professionals and in the MEA region, 24 e-newsletters are delivered to more than 41,000 active subscribers, and through an international website the latest industry news reaches the largest dental community worldwide wide an audience of over 650,000 Dental Tribune readers.
Ultra-low abrasion for your patients who need effective sensitivity relief and seek gentle whitening

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- Active lifting and prevention of extrinsic dental stains*7
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Recommend Sensodyne – specialist expertise for patients with dentine hypersensitivity.

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For reporting any adverse event/side effect related to GSK product, please contact us on contactus-me@gsk.com
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A pleasure to welcome you to The Kingdom

Dear Colleagues,

On behalf of the Organizing Committee, I am pleased to welcome all of you to participate on our 26th Saudi Dental Society International Dental Conference that will be held at Riyadh International Convention and Exhibition Center from 13-15 January 2015.

So far this Conference is Riyadh’s largest annual event devoted to the dental care in Saudi Arabia, and it will give participants a platform to exchange ideas, discover new trends in dentistry, reacquaint with colleagues, meet new friends, and broaden their knowledge.

The Ministry of Health gives its utmost priority to provide the best health care services throughout the Kingdom making use of the latest technology in the sector.

The health care policy of the Kingdom has been designed according to the vision of Custodian of the Two Holy Mosques King Abdullah, who once said: “Nothing is more important than the health of the people”.

Aside from the scientific sessions during the Conference, there will be hands-on teaching workshops and of course our popular poster sessions to give the presenter as much exposure as possible to their peers, and research awards for the Graduates, Young Dentists and Dental Interns.

We are thankful to the many international speakers who will shed light on the research and clinical issues that shape our field today.

We hope that presentations from many different speakers from different countries shared during this Conference will enrich knowledge to the dental professionals in Saudi Arabia and provide even better treatment, and dental care to the community they served.

Your participation will make this conference wonderful, fruitful and successful.

On behalf of the Scientific Committee, I warmly welcome all of you to participate on our 26th Saudi Dental Society International Dental Conference that will be held at Riyadh International Convention and Exhibition Center from 13-15 January 2015.

For the past four consecutive years in 2010, 2011, 2012 and 2013, the Saudi Dental Society has been awarded as the best organization among all 50 scientific, humanitarian and medical organization in the Kingdom of Saudi Arabia.

Our aim for the members, our colleagues and friends in the dental field is to provide them with a good and highly innovative advancement to enhance their knowledge to a modern technology used globally.

We call all general practitioners/dentists to participate in the enrichment of the scientific program, submitting their works and organizing special topic sessions. The Scientific Committee members are now ready for the evaluation of the expected abstracts. High quality keynote speakers have already accepted our invitation to participate.

The Conference will be organized in plenary sessions, workshops, oral presentations and poster presentations as well as medical and dental exhibitions.

We look forward to your participation, particularly your insights which can be shared during the presentations and discussion periods of all sessions.

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Riyadh, Saudi Arabia

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WELCOMING

Dr. Mohammad I. Al-Obaida President The Saudi Dental Society

Dr. Abdullah S. Al-Keraidis Chair, Scientific Committee

INTERVIEW

“The Saudi Dental Society (SDS) International Dental Conference last year paved the way to the first paperless event for the society...”

- Dr. Mohammad I. Al-Obaida

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SPEAKERS

Speaker Introduction

> Page 2

EXHIBITION PLAN

See the industry

> Page 3

VISIT US IN THE EXHIBITION

DENTAL TRIBUNE

ME Association

Riyadh, KSA: This is your second SDS Conference for you as President, what are your thoughts of the upcoming event in relation to previous?

The Saudi Dental Society (SDS) International Dental Conference last year paved the way to the first paperless event for the society where we introduced the Poken which is a technology that utilizes Near Field Communication (NFC) technology to allow the exchange of online social networking data between two keychain accessories. Participants were able to interrelate professionally and exchange ideas during the conference activities digitally through their pok- en devices. The membership of the SDS continues to grow and each event is as successful as the previous year. This year, the event will feature 20 outstanding clinicians and dental experts who will cover various dental topics and bring forth another unique experience to its numerous members.

How do you reflect back over the last 2 years as president of the SDS?

During my first year, I had vowed to perform my tasks aimed at developing the society’s vision and to implement these policies and procedures. I am humbled to state that during my 2 years as President, the SDS served the dental community with many meaningful and remarkable accomplishments. I had hoped to stimulate more progress for the members of the Society towards providing them a better and diversified service, education and support.

We see more and more the SDS has become very active outside of the Kingdom, could you elaborate on your involvement in Dentistry for the GCC region?

The membership of the SDS is by far one of the largest in the GCC region. This is why some of the SDS Board members are often involved in the GCC conference organizing committee and a majority of its members are always actively participating in the conferences outside the Kingdom like Dubai, Kuwait, Beirut, etc. The commitment and presence of the SDS members in the GCC conferences ensures their support and they gain scientific and educational advancement in return.

What is your impression of the dental scene in the Middle East region? How has it evolved over the last 2 years?

During the last 2 years, the Society supported successfully and effectively various community services and campaigns in the various regions of the Kingdom to promote health care awareness and education. The Awareness Day in Shroq Almaserah Private Elementary School, Awareness Campaign for Special Needs Center, Yasmine Fanasik Campaign to Raise Awareness for Cancer Damage, Children’s Charity Committee for Orphans Care, Awareness Campaign in AlNoor Institute for the Blind, Awareness Day in Abdullah bin Masood Elementary School, Education Day in Al-Qahat, Campaign Smoke-Free Mecca and participation in the Activities of the General World Children’s Day are just a few of those accomplishments. This is a clear manifest that SDS fulfills its objec- tives not only to its members.

By Dental Tribune MEA
but to the whole community as well.

How much impact has Digital Dentistry had in The Kingdom so far?

The Digital Dentistry had been introduced many years back but only a few keen users have adopted it until recently when many more dentists had found it better and convenient to use. The dental community in the Kingdom has adopted to using these current digital techniques and workflows. They are now familiar to its learning experience and the impact of the new technologies in the dental community.

What advice do you have for the younger generations?

I am encouraging the younger generations to focus their professional ambitions by being committed to obtaining educational advancement to ensure their success and not to forget to share their services to the community.

Is there anything else you would like to share with the readers?

I am urging everyone to continue to contribute in terms of support, services and goodwill for a better community.
PRECISION CLEAN BRUSH HEAD PROVIDES

UP TO 5x
GREATER REDUCTION
IN PLAQUE BIOFILM ALONG THE GUMLINE

5x

* vs. a regular manual toothbrush

Oral-B, most Dentist Recommended Toothbrush Brand worldwide

continuing the care that starts in your chair
Oral-B Launches Up-To-Date series in MEA Region. More to come in 2015

By Oral-B

Dubai, UAE: Procter & Gamble’s Oral-B launched a series of Continuing Dental Education events in 2014 for the Middle East region. The events which already took place in Dubai, Abu Dhabi, Ras Al Khaimah, Muscat, Dammam, Riyadh and Jeddah will continue to grow in the region in 2015.

The Oral-B brand is a worldwide leader in the brushing market as well as education. Part of the Procter & Gamble Company since 2006, the Oral-B brand includes manual and power toothbrushes for children and adults, oral irrigators, oral care centers and interdental products, such as dental floss. Oral-B toothbrushes are used by more dentists than any other brand worldwide.

P&G Oral Health are pleased to sponsor this scientific exchange seminar for Dentists, Hygienists and Therapists at a choice of different locations and dates during the year 2014 and will continue in 2015. The 2014 events took place at several locations within UAE, KSA and Oman.

The Scientific Relationship Manager for the Arabian Peninsula describes the initiative: “The MEA region is very important for Oral-B. Over the last two years we have been striving to deliver top notch education and help improve the overall oral health condition in the region. Our newest innovations of Stabilized Stannous Fluoride in the new Oral-B toothpaste, along with the oscillating / rotating power brushes will help achieve oral health maintenance goals in the region.”

Up To Date Dubai - 31st January 2014 - Gloria Hotel Dubai
Up To Date Dammam – 20th June 2014 - Sofitel Hotel Al Khobar – Corniche
Up To Date Jeddah – 50th October 2014 - Park Hyatt Marina Jeddah

Up To Date Riyadh - 1st November 2014 - Radisson Blu Hotel Riyadh
Up To Date Muscat – 04th November 2014 - Grand Hyatt Muscat
Up To Date Abu Dhabi – 18th November 2014 - Millennium Hotel Corniche Abu Dhabi
Up To Date Ras Al Khaimah – 15th December 2014 - The Cove Rotana, RAK

 wb The powerbrush offers several benefits of good oral hygiene

Oral-B showcased its latest developments at each Up To Date events

Up To Date: Scientific Exchange Seminar in Dubai, UAE

Up To Date: Scientific Exchange Seminar in Jeddah, KSA

Up To Date: Scientific Exchange Seminar in Bas Al Khaimah, UAE

Dental Delegates enjoying the Up To Date in Abu Dhabi, UAE

Up To Date: Scientific Exchange Seminar in Muscat, Oman

Up To Date: Scientific Exchange Seminar in Ras Al Khaimah, UAE

Up To Date: Scientific Exchange Seminar in Dubai, UAE

Dr. Elias Berdouses, Greece lectured in Muscat, Oman. Dr. Hussain Aliaovati – Chairman of Oman Dental Association awarding Dr. Elias in Muscat.

Prof. Khaled Balto, KSA entertains the crowd on Endodontics

Prof. Crawford Bain, UK lectured at several of the UTD events

Dr. Ninette Banday explaining an advantages of the Power Brush to Dr. Ninette Banday

Up To Date: Scientific Exchange Seminar in Ras Al Khaimah, KSA

Prof. Colin Murray, UK lecturing in Abu Dhabi and RAK
GC introduces MI Varnish with Recaldent*(CPP-ACP)

Topical fluoride varnish with Calcium and Phosphate for the effective treatment of hypersensitivity

By GC Europe

L EUVEN, Belgium: GC, a world leader in dental laboratory and laboratory materials has launched MI Varnish, a topical fluoride varnish containing the patented Recaldent technology. Recaldent, also known as casein phosphopeptide – amorphous calcium phosphate (CPP-ACP), is a milk-derived protein that remineralises tooth surfaces by offering bio-available calcium and phosphate ions. Tooth Mousse and MI Paste Plus are the other products from GC containing Recaldent. The remineralising effect of Recaldent in Tooth Mousse and MI Paste Plus not only offers general prevention for all ages, but also offers the much needed prevention for high caries risk patient groups under orthodontic treatments, for paedodontic or geriatric dentistry.

MI Varnish is composed of 2% Recaldent and 5% sodium fluoride. This unique combination in MI Varnish offers the much needed protection to patients of all age groups, all caries profiles to effectively relieve them from hypersensitive teeth. MI Varnish is the only varnish in the market that contains the patented CPP-ACP. Evidence supports that addition of bio-available calcium source enhances the efficacy of MI Varnish.

MI Varnish enhances the hard tissues fluoride uptake and effectively supports, replenishes and protects tooth surfaces with the stroke of a brush. Its features are as follows:

Quick

Applied in minutes, MI Varnish requires no preparation or prophylaxis, enhancing patient satisfaction, particularly for children.

Easy

The texture and consistency of MI Varnish enables it to stick effectively to the applicator brushes and flow easily into hard to reach proximal areas, while covering all tooth surfaces evenly and effectively.

Effective

MI Varnish penetrates dentinal tubules effectively to form a good seal, while its neutral pH of 6.0 enhances enamel acid resistance and inhibits demineralisation.

Aesthetic

MI Varnish has a neutral shade, creating an almost invisible coating.

Comfortable

MI Varnish does not clump or coagulate when exposed to saliva and provides a creamy texture and comfortable film thickness, even when multiple layers are applied.

Pleasant

MI Varnish is available in fra-grant mint and strawberry flavours.

MI Varnish is available on unit dose containers that are easy to open and contain enough material for a full mouth application. MI product family

MI Varnish a great complement to GC’s line of preventive and diagnostic products that include Tooth Mousse and MI Paste Plus, Saliva Check BPFER, Saliva check Mutans and GC Tri Plaque ID Gel.

MI Varnish is the latest product in the portfolio of preventive dental care that GC offers dentists to manage a minimum intervention continuum of care, ranging from diagnosis to prevention and treatment.

References

GC trademarks: Tooth Mousse, MI Paste Plus, Saliva Check Buff-er, Saliva Check Mutans, GC Tri Plaque ID Gel.

*Recaldent is not a GC Trade- mark.
Support, replenish and **protect** with the stroke of a brush

MI Varnish from **GC** treats **hypersensitive teeth** and provides enhanced **long term protection**

MI Varnish is part of GC's **Minimum Intervention** range

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A clinical assessment of the efficacy of a Stannous-containing Sodium Fluoride Dentifrice on Dental Hypersensitivity

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By Trevor N. Day, PhD; Johannes Einwag, Prof. Dr. med. dent.; Joachim S. Hermann, PD Dr. med. dent.; Tao He, DDS, PhD; Mary Kay Anastasia, BA; Matthew Barker, PhD; Yuqing Zhang, MS

The World’s Dental Hygiene Newspaper • Middle East & Africa Edition

Aims: To measure the desensitizing benefits of an experimental stannous-containing sodium fluoride dentifrice versus a regular sodium fluoride negative control.

Methods and Materials: This was a randomized, double-blind, parallel group, four-week clinical trial. Sixty-one subjects with clinically diagnosed dentinal hypersensitivity were enrolled and randomized to the experimental dentifrice or the control dentifrice to use twice daily for four weeks.

Efficacy assessments (Air Blast) were performed at baseline and weeks two and four. Separate analyses were performed for the two most sensitive teeth at baseline and for all 12 teeth. Results for weeks two and four combined also were analyzed.

Results: Thirty-one subjects were included in the analyses. For the two most sensitive teeth, the experimental dentifrice showed statistically significantly less sensitivity (p < 0.05) versus the control at weeks two and four and for weeks two and four combined. The sensitivity reduction ranged from 24.9% to 28.4% over the control. For all 12 teeth, the experimental group had statistically significantly lower (p < 0.05) sensitivity scores versus the control group at week two and weeks two and four combined.

Conclusion: The experimental dentifrice demonstrated significant desensitizing advantages versus the control.

Clinical Significance: This stannous-containing sodium fluoride dentifrice provides an effective treatment for patients with dentinal hypersensitivity, significantly reducing sensitivity versus a negative control in this four-week clinical trial. Key Words: Stannous, dentifrice, sodium fluoride, sensitivity, clinical trial.

Introduction

Dentinal hypersensitivity is a highly prevalent condition reported to affect from 4% to 57% of the population. The causes of sensitivity are well characterized as exposed dentinal tubules most commonly resulting from gingival recession followed by loss of cementum. The mechanism by which nerves are triggered to result in the pain associated with hypersensitivity is still widely accepted to be the Brännström hydrodynamic theory. This postulates that changing physical conditions on the dentin surface such as heat, pressure, or osmotic potential give rise to fluid movement in the tubules. The consequent pressure change stimulates the nerves giving rise to the pain.

The mechanism of action of stannous ions in reducing dentinal hypersensitivity has been found to be the precipitation of stannous compounds occluding the dentinal tubules and thus preventing stimulation of the nerves in the pulp cavity. In vitro studies using various techniques, such as scanning electron microscopy, electron probe microanalysis, and Vickers surface microhardness, demonstrate deposition of tin and fluoride on the surface and covering of the dentinal tubules. One laboratory evaluation showed that while both zinc and tin covered or obturated tubules, zinc was largely removed by washing whereas tin remained covering the tubules. Another study showed specimens treated with stannous fluoride (Crest® ProHealth®) failed to stain and were excluded. Subjects with sensitive teeth or with any other condition that the investigator considered may compromise the results also were excluded. Subjects taking daily doses of anticonvulsants, sedatives, tranquilizers, or other mood-altering drugs were excluded as well as subjects with a history of significant adverse effects following the use of oral hygiene products such as toothpaste and mouth rinse.

Test Dentifrices, Assignment to Treatment Sequence: The two treatments used in this study were:

1. An experimental stannous-containing sodium fluoride dentifrice with 1450 ppm F- sodium fluoride and stannous chloride as a key excipient (Procter & Gamble UK, Surrey, United Kingdom)
2. Crest® Decay Protection (UK) with 1450 ppm F- sodium fluoride (Procter & Gamble UK, Surrey, United Kingdom)

Both were supplied to the subjects with (medium) Oral-B Advantage 40 toothbrushes (The Procter & Gamble Company, Cincinnati, OH, USA). The test products were supplied in kits containing the assigned toothpaste, toothbrush, and written usage instructions. The dentifrices in both kits was supplied blinded in white tubes.

Subjects were stratified at baseline into one of four strata depending on their gender (female or male) and the baseline self-reported tooth hypersensitivity (low or high). Within strata, subjects were randomly assigned to one of the two treatment groups using an encoded program. Subjects residing in the same house were included in the same strata using an encoded program. Subjects residing in the same strata using an encoded program.
Aim (p=0.56) between groups at baseline for either the two most sensitive teeth or all 12 teeth combined.

Efficacy Results
At the week two and four follow up visits combining weeks two and four, the experimental group had mean air blast scores for two most sensitive teeth that were 28.4%, 24.9%, and 27% lower, respectively, than the control group (p<0.05) at both assessment (Figure 1). At week two, mean scores for the experimental and control groups were 1.51 and 2.11, respectively (Table 1). At week four, the experimental group had a mean score of 1.42 compared to 1.98 for the control group. The weeks two and four combined mean score was 1.46 for the experimental group and 2.00 for the control group.

At week two and combining weeks two and four, the experimental group provided significantly greater reductions in air blast scores for all 12 teeth relative to the control group (Table 2).

The experimental group had a mean score of 1.17 for the control group was 1.52. The weeks two and four combined mean score was 1.17 for the experimental group and 1.40 for the control group after four visit, the experimental group had a mean score of 1.07 (p=0.07) lower mean air blast scores for all 12 teeth relative to the control group (1.16 and 1.40, respectively) (Table 2).

The desensitizing benefit of the experimental dentifrice over the control was 22.4% at week two, 17.1% at week four, and 10.9% for the combined weeks two and four visits (Figure 1).

Safety Results
One subject in the experimental group reported a possible related adverse event (desensitization) observed by the examiner that was mild in nature. Another subject in the experimental group had a non-treatment-related adverse event (herpetic lesion) reported and observed that was mild in nature.

Discussion
In this clinical trial, the experimental group exhibited a significantly greater reduction in tooth sensitivity via air blast measurements than the control group (Figure 1). There were no significant differences between the two treatments at either week four or week eight (p>0.54) for either assessment.

One of the benefits of this stannous-containing sodium fluoride dentifrice formulation relative to other desensitizing treatments is its effectiveness against other oral hygiene habits (e.g., flossing) with the exception that any anti-tooth hypersensitivity products should be used. Air Blast Tooth Specific Sensitivity
The thermal sensitivity perceived by the subject was measured by the examiner by directing an air blast individually at each of the premolars and canines at baseline, week two, and week four visits. Each tooth was isolated with cotton rolls and the air blast delivered from a distance of 1.0 centimeter for 1 second. The following scale was used to assess the level of hypersensitivity for each of the 12 teeth examined:

1. No pain, but perceive stimulus
2. Slight pain
3. Pain during application of stimulus
4. Pain during application of stimulus
5. Pain during application of stimulus

Exclusion criteria included:
• 3 – Pain during application of stimulus
• 2 – Pain during application of stimulus
• 1 – Pain during application of stimulus

Table 1: Between treatment comparison of air blast score for two most sensitive teeth

Table 2: Between treatment comparison of air blast score for all 12 sensitive teeth

Figure 1: Overall results pooling weeks two and four from the repeated measures analysis.

In this clinical trial, the experimental group exhibited a significantly greater reduction in tooth sensitivity via air blast measurements than the control group (p<0.05) at both assessment. At baseline, both the experimental group had significantly lower mean air blast scores for all four visits. The experimental group also demonstrated significantly greater reductions in the control in tooth sensitivity via air blast measurements among all 12 teeth on post-baseline measurements at week two and the combined results for weeks two and four (p<0.05). The assessment of all 12 teeth was included in this trial for comparison purposes but is not a widely used measure in sensitivity trials since the condition typically does not affect each tooth.

These results are aligned with other studies evaluating stannous- containing dentifrices. Five trials in the literature evaluated (p<0.05) a combination of 0.454% stannous fluoride and 5% potassium nitrate in toothpaste, four trials compared the dentifrice to a positive control sensitive (p<0.05) and the fifth study was versus a commercial non-desensitizing control dentifrice.10 The effectiveness of the product combining the content of stannous fluoride with potassium nitrate was found to be greater than that of the sodium fluoride product with potassium nitrate.11,12 and the non-desensitizing control.16 Two published randomized parallel group studies were conducted on a dentifrice containing stannous fluoride compared to a sodium fluoride negative control toothpaste.13,14 In both studies, the sensitivity scores of the stannous fluoride group after four and eight weeks of product usage showed statistically lower than the control group.13,14 A non-staining marketed desensitizing dentifrice (Crest®) was found to be significantly better than the sodium fluoride negative control toothpaste.15 In addition, the significant reductions in dental hypersensitivity demonstrated by the stannous-containing sodium fluoride dentifrice, now marketed in parts of Europe and China, are consistent with outcomes of other research on this particular formulation. An eight-week, randomized, parallel group, two treatment, double-blind study was conducted among generally healthy adults with moderate dental hypersensitivity.15 Subjects were stratified at baseline according to age, gender, and baseline dental sensitivity scores and randomly assigned to one of the two treatments: to dentifrice containing sodium fluoride dentifrice or a marketed potassium nitrate control (Crest® Sensitivity Protection, The Procter & Gamble Company, Cincinnati, OH, USA) for daily use. Hypersensitivity was assessed by Yeaple Probe and cold Air Blast.15 All other tooth and tile and thermal assessments respectively, at baseline, week four, and week eight. Fifty subjects completed all evaluations. Both treatments provided significant reductions in hypersensitivity compared to baseline at both week four and week eight. There were no significant differences between the two treatments at either week four or eight (p>0.54) for either assessment.

Conclusion
This stannous-containing sodium fluoride dentifrice provides statistically significant benefits for dental hypersensitivity and should be considered as a home care option for patients who experience this condition.

Clinical Significance
This stannous-containing sodium fluoride dentifrice provides an effective treatment for patients with dental hypersensitivity.

References

Full list of references available from the publisher.
PRECISION CLEAN BRUSH HEAD PROVIDES

UP TO 5x

GREATER REDUCTION
IN PLAQUE BIOFILM ALONG THE GUMLINE

5x

* vs. a regular manual toothbrush

continuing the care that starts in your chair
Removal of interproximal dental biofilms by high-velocity Water Microdrops

By A. Rinaide, D. Carugo, L. Capretto, M. Aspiras, M. De Jager, A. Ward and P. Stoodley

Abstract

The influence of the impact of a high-velocity water microdrop on the detachment of Streptococcus mutans UA159 biofilms from the interproximal (IP) space of teeth in a typodont model was studied experimentally and computationally. Twelve-day-old S. mutans biofilms were exposed to a prototype AirFloss delivering 115 μL water at a maximum exit velocity of 60 m/sec in a 50-msec burst. Using confocal microscopy and image analysis, we obtained quantitative measurements of the percentage removal of biofilms from different locations in the IP space.

The 3D geometry of the typodont and the IP spaces was obtained by micro-computed tomography (μ-CT) imaging. We performed computational fluid dynamics (CFD) simulations to calculate the wall shear stress (τ_w) distribution caused by the drops on the tooth surface. A qualitative agreement and a quantitative relationship between experiments and simulations were achieved. The wall shear stress (τ_w), generated by the prototype AirFloss and its spatial distribution on the teeth surface played a key role in dictating the efficacy of biofilm removal in the IP space.

Key words: oral hygiene, Streptococcus mutans, micro-computed tomography, microscopy, interproximal cleaning, dental plaque.

Introduction

Good oral hygiene practices maintain a healthy oral cavity, biofilm reduction and prevent the progression of dental diseases experimentally and computationally. Twelve-day-old S. mutans biofilms in the IP space were exposed to a prototype AirFloss delivering 115 μL water at a maximum exit velocity of 60 m/sec in a 50-msec burst. Using confocal microscopy and image analysis, we obtained quantitative measurements of the percentage removal of biofilms from different locations in the IP space.

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Materials and Methods

Bacteria and Growth Media

Biofilms were grown from S. mutans UA159 (ATCC 700610). Stock cultures of S. mutans were stored at -80°C in 10% glycerol in physiological buffered saline (PBS). Biofilms were cultured with sucrose (2% w/v) supplemented brain heart infusion (BHI) medium (Sigma-Aldrich, Dorset, UK) and incubated at 37°C and 5% CO2.

Typodont Model and Microburst

To recreate a realistic geometric environment present in the IP space, we grew biofilms on the 2 upper central incisors (teeth 10 and 11) of the palatal surface of typodont teeth in the proximal (maxillary dental arch). The CAD-based 3D rendering of the IP space was used in the study. (B) The 3D meshwork showing the geometry of the tooth surface was used for the computational simulations. The sketch (right) shows the mesial view of a maxillary central incisor, and the dashed square shows the region of interest used in the study.

Results

3D Imaging of Typodont Model

High-resolution 3D images detailing the micro-architecture of the typodont were obtained by µ-CT (Bk). This allowed us to computationally disassemble the typodont, maintaining the relevant juxtaposition between the individual teeth, and to create a computational virtual typodont without interference from the other typodont materials.

Quantification of Biofilm Removal

With confocal microscopy, S. mutans biofilms grown in the IP space showed bacterial cells aggregates, forming distinct cell cluster colonies consisting of ‘tower’, ‘mushroom’, and ‘cushion’ shaped structures. The thickness of the resulting biofilm on each tooth surface was approximately 200 to 500 μm. After the microburst, the images taken for the proximal surface of the teeth showed almost no biofilm close to the nozzle tip of the prototype AirFloss. Image analysis showed 95% removal close to the tip, 62% removal at approximately half the labio-palatal distance from the tip to the back of the teeth, and 8% removal at the back of the teeth. The percentage removal values were plotted vs. the distance from the nozzle tip to the midpoint of the palatal surface of the teeth (A). A comparison between the values obtained from the numerical simulations for τ_w at the same locations (Figs. 5C, 5D).

Critical Shear Stress for Biofilm-Muggregate Detachment

The morphology of the biofilms in the IP space 100 m/s micro-velocity air bubbles varied markedly between one channel and the...
The Ultimate Sonicare Power Toothbrush

New Philips Sonicare DiamondClean—the ultimate clean for ultimate results.

Help your patients experience the difference of Sonicare technology. It will be love at first brush.

- Our newest power toothbrush removes 45% more plaque than Sonicare FlexCare+ with ProResults brush head
- Powerful yet gentle dynamic cleaning action helps improve gum health in just 2 weeks
- Clinically proven to whiten teeth in just 1 week

Effect of the Nozzle z-position on Wall Shear Stress Distribution

Contours of fluid τz on the tooth surface and from these computations were obtained to investigate the effect of tip positioning on the device’s hydrodynamic performance. Figure 4 shows the tooth surface area where τz is lower than the shear stress of 0.5 Pa. Computational results predicted that the maximum τz of biofilm removal would take place when the nozzle tip is placed at z/H = 0.5 or z/H = 0.66, while the effect of tip positioning would be significantly reduced at extreme z/H positions, namely, z/H = 0.15 or z/H = 0.85 (close to the incisal edge).

Discussion

Ultra-low abrasion for your patients who need effective sensitivity relief and seek gentle whitening

- Clinically proven to relieve your patients' dentine hypersensitivity.¹, ⁶
- Active lifting and prevention of extrinsic dental stains.², ⁷
- Ultra-low abrasive formulation appropriate for your patients with exposed dentine.⁸

Recommend Sensodyne—specialist expertise for patients with dentine hypersensitivity

*With twice daily brushing


20th March 2015
World Oral Health Day
Smile for life!
The challenge of combining TFZ to e.max in one case

By Alham Farah, Syria

The challenge of this case.
The way to think about combination cases, where you have glass ceramic veneers next to zirconium oxide bridges, is different than having only one kind of restorative material in a case. Lots of factors have to be taken into account, most important is the optical properties of both materials and the fact that they need to match (Not just from a dental technician point of view, but also from a dental point of view and the way he adjusts his/her preparation accordingly).

It was difficult to find an equivalent to our chosen SiO2 material for the veneers (IPS e.max Press, in this case), with its outstanding esthetic and life-like appearance, but going to Zirconium oxide option to restore the posterior bridges was necessary since the IPS e.max is indicated for a maximum of 3 units bridges up to the second premolar region, and in our situation here our bridges go further to the molar area.

Material Selection Judgment
Before you choose where to outsource your Zirconia work, you have to make sure that the brand of Zirconia to be used will fulfill your requirements of translucency-opacity level, and the shade concept will easily match your IPS e.max veneers work in the front esthetic region. No method would enable you to make sure, better than milling different kind of Zirconia, and trying them all in, together with the IPS e.max veneers, to check the matching level yourself.

In my case scenario here, to narrow down my options I based on a study for 3M ESPE showing a comparison between several kind of high translucency zirconia. (Fig. 11)

Showing that: Lava Plus (from 3M ESPE) & Zenostar Zr Translucency Pure (from Wieland) are the top in their range when it comes to translucency levels. The advantage of Zenostar in our case situation over the Lava, was the important factor of the shading concept of Zenostar and how its coordinated with the IPS e.max press Ingot shade and coloring concept.

In terms of, MO (Medium Opacity) ingot from IPS e.max Press has a match in the Zenostar Zirconia, which is also called MO (Medium Opacity).

LT (Law Translucency) Ingot from IPS e.max Press have equivalent in the Zenostar Zirconia, which is also called T= (Translucent).

Nothing left to do but to try the material on a dummy case and make sure of the match myself. (Fig. 12)

Zenostar Pure & Light
From the (T=Translucent) Zirconia and according to the final shade chosen by our patient for her veneers & bridges restorations which is BL4 (according to Ivoclar Vivadent shade guide A-D), we had to choose between two Zr blanks from the bright colors (light & pure). Since the intensity and brightness of a color would change relatively with changing the thickness of the material, I decided to go for both colors, then we choose which matches our veneers better on the day of the try in. (Fig. 13)

For professionals by professionals
– SR Nexco goes one step further

By Ivoclar Vivadent

A new flask has been developed in cooperation with expert users of the press technique.

SR Nexco Flask is a new type of flask with the help of which light-curing veneering composites can be pressed on dental frameworks. In order to effectively address the practical challenges of functionality, ergonomics and design, the flask has been developed in close cooperation with industry professionals.

The new flask offers the following important benefits: It allows composite materials to be efficiently and quickly pressed to dental restorations, including long-span bridges. The results are highly accurate, showing hardly any difference between the maximum of 3 units bridges up to the second premolar region, and in our situation here our bridges go further to the molar area.

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The process of accumulating patient information to determine which course of dental implant treatment should be considered can be described under the category of pre-surgical prosthetic planning. The first step in patient evaluation involves conventional periapical radiographs, panoramic radiographs, oral examination, and mounted, articulated study casts. These conventional tools allow the clinician to assess several important aspects of the patient’s anatomical presentation, including vertical dimension of occlusion, lip support, phonetics, smile line, overjet, overbite, and ridge contours, and to obtain a basic understanding of the underlying bone structures.

The accumulation of preliminary data afforded by conventional diagnostics provides the foundation for preparing a course of treatment for the patient. However, the review of findings is based upon a 2-D assessment of the patient’s bone anatomy and may not be accurate in the appreciation of the spatial positioning of other vital structures, such as the incisive canal, the inferior alveolar nerve, or the maxillary sinus. In order to understand each individual patient’s presentation fully, it is essential that clinicians adopt an innovative set of virtual 3-D tools. Through the use of advanced imaging modalities, new paradigms have been established that, in the author’s opinion, will continue to redefine the process of diagnosis and treatment planning for dental implant procedures for years to come. Without the application of computed tomography (CT) or lower radiation dosage cone beams computed tomography (CBCT), an understanding of the 3-D anatomical reality cannot be accurately determined, potentially increasing surgical and restorative complications.

The utilisation of 3-D imaging modalities as part of pre-surgical prosthetic planning can take several paths as demonstrated in the flow chart. The first involves acquiring a 3-D scan directly, without any prior planning or ancillary appliances. The scan process can be accomplished at a local radiology centre or via an in-office CBCT machine, now widely available. The scan itself can be completed within several minutes. Once the data has been processed, it can be viewed via the native software of the CBCT machine used and evaluated for potential implant recipient sites, followed by the surgical intervention. A second path requires the fabrication of a radiopaque scannographic appliance that incorporates vital restorative information and will be worn by the patient during the acquisition of the scan. In this manner, the tooth position can be evaluated in relation to the underlying bone and other important anatomical structures, such as the maxillary sinus or the inferior alveolar nerve. The scan data can again be visualised via the CBCT machine’s native software and a plan can be determined based directly upon the restorative needs of the patient.

The scan data is formatted into a nonproprietary data interchange protocol referred to as DICOM (Digital Imaging and Communications in Medicine). The DICOM data can be exported for use in third-party software applications that incorporate additional tools to aid clinicians in the diagnosis and treatment planning functions. The use of interactive treatment planning has expanded drastically in the past ten years as computing power has increased exponentially. There are at least two paths that can be taken once a virtual plan has been established. The first allows the data to be assessed, providing important information to the clinician who will perform the surgical intervention free-hand based upon the software plan. This has been termed CT-assisted intervention by the author. The second path involves the fabrication of a surgical guide or template that is remotely constructed from the digital plan usually through rapid prototyping or stereolithography. This method has been described as CT-derived template-assisted intervention and is considered to be more predictable than any previous methods. The use of advanced imaging modalities for presurgical prosthetic planning is essential for any type of implant surgical and restorative intervention, including single-tooth and multiple-tooth restoration, full-arch fixed and removable overdenture reconstruction.

5-D planning concepts for the mandible

Regardless of the image acquisition process, there are four standard views that need to be fully appreciated in the diagnosis phase. These include the cross-sectional (A), the axial (B), the panoramic (C), and the 3-D reconstructed volume (D) (Image: Dr Scott D. Ganz).
The initial plan in the case demonstrated was for the patient to receive an implant-retained overdenture. Therefore, recipient sites were determined based upon the available bone in the mandibular symphysis. The right and left mental foramina, which are determined upon the anterior mandible, were illustrated (Fig. 12). The symphysis area is not free from risk. A cross-sectional view is necessary for an appreciation of the thickness of the facial and lingual cortical bone. In addition, there are important vessels in the anterior mandible. In addition, it is important to provide ample clearance between the ridge were illustrated (Fig. 14b). In order to demonstrate the capabilities of the new digital paradigms, five virtual implants were placed into the anterior alveolar ridge after the teeth had been extracted virtually (Fig. 14a). The positions of implants can be further enhanced by placing yellow abutment projections that extend above the occlusal plane. Using selective transparence, the various structures can be adjusted in opacity and transparency. Using advanced software applications, horizontal osseotomies can be simulated in order to facilitate implant placement; the ridge required an alveolectomy, reducing the ridge by approximately 4-10 mm.

In many case presentations, a reduction of the alveolar crest is an essential part of the surgical phase to achieve adequate width of the bone for implant placement. It is now possible to plan for accurate bone reduction with the full knowledge of the impact on the inter-arch space and occlusal requirements. The advent of the bone reduction template provides one additional digital solution that can also result in reduced patient morbidity, especially when the process can be completed in one surgical procedure. New paradigms have been established that, in the author’s opinion, will continue to redefine the process of diagnosis and treatment planning for dental implant procedures, both restorative and prosthodontic.

Conclusion

The advent of complete digital fabrication has evolved within the industry. The ability to utilise digital imaging and treatment planning technology is now within the reach of many clinicians through the various software products on the market. In addition, there are many thirdparty outlets online that enable clinicians to upload their DICOM data for evaluation, processing, treatment planning, and even surgical template fabrication.

In order to demonstrate the capabilities of the new digital paradigms, five virtual implants were placed into the anterior alveolar ridge after the teeth had been extracted virtually (Fig. 14a). The positions of implants can be further enhanced by placing yellow abutment projections that extend above the occlusal plane. Using selective transparence, the various structures can be adjusted in opacity and transparency. Using advanced software applications, horizontal osseotomies can be simulated in order to facilitate implant placement; the ridge required an alveolectomy, reducing the ridge by approximately 4-10 mm.

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Global success – Sirona Connect portal now available in eight languages

By Sirona

BENNEISEN, Germany: Take digital impressions and order the restoration online, quickly and easily via the global Sirona Connect portal. Sirona Connect is the first innovative system for digital cooperation between dentists and dental labs. The rapidly growing number of users is creating a true boom in orders this year. Sirona anticipates a 60 percent increase in orders around the world.

Sirona Connect allows dentists and dental technicians to connect in a very modern way—they can exchange data conveniently and securely via the portal. The portal interface is integrated into the dentist’s and technician’s software, regardless of which software version is being used by either party, thus greatly facilitating workflow.

More and more dentists and dental technicians are using this service. “This year, we anticipate 60 percent more orders than last year via the portal all around the world,” says Ronny Kucharczyk, Product Manager Digital Impressions. “This corresponds to around 100,000 restorations.” He partly attributes this growth to CEREC users who use laboratory services for certain indications or materials. “These are dentists who cannot or do not want to make certain restorations themselves for various reasons.” And there is also a growing number of users of purely digital impression systems such as APOLLO DI or CEREC AC Connect with Omnicam who order their restorations via the portal. “The high demand reflects practice routines,” explains Kucharczyk.

Sirona Connect users come mainly from Europe and the US. But the number of orders from countries such as China, Korea, and Brazil is increasing as well. The main reason for this is that taking digital impressions is becoming more common in practices, especially in these countries. Thus the Sirona Connect portal is now available in the language of each respective country. Dentists and dental technicians can now communicate via the portal provided by Sirona, the global market and technology leader in the dental industry, in a total of eight languages. In addition to German and English, the available languages include French, Italian, Spanish, Chinese, Korean, and Portuguese.

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The final restoration and the wax-up. Moreover, the flask is exceptionally versatile, due to the many special details incorporated into it, which allow it to be individually adjusted to the specific indication and the framework situation.

Many handy details make work easier

SR Nexco Flask is equipped with large, easy-grip screws. Unlike in most other devices of this kind, these screws are not permanently fixed. They can be inserted without any guides and therefore improve flask handling. The top part of the flask is transparent and allows light to pass through it. As a result, the light-curing composite is evenly polymerized from all sides. Apart from an additional base plate, which enables height adjustments to be made depending on the dimensions of the restoration involved, the flask also includes a separate spacer for curing smaller restorations.

The spacer reduces material consumption to a minimum. Positioning pegs keep the top part of the flask in place. The notches on the sides allow the top and bottom parts to be easily separated. The openings for the injection of Transil F clear silicone are designed to accommodate the product’s mixing tips. This renders the silicone easy to handle and use in conjunction with SR Nexco Flask. Due to its excellent flow properties, Transil F completely encases the invested framework.

The new flask is an extension of the existing SR Nexco product system. It is ideally matched to the SR Nexco materials.