Oral-B paves the way forward with ‘Up-To-Date’ scientific exchange seminars

By Dental Tribune MEA/CAPPmea

The Oral-B brand is a global leader in the brushing market. Part of Procter & Gamble Company since 2005, Oral-B brand includes manual and power toothbrushes for children and adults, oral irrigators, oral care centers and interdental products such as dental floss.

Since joining as the Professional & Academic Relations Manager at Oral-B, Dr. Ashhad Kazi and the AP team have played a significant role in the development of Dental Education in the Middle East and Africa region over the past 5 years.

In 2014, the Oral-B team successfully launched the very first scientific exchange seminars for dentists, hygienists and dental therapists at several different locations within the GCC. The proven concept which has been running in Europe for several years has now become a pivotal backbone of the Oral-B philosophy within the MEA region. Dr. Kazi commented “We over exceeded our plans and expectations for the region in 2015. Over the last two years we have strived to deliver top notch education whilst improving overall health conditions in the region through our new initiative. With science and groundbreaking technology, the Oral-B innovations of stabilized stannous fluoride (in the Oral-B...

Successful Ormco 2nd MENA Symposium in Dubai

By Dental Tribune MEA/CAPPmea

Dubai, UAE: On 4 and 5 December 2015, American orthodontic Ormco, held its 2nd MENA Symposium in Dubai Jumeirah Emirates Towers. 300 international delegates attended the various presentations of the international speakers. The presentations were mainly focused on Damon System and its umbrella products usage. Ormco has offered a variety of topics after which the delegates could pursue the excellence of orthodontics by attending the event.

The first day has started with Dr. Stuart Frost from the US lecture with the title “It is all about the finish. Becoming a Damon Master finisher!” During which he has discussed the importance of facial based treatment planning for more beautiful faces and smiles with excellent finishes. The lecture was followed by Dr. Hans Seeholzer from Germany who spoke mainly about marketing in orthodontics with the lecture titled “Tips and tricks to be a successful and modern orthodontist today” and...
the day was finished by Dr. Za-
karia Bentahar who answered the question “How to improve efficiency with passive self-
ligating brackets?” In the end of the day, after the full day of lectures the delegates were invited to attend the cocktail reception that was held in Ju-
meirah emirates towers.

Dr. Andrey Tikhonov from Russia has opened the second day program of the 2nd MENA Symposium with his lecture “Damon System Truths versus Myths” during which he said that “Orthodontics is about changing people destiny, so it is not only about straighten-
ing teeth.” The lecture of Dr. Tikhonov was followed by Dr. Philippe Van Steenberghe on elastics and how important they are under the title “Early elastics a new world to ex-
plore”. The day was finished with two lectures of Dr. Jeff Kozlowski’s Digital Ortho-
dontics showing how to use insignia and how passive self-
ligation can help enhance the efficiency and effectiveness of treatment for your practice and patient.

During the two day sympo-

tsium the speakers elaborated mainly on the benefits of Da-

mon System usage in their practices. Additionally, during the breaks in between the les-
cures, the participants could see an interactive display of the Damon System and also displayed Damon System um-
brella products displayed in Ormco booth.

Moreover, the new addition to the 2 day agenda were hands-
on courses on brackets po-
sitioning. The two hands-on courses were given by Dr. Sta-
Art Frost and Dr. Dimitris Ma-
vreas. During the courses the guests could practice on the Ormco typodonts and discover further the Damon System.

Orthodontics goes Digital with CEREC from Sirona

By Dr. AbdelAziz Yehia, UAE

I

nally happened... Since LIAS. 2015, when Sirona unveiled the CEREC Ortho Software, a Software uniquely designed to send accurate 3D full arch scans to World-Class providers like, and in coopera-
tion with Invisalign, 3M Ign-
ognito, Dolphin Software, and others... as well as the possi-

bility to connecting to a Siro-

nna laboratory, and the Dental Market has been waiting the release of this Software; with the Gulf (specifically United Arab Emirates) being no ex-
ception.

Now (since December, 2015) Dr. Amro Adel, General Man-

The special course attracted 31 participants representing 4 Dental Centers in Dubai – U.A.E, and 1 Dental Center in Doha – Qatar.

Ormco booth during the 2nd MENA Symposium

Delegate during the 2nd MENA Symposium

Ormco team during the 2nd MENA Symposium

Sirona users enjoying the simplicity of the CEREC Omnicam.
The new imaging plate scanner XIOS Scan completes the intraoral family from Sirona. Whether you’re taking the first steps into the digital world or establishing or updating a fully digital practice, XIOS Scan and XIOS XG Sensors offer perfectly synchronized solutions for every workflow. Enjoy every day. With Sirona.

SIRONA.COM
3M Oral Care at Saudi Dental Society

By SM

On 5-7 January 2016 3M Oral Care Saudi Arabia took part in the 16th King Saud University International Dental Conference and the 27th Saudi Dental Society Conference held at the Riyadh International Convention and Exhibition Center. Newest Oral Care products and solutions were presented and the exhibition booth which was equipped with designated areas for customer hospitality, product demonstrations and hands-on workshops.

Wide range of dental and orthodontic products used and recognized by thousands of oral care professionals worldwide was presented at the booth. Doctors demonstrated keen interest in new 3M products and solutions such as Filtek™ Bulk Fill Posterior Restorative, Ketac™ Universal Glass Ionomer Restorative, 3M™ True Definition Scanner as well as Clarity™ Advanced Ceramic brackets and APC™ Flash Free orthodontic systems.

Traditionally core dental products such as Single Bond Universal Adhesive, Filtek™ Z50 XT Universal Restorative, Belvy™ cements range, Penta™ impression materials for Pentamix™ mixing units, temporization products including Premure™ 4, Stainless Steel Crowns, Peso Strip Crowns as well as orthodontic products including Victory Series™ Bracket System, TADS and Incognito™ Appliance System were also displayed at the booth.

A special area equipped with products and all necessary tools for hands-on workshops was allocated at the booth. The workshops were run by 3M Scientific Affairs & Education Team specialists Dr. Haitham Yousef and Dr. Mustafa El Sammak. The 5-day workshop schedule included sessions on such actual topics as new trends in posterior restorations, precise conventional and digital impressions with innovative 3M™ True Definition Intra Oral Scanner. In the breaks between the workshops doctors could relax with the cup of fresh Arabic coffee and dates in the hospitality lounge with comfortable sofas.

“3M has been working hand in hand with the Dental Industry in the Kingdom of Saudi Arabia for over a decade. We strongly believe in transfer of knowledge and enhancing the level of patient care through a variety of hands-on workshops, lectures and seminars. We believe that once the dentist is convinced of the efficacy and efficiency of our products he will become a lifelong user. 3M tries to cater to the needs of all segments of the industry, be it Government, Private clinics or Universities. To further increase our relevance to the local requirements, 3M has recently started work on the set up of the first manufacturing facility in the Middle East & Africa region. The groundbreaking ceremony was held in December 2015 at the site in Hammam. This step will bring us even more close to the customers as we will be able to customize our products and solutions for the local needs.” – commented Michal Mirowski, General Manager, Health Care Business Group, Saudi Arabia.

Large diastema closure with Filtek™ Z350XT Universal Restorative

By SM

Female patient, 28 years old. Main complaint about the spacing between her teeth with complete rejection of orthodontic treatment and laminate veneers. Direct restoration was made using Filtek™ Z350XT Universal composite (Enamel and Dentine), Single Bond Universal adhesive, Sof-Lex™ finishing and polishing discs and interproximal finishing strips.
Let’s make happiness a clinical outcome

Postoperative sensitivity. All dentists worry about it. No patient wants it. With Single Bond Universal Adhesive, you can virtually eliminate it whether you prefer a total-etch, self-etch or selective-etch technique. And for strength and esthetics anywhere in the mouth, use Filtek™ Z350 XT Universal Restorative. Then complete the restoration with Sof-Lex™ Spiral Finishing and Polishing Wheels, which adapt to all tooth surfaces.

It’s one simple system that’s as versatile as it is effective. At 3M, we simplify outcomes. Especially happiness. For you and your patients.

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Vintage LD…
The Better Lithium Disilicate

By SHOFU

Vintage LD is an innovative lithium disilicate system from Shofu that offers you greater flexibility, more treatment options and aesthetic versatility for a variety of all-ceramic anterior and posterior restorations. A combination of three perfectly compatible components comprising of high strength lithium disilicate glass ceramic ingots in varying levels of translucency, a naturally shaded, opalescent silicate based veneering porcelain and a comprehensive range of low fusing fluorescent stains offers the choice of pressing, staining and highly aesthetic cut back or full build-up layering techniques.

Designed to fulfill the demanding aesthetic requisites of discerning dental professionals, Vintage LD exhibits outstanding shade stability even with multiple firings with virtually non-existent reaction layer for a faster, simpler and error-free fabrication cycle. Available in sets or as refills to meet the individual needs of your lab.

Available in:
- 5.0 x 5.0 mm
- 4.5 x 6.0 mm
- 4.0 x 5.0 mm
- 4.0 x 6.0 mm
- 3.0 x 6.0 mm
- 5.0 x 6.0 mm
- 6.0 x 5.0 mm
- 5.0 x 5.0 mm
- 6.0 x 5.0 mm
- 5.0 x 6.0 mm
- 4.5 x 6.0 mm
- 7 Years
- 8 Years
- 14 Years

Beautiful Bulk
A Smart approach to smarter dentistry

By SHOFU

Reduce chair time and your inventory too… with Beautiful Bulk, the new generation bulk fill resin restorative developed for easier, faster and predictable posterior restoration. Formulated in 2 discrete viscosities to fulfill individual preferences, Beautiful Bulk Flow, a flowable variant is ideal for dentin replacement and a sculptable Beautiful Bulk restorative to restore to full contour. Excellent chameleon effect is achieved with just two shades (Restorative Universal and A shade) of Beautiful Bulk restorative that blends in imperceptibly with surrounding tooth structure.

Developed with S-PRG filler technology, Beautiful Bulk Gionner resins come with additional anti-plaque benefits and sustained fluoride release and recharge to protect against recurrent caries. Exceptionally high filler load with unique filler resin structure maximizes light penetration for optimum cure (Up to 4 mm) while lowering polymerization shrinkage stress.

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- 6.0 x 5.0 mm
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- 6.0 x 5.0 mm
- 5.0 x 6.0 mm
- 4.5 x 6.0 mm
- 7 Years
- 8 Years
- 14 Years

Register now for our free IMPLANTOLOGY COURSES!
Splyce ID: Designing Bespoke Modern Wonder Clinics Part III (The Color White)

By Nijas Salim, UAE

There’s a lot of white at play in clinics. But it seems like we still can’t have enough. So what is with the color white I want to know?

That previous line almost plays out in my head like lyrics to a song. But that’s what I am asking Ranjit Prasad, the Principal Architect of Splyce. We know the obvious, white is the embodiment of cleanliness, of health and hygiene, the spick-and-span-germ-free hue, the sign that there is nothing sinister, however small in size, lurking, an RGB version of what you see is what you really get.

White has always been symbolic of purity and of freshness but Ranjit will tell you that despite white being a de facto color of use in the healthcare industry, white makes a massive design statement and its use has desired effects. White has the ability to expand the sense of space, and alter the experience of shapes. Though easy on the eye, it still needs utmost care, and this care is transformed into the assimilation of attributes of luxury. White is also quite relaxing and nourishing.

“Choosing the right white in itself is a job. There are unbelievable choices of white available to pick from. And suddenly accents get an elevated status. The warships of wood or gold trimmings, they all finally get maximum exposure. White also brings artificial light sources into play, and the impact of the color of the light gets magnified. White helps natural light seeping in to get a magnificent glow. So much more can be done with finishes when coupled with white. I also like how white accentuates minute details and curves, thus allowing the care, thought, and stand out details of our design to be really seen and experienced.”

And suddenly I remember the importance of the color white, the understated king, the one that all colors unite to become. I remember that Krzysztof Kieślowski film, the one that imitates life, the one that is filled with humor, is called, White. Splyce Interior Designs is a boutique agency driven to meet satisfactions of a clientele that know the value of good design and has incorporated that into their own philosophy. Splyce believes its raison d’être is creating stunning designs that exceeds client expectations.

The glow of the art
https://everglow.coltene.com

“Choosing the right white in itself is a job. There are unbelievable choices of white available to pick from...”

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Predictable Endo 102: Why warm and soft is so good
System ‘S’ for injectable or carrier-based GP

By John J. Stropko, DDS

The author has been in private practice and a continuing education provider for the past 50 years. The first half was spent providing general dentistry and the second half in a specialty practice limited to endodontics. On the road to predictability, it became apparent there was a relationship present between root canal treatment, periodontal status, prosthetic considerations, and restorative procedures. Each operator has to decide what steps for a more predictable outcome they are willing to trust another to do. This article is an attempt to share some “secrets of success” and perhaps serve as a checklist for a system that works in the attempt to achieve predictability of endodontic treatment.

During the earlier years of the past century, several techniques were devised for the obturation of the canal system after removal of the diseased pulp, or necrotic tissue. Some of the most popular were silver points, lateral condensation of gutta-percha (GP), Sargent paste and chloropercha. Currently there are seven techniques that utilize gutta-percha as the obturation material of choice:

1) Single cone
2) Lateral condensation
3) Carrier-based (Thermoflex, System “A”)
4) The foramen should not be needlessly enlarged and deformed
5) Carrier-based (Thermafil)
6) Injection of thermo-plasticized GP (often referred to as “squirtig” using a Calamus or Obtura unit)
7) Mechanically assisted compaction (File-Mac, ProTaper)

In 1967, Dr. Herb Schilder, often referred to as “the father of modern endodontics,” introduced the concept of filling the root canals in three dimensions.1 The Schilder Technique involves a different approach for obturation of the canal system and resulted in much controversy.

Evidently, the controversy did create interest from some doctors, because in the mid 1970s new ideas and techniques evolved that became the basis of what are currently accepted current endodontic principles and techniques. Today, the numerous clinical reports, published research and the rapid advancements in technology have significantly changed the operator’s obturation preferences. Ease of communication, along with modern marketing, has become a very important determinant when making a choice of techniques.

More recent studies have documented some previous obturation materials that were popular, but some form of GP still remains the most acceptable and widely used. The purpose of this article is to share a simple, six-step protocol (System “S”) in a straightforword manner, to achieve predictability of endodontic treatment for the benefit of the patient.

There are six important components to the System “S” protocol:

1) Proper shaping with patience
2) Adequate cleaning, disinfection and drying
3) Delivery of pre-softerened GP to apex (Calamus/Obtura)
4) Coronal seal for the rest of the system
5) Respect for the endo-pro relationship
6) Use of the surgical operating microscope (SOM) for the entire endo treatment

The author believes that as long as the gutta-percha is introduced to the apical third of the canal system, pre-warmed and pre-softerned, the deformation and adaptation to the canal walls is more predictable, resulting in a better seal that is significantly less “sealer-dependent.” It has been shown that the pre-warmed techniques (Obtura, Thermafil) produce a better seal than lateral condensation.1

Due to the lack of deformity inherent at room temperature, the technique utilizing non-softerned GP are more “sealer-dependent.” The two most popular thermo-plastic obturation techniques are the “carrier-based” (e.g., Thermoflex) and “direct injection” (e.g., Calamus/Obtura). The pros and cons of each will be discussed, but regardless of the technique used, the “shape” of the prepared canal system is of utmost importance and must be discussed.

Access and shaping the canal system

In the early 70’s, Schilder clearly stated the requirements for the proper shape using GP to achieve three-dimensional obturation of the canal system:

1) The root canal preparation should develop a continuously tapering cone shape.
2) It should have decreasing cross-sectional diameters at every point apically and increasing at each point as the access cavity is approached.
3) It should have multiple planes, which introduces the concept of “flow.”
4) The foramen should not be transported.
5) The apical opening should be kept as small as practical in all cases.

There were several other requirements which are clinically definitive. Following are a few of them: After placement of the rubber dam, appropriate access is achieved. Unless the access is large enough for adequate visibility, appropriate instrumentation may be compromised and canals missed. A perfect example is a maxillary first molar; if the access is made as though there was an MB2, it is amazing how many times an MB2 is found. A general rule of thumb is, if you access for it, you are more likely to find it. A proper access will also facilitate the creation of the continuously tapering shape of the canal, necessary for the warm GP technique. Occasionally after caries or old restorations are removed, a “pre-endodontic” restoration may be required to control and maintain a sterile environment until the endodontic treatment is complete. This can usually be accomplished using a bonded composite technique.

Shaping should be confined to the anatomy of canal system, following the natural curvatures. Instrumentation beyond the apex is unnecessary and may needlessly enlarge and deform the apical foramen.4

Using the Schilder protocol to achieve the desired shape of the canal system was a time-consuming process. It involved the tedious use of pre-curved files and reamers to follow the anatomical curvatures of the canal.

Other requirements that caused some controversy (and still does), besides the size of the access opening, was the need to keep the apical foramen as small as possible, and to maintain patency throughout the entire process. The majority of more recently published research and clinical studies have confirmed the rational for an appropriate access and correct shaping.

In the early 1990s, technology brought about the introduction of rotary instruments, relaying the operator of considerable time spent creating an acceptable shape. The ProFile rotary brush (Tuifa Dental) with 0.08 taper, was introduced to the profession. Creating the shape necessary for the success of the warm obturation techniques was made easier and faster.

By the beginning of this century, numerous designs gradually evolved utilizing varying tapers, active or passive cutting blades, etc. (Fig. 1). At first, the biggest problem with the rotary files was breakage during use; but modern nickel titanium (NiTi) metallurgy technology has developed more, and more dependable, rotary files. As a result, today the separation of a rotary instrument during use is of virtually little or no concern. It has also been shown that proper shaping permits more thorough irrigation and the removal of significantly more debris from the prepared canal system. Disinfecting irrigation should be used between each instrument during the entire shaping process and patency continually maintained with #410 file. Note: The quantity of irritants used is not as important as the frequency of use. The irrigation protocol, instruments, fluids, etc., are in constant evolution and becoming more effective. However, a clean and sterile environment of the canal system prior to obturation is still the objective.

Irrigation for cleaning the canal system

After shaping is completed, final cleaning can be effectively accomplished by the alternative use of:

1) Warm 5- to 6-percent NaOCl
2) 17 percent aqueous EDTA for approximately 30 seconds (smear layer removal)
3) Warm 5- to 6-percent NaOCl
4) The NaOCl is effective at removing the “tsunami effect” for cleaning canals.

The NaOCl can be effectively warmed by placing the irrigating syringes in a beaker of water set on a small coffee warmer (Fig. 2). The canal(s) are completely flooded with the desired solution; an Endo Activator (Dentsply) is appropriate for the “tsunami effect,” then re-irrigated with the same solution for flushing of debris (Fig. 5). The NaOCl is then effectively removed with a capillary tip (Ultradent) attached to a high-speed evacuator. Other
Fig. 6. When drying canals with air, needles must be notched or sidevented (arrows). Solutions (hydrogen peroxide, chlorhexidine, 17 percent aqueous EDTA, MTAD, etc.) can also be used alternately, depending on operator preference. Close observation with an SOM will clearly indicate complete cleaning of the canal system when no debris is flushed out during the irrigation process. During the evaporation of the capillary tip, it becomes apparent if there is a joining of the canal systems within the root. For example, if using the SOM as the MB1 canal is being evacuated and it is noted that fluid is simultaneously being drawn from the MB2 canal, there is a good indication that the system is complicated and does join at some point (Figs. 4a, b). There are occasions, especially in lower molars, where the marginal root canal system unexpectedly joins with the distal root canal system (Fig. 4c).

On occasion, the maxillary canal system will have the DB1 or MB1 canal system connected to the palatal system. These “surprises” are important to be aware of, before obturation of the canal system, especially when using either carriers or injectable GP.

Drying canals with F•I•R•E

The canals(s) are loaded with 95 percent ethanol (Eveready available at local liquor store), agitation of the fluids are initiated with an activator for the hemostatic effect, then Be-irrigated with the 95 percent ethanol, and then evacuated with the capillary tip. The canal(s) are then heat dried by using a Stropko irrigator on a dedicated, air-only syringe (DCS), but if a three-way syringe is used, be sure to exclude all water from the line first (Fig. 5). Next, with a 27- or 29-gauge needle or sidevented needle, to easily dry the canal system (Fig. 6). Important note: It is essential to regulate the air pressure to the syringe at 1 to 3 psi and use a sidevented or notched needle, to prevent any possibility of inadvertently forcing air through the apical area less than 0.5 mm and achieving an air-in-line regula tor, the Chapman-Huffman reg ulator, part #17-000-00 (Fig. 7).

As dentists, we are accustomed to a “blast” of air while using the usual air/water syringe but at high air pressure to the A/ W syringes. There is regulated air pressure at the syringe tip, or air is only necessary to create the flow necessary for thorough air drying of the canal. On occasion, one has to direct the air to a sensitive area on himself or herself to be sure the air is even flowing. Just watching the evaporation that occurs within the canal while using the SOM, is enough to convince any operator that there is indeed a flow of air.

There is enough physiologic back pressure of the apical envi ronment (1.5 mm Hg) to prevent movement of the air past the terminus in the correctly shaped canal. In almost 20 years, with many different doctors using the Stropko irrigator to “dry” canals, the author has only heard of one unfavorable incident. In that one case, the doctor did not use the tip at the terminus and did not regulate the air pressure to the air syringe.

To repeat, when the Stropko irrigator is used with the properly regulated air pressure (1 to 3 psi) and the appropriate 27- to 90-gauge, side-vented/notched needle is used, there is no risk of forcing air into apical tissues.

Sealer application

To the SOM user, the ineffective ness of drying the canal with a paper point is soon realized. It is also easy to observe how differently the Kerr Pulp Canal Sealer (EWT) (SybronEndo) acts when the canal is in fact not just blootted. After blotting with a paper point, the sealer tends to act like a drop of oil that plateaus in the canal wall. But when the surface is dried, using alcohol and air as described above, the sealer readily spreads onto the canal wall, much like a coat of paint. The complete dryness of the canal to the desired working length is checked with a clean absorbent point that fits to length. This also gives the operator an excellent chance to recheck the working length and dryness of the canal. Any sealer (Kerr EWT, Roth, AH Plus, etc.) can be used as long as the heat of the warm GP does not give a “flash set.” The end 5 mm of a sterile paper point is coated with the sealer of choice and placed into the canal to the working length.

The user tests the Pulp Canal Sealer EWT, mixed per usual digital precautions, but a little “on the thin side.” Using short, rapid apical perforations, the walls of the canals are completely coated with sealer. The use of the SOM is a great aid for observing when the heating of the canal wall by the sealer is complete. The amount of sterile absorbent point is used, in the same manner, to remove any excess sealer that may remain.

Depending on the amount of sealer placed at the beginning, more than one absorbent point may be necessary to get the “blotchy appearance” on the final point (Fig. 8). Only a thin coat of sealer is necessary for lubrication, so very little remains on the walls of the canal (Fig. 9). One of the most common mistakes made at first, is using too much sealer. When this happens, the excess sealer will be extruded back into the chamber, or apically when the warm GP is placed. In some cases, the GP may be prevented from completing its desired “set.” Typically, only one or two points are normally needed once the operator achieves proficiency at applying the correct amount of sealer to begin with.

Thermoplasmic GP techniques are now available and depend more on the sealer as a lubricant and facilitate the flow of the thermoplasmic GP.

Important consideration between using injection or carrier based obturation Essentially, there is one very significant difference between the two techniques. The injection technique fills the canal system from the apical to the coronal, whereas the carrier-based techniques fill from coronal to the apical. This is important to take into account, especially in cases in which the operator does not want to fill the canal to the orifice or needs to control the “depth” of the fill. A good example would be in the case of treatment of a periapical lesion, where the pulpal closure is important. The “fill” can be accomplished rather easily, and both the sealer and GP can be applied to the perforation. MTA can then be added to the repair in a very controlled manner (Figs. 10a–c). When a post space is required, the GP can be injected to any level in the canal, but it is better to obturate the entire canal first, so unknawn coronal canals won’t be missed.

Injection of thermo-plasticized GP with a Calamus or Obtura

when using the Obtura for more than a decade, the thermo-plasticized GP obturation, the author switched to the Calamus when it was introduced in the early 1980s. After thousands of canals were obturated using the 95 percent sealer, many advantages were noted when comparing the two units (Table 1).

Both units are available as a sin gle unit, or a dual controlled with a thermal handpiece for convenience (Figs. 11a,b). The consistent flow of the Calamus unit makes it easier to control the curve and shape of the fill, as compared to the Obtura, because the relatively large muscle action of squeezing the syringe is easier to control from patient to patient, or day to day among different doctors. In most cases, several advantages were noted when comparing the two units (Table 1).

The size of the needle used in the Calamus or Obtura (20 vs. 25 gauge) is generally a matter of preference and can also depend on what the canal wants. It does not make any difference, however, when the needle is side-vented or notched apically into the canal the needle is placed, as long as it is nonbinding.

For example, a straighter and larger canal will take a larger needle. On some occasions, the 20-gauge needle will not be far enough apical to the orifice of the canal before binding. If the needle is too narrow, the operator does not want to fill the canal. Any sealer (Kerr EWT, Roth, AH Plus, etc.) can be used as long as the heat of the warm GP does not give a “flash set.” The end 5 mm of a sterile paper point is coated with the sealer of choice and placed into the canal to the working length.

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The carrier works toward the orifice in approximately 2-3 steps as the plugger advances “wax wedging” in the process. The shepherd- ing of the GP is continued until the desired depth in the orifice is reached. The needle often made when working with warm GP is the tendency to “bounce” off the GP while compacting, instead of pushing the GP to the canal to compact. Just a few seconds are needed for the newly compacted “wax” to cool. Obturation with carrier-based GP (Thermofil)

Table 1. A comparison of thermo-plasticized GP obturation with Calamus vs. Obtura.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Obtura</th>
<th>Thermofil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No hand fatigue during use</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>2. GP pellets delivered several in a box</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>3. Multiple needle use the norm</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>4. Barrier protection easy to place</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>5. Patient often felt a “flash of warmth”</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>6. Proper “squeeze” a longer learning curve</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>7. Can easily be rotated for ergonomics</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>8. Standard, easy to use</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>9. No need for fatigue during use</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>10. Patient response during obturation</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>11. Generally, very much to use</td>
<td>✔️</td>
<td>✔️</td>
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The fill" and forget the impor
obturation. As endodontists, we
case over to another person to
of the canal system and turn the
protocol is to fill the entire canal
if all is done as described.
mo-plasticized gp is maintained
and composite technology, the
ition curve when beginning to use
this is the essence of the learn-
cess material might be extruded.
• 17a,b). However, it makes sense
obtain more than a small
canals, but is the desired size, a very
If the fit of the post is not passive
- taper the apical end until it does
the weaker the tooth will be. and
less radicular structure present,
• 11) The patient has more time to
prepped" with dam
- necessary to achieve a clean
• 10) The tooth can be "roughed
• 8) There is no chance of con
the post space. A post should
• 5,000 rpm.
• 4) Access is sterile for placement of the
• 3) Post space should never be
the weaker the tooth. Posts nev-
• 2) Patient is anesthetized.
• 1) Patient is "in the chair.
Therefore, a minimum total of
5.5 mm is necessary between
the osseous crest and the cervi-
cal margin of the restoration.11
Therefore, a minimum total of
5.5 mm is necessary between
the osseous crest and the cervi-
cal margin of the restoration.11

For more information please contact
For more information please contact
• 487x214]
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- 622x691]
obturate the entire canal system.
completely disinfect, clean and
be removed to achieve vision
shaping the canal system. only
considered when accessing and
the weaker the tooth. posts nev-
• 7) the "endo-doer" knows cor-
coronal coverage.9
• 6) The tooth can be "roughed
• 5) Latex gloves and all other ma-
- easy foundation restoration
techique
After the obturation of all
the canal system, the
time if the coronal seal has been
the osseous crest and the cervi-
cal margin of the restoration.11

A bond that is in place for three months without leakage
Another important consideration
of the success of root
• 11)
- the equation becomes a non-
diction while final cleaning of the
of sealer and gp to maintain vi-
- the chairside assistant
is reached. using the co-observ-
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Beverly Hills Formula - Over 20 Years Perfecting the Business of Smiling

By Chris Dodd, CEO Beverly Hills Formula

Manufactured in freshmen, the Beverly Hills Formula ranges are rapidly becoming the go-to whitening products, with many people opting to use these safe at-home whitening toothpastes over harsh and abrasive treatments. The company is constantly expanding its range and endodontists are a whitening toothpaste to suit all preferences. With over 20 years’ experience, the company, based in Ireland, has grown considerably in the past few years. In 2015, Nielsen’s CheckOut Magazine named the Beverly Hills Formula as one of the top five oral care brands. This is an appreciable achievement when one takes into consideration the vast number of whitening toothpastes available on the market today.

The success of Beverly Hills Formula comes down to a number of factors:
- The company is streets ahead in terms of new product development.
- The range of whitening products are safe to use at home.
- The company has ensured that their products are as effective as possible, and have proved themselves as leaders in expert stain removal.

Launched in 2012, the Perfect White Range has been viewed as a revolutionary way of allowing patients to whiten their teeth without opting for professional treatments. It has been seen as a highly predictable and effective product to the consumer. Beverly Hills Formula brought the fact that they have brought a new dimension to the toothpaste business. The Ivory White Black product was well received by consumers. Although a number of copy-cat products have seen success, Beverly Hills Formula has continued to be a popular choice for consumers.

Perfect White Black was the first of its kind on the market. The toothpaste, containing activated charcoal, took the market by storm. Charcoal is a centuries old method of cleaning teeth, and this cutting-edge innovation was well received by consumers. Although a number of copy-cat products have emerged in the market, none have seen the same success as Beverly Hills Formula’s very own Perfect White Black, with qualified dentists and a cosmetic doctor Dr. Martin Kinsella saying: ‘I’ve tried the Beverly Hills Perfect White Black and found it to be effective in removing stains and helping to achieve a whiter, brighter smile. Following on from this, the company introduced Perfect White Black Mouthwash in 2015, also the first of its kind. The ‘shake to activate’ charcoal mouthwash keeps breath fresh for up to 12 hours, whilst removing stains. Perfect White Gold toothpaste, containing real gold particles was launched later that year. Both of these products have seen considerable success in the market.

2016 will be a huge year for Beverly Hills Formula, with the company planning on introducing an expert whitening product, Perfect White Expert Toothpaste, containing effective and safe levels of peroxide, will offer a high performance whitening boost. As well as this, the company has launched Perfect White Black Sensitive, the first toothpaste toothpaste for sensitive teeth. The brand has also introduced a charcoal dental floss and

Fig. 1. Stain Removal Study Results (UK, 2012).

References

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John J. Stropko received his DDS from the University of Pennsylvania in 1964. For 24 years he practiced endodontics in Scottsdale, AZ. In 1989 he received a certificate in Endodontics from Boston University and has recently retired from the private practice of endodontics in Scottsdale, Ariz.

Stropko is an internationally recognized authority on micro- endodontics and has performed numerous live microendodontic and micromorpho- logizations. He has been a visiting clinical instructor at the Pacific Endodontic Research Founda- tion (PERF), an adjunct assis- tant professor at Boston University; an assistant professor of clinical endodontics at Loma Linda University; a mem- ber of the endodontic faculty at the Scottsdale Center for Den- tistry in Scottsdale, Ariz., as an instructor of microsurgery; and is a co-founder of Clinical Endo-odontic Seminars. His research on in-vivos root canal morphol- ogy has been published in the Journal of Endodontics. He is the inventor of the Stropko Irriga- tor, which has been published in several journals and texts and is an in- ternational-known speaker. Stropko and his wife, Barbara, currently reside in Scottsdale, Ariz. You may contact him at docstropko@gmail.com.

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In 2015, a study conducted in the US found that Beverly Hills Formula stain removal products had the lowest abrasion levels on the market. The independent study found that Beverly Hills Formula whitening products have abrasivity levels as low as 89, when compared with some leading stain removal products on the market which scored as high as 186. It is important to note that although there are many leading whitening toothpastes on the market, many of these contain extremely high abrasion levels, which will strip away at the enamel over time. This can cause a range of problems, including increased sensitivity to hot and cold products, as well as causing teeth to appear yellow over time - quite the opposite function of a whitening toothpaste! It is important that patients are well informed of the dangers of using toothpaste which contain high abrasion levels, which generally will do more harm than good to ones teeth. Beverly Hills Formula is continuously researching ways of keeping abrasive levels at a minimum, whilst obtaining the maximum whitening effect.

Whilst it is extremely important to keep abrasion levels at a minimum, it is also important to keep drift levels on the market. Many of these containing whitening toothpastes on the market, removing up to 90% of stains after a five minute period. Compare this with other existing whitening brands, which scored as low as 40%. Beverly Hills Formula strives to help patients achieve professional whitening results without the need for harsh abrasives or bleach. Their innovative and cutting edge products have paved the way for high quality and safe teeth whitening in the home.

Teeth and gum sensitivity effects over 50% of adults

Sensitivity is a growing oral care health concern and preventing sensitivity starts by keeping the teeth enamel strong & healthy. Sensitivity is in a lot of markets the Nr. 1 concern influencing purchase. Consumers want products that work well but are also gentle to their teeth enamel and gums. Many people suffer from sensitive teeth and it can start at any time. It is more common in people aged between 20 and 40, although it can affect people in their early teens and when they are over 70. Women are more likely to be affected than men. If sensitivity effects so many people why are they not buying more “sensitive” oral care products?

Research tells us that most consumers, as many as 90%, find it difficult to choose products more attractive and readily available with clear and easy to understand information. In 2014 there was a rise in the number of launches with enamel focus.

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Contact Information
For more information on Beverly Hills Formula products please call +353 1842 6611. Email info@beverlyhillsformula.com or visit www.beverlyhillsformula.com.
FDI and Royal Philips sign global agreement to promote the importance of oral health

By Philips

GENEVA, Switzerland: Considering the more than two billion plastic toothbrushes that end up in landfills every year, wouldn’t anyone rather opt for an eco-friendly and sustainable alternative to plastic toothbrush? Humble Brush has the same durability and bristles’ lifespan and is made of soft-food-grade silicone, it is an inspiring approach to making a change.

“People are increasingly looking for eco-friendly and sustainable alternatives to plastic products, and toothbrushes are no exception,” said Dr. Erik van Acht, global head of social responsibility at Philips.

The company’s mission is to introduce children and adults to an alternative to conventional brushes which are gentler on the environment. "The world needs to know the importance of good oral health and the role of technology in improving oral care worldwide," said Dr. Patrick Hescot, FDI president. "For Philips, the FDI World Oral Health Federation is a great partner." "World Oral Health Day is an opportunity to position oral health where it belongs: at the heart of wellbeing and quality of life." 

"For Philips, the FDI World Dental Federation is a great partner," said Hergert van Acht, CEO, Philips Health & Wellness. "Increasing education around the importance of looking after oral health is one of our key goals. We are committed to bringing meaningful innovation to address global oral health needs. WHO allows us to engage and encourage people to commit not only to their oral health, but also to increase the positive impact on their overall health. At Philips, we are actively promoting the link between oral and systemic health to help improve people’s lives." Activities for WOHID include poster, billboard and media campaigns, free dental screening, oral health camps, literacy sessions and workshops, hook-ups and kits, cultural activities, debates, and festivities such as flashmobs, walkathons and charity sporting events. In some countries, groups have made attempts on world records such as greatest number of people attending an oral health literacy session or brushing their teeth at one time.

For more information, visit www.worldoralhealthday.org, World Oral Health Day, 20 March 2016

Humble Brush: Charitable and eco-friendly approach to global oral care

By Kristin Hübner, DTI

STOCKHOLM, Sweden: Considering the more than two billion plastic toothbrushes that end up in landfills every year, wouldn’t anyone rather opt for an eco-friendly and sustainable alternative to plastic toothbrush? Humble Brush, the maker of the world’s fastest growing bamboo toothbrush, is doing exactly that.

"Our vision is to promote the importance of oral health and its impact on a person’s overall health, and together promote World Oral Health Day (WOHID) 2016," World Oral Health Day, celebrated on March 20, is an international day to raise awareness of the connection between oral health and overall health. FDI member national dental associations, dental student associations and other groups, organize a variety of global events.

"I’d like to welcome Philips to our group of sponsors and congratulate them for demonstrating their commitment to the cause of global oral health awareness," said FDI President, Dr. Patrick Hescot. "World Oral Health Day is an opportunity to position oral health where it belongs: at the heart of wellbeing and quality of life."

"World Oral Health Day is an opportunity to position oral health where it belongs: at the heart of wellbeing and quality of life."

For every Humble Brush sold, the company donates a toothbrush or alternative oral care to people in need. (Photograph: Humble Brush)

Humble Brush is our key goal. We are committed to bringing meaningful innovation to address global oral health needs. WHO allows us to engage and encourage people to commit not only to their oral health, but also to increase the positive impact on their overall health. At Philips, we are actively promoting the link between oral and systemic health to help improve people’s lives."

"Humble Brush CEO Dr Noel Abdayer told Dental Tribune Online, ‘Bamboo, which is one of the fastest growing plants, has natural antibacterial properties that eliminate the need for any fertilisers or pesticides during cultivation. The brushes’ colourful bristles are free of the toxic bisphenol A and made from nylon, a material that degrades over time and can be processed through regular waste channels. In accordance with the company’s commitment to protecting the environment, all Humble Brushes come in fully compostable packaging."

Aside from their eco-friendly approach, Humble Brushes are no different to conventional toothbrushes and have been received enthusiastically by dental professionals and the dental community, Abdayer said. "Once they realise that the head is the same as a regular toothbrush and have tried the Humble Brush they embrace it as an eco-friendly, big-picture alternative for their patients."

Together with partner organisations, the foundation currently operates at 15 sites around the world. With a help-to-help themselves approach, its projects aim to raise oral health awareness and implement behavioural changes in order to address the critical lack of access to dental care in many of the world’s poorer and remote areas. This involves oral hygiene interventions, such as monitored toothbrushing and dietary adjustments, as well as general oral health education for caretakers and in dental clinics. Founded in 2014, the company now has local offices around the world, including Finland, Latvia, the UK, Greece, Turkey and the US. "We are planning to open up in 25 new markets in 2016, making Humble Brush the world’s fastest growing brand in the oral care industry," Abdayer said.

Humble Brushes are available in adult and child sizes, starting from €4.99 (US$6.60). More information about the company and the foundation can be found at www.humblebrush.com and www.humblesmile.org.
A good option for the lifelike recreation of gingival tissue

The flawless reconstruction of gingival tissue requires sound teamwork as well as excellent materials and exceptional skill. Layering with the light-curing laboratory composite SR Nexco takes this procedure to a new level.

By Dr. Patrice Margossian, Marseille, & Pierre Andrieu, France

Careful planning is indispensable in the treatment of an edentulous jaw with implant-supported restorations. The axes and positions of the implants must correspond to the given biological, mechanical and aesthetic conditions. In situations where severe bone recession has occurred, the work of the dental team will involve not only the reconstruction of dental but also of gingival tissue. The dentogingival complex must primarily fulfill two aspects: function (chewing and speaking) and esthetics (alignment of the teeth and gums and lip support).

Clinical case presentation

When the 37-year-old female patient presented to our practice her teeth and the related bone structure were in very poor condition (Figs 1 and 2). Numerous teeth were missing in both the upper and lower jaw. Furthermore, the upper jaw showed considerable bone and gingival resorption. The patient wished to have fixed teeth again and regain an attractive appearance. Due to the extensive damage that had occurred, the complete restoration of both jaws with implants was indicated.

Surgical phase

As a result of sufficient bone structure in the lower jaw, this part of the mouth could be restored at once with four immediately loadable implants. During the reconstructive phase, the upper jaw had to be treated with a provisional removable denture due to the atrophied jaw ridge. The tooth extractions in the upper and lower jaw took place during one day. At the same time, the four lower jaw implants were inserted and loaded. An immediate denture was placed in the upper jaw.

During the osseointegration period of the mandibular implants, the bones in the upper jaw were reconstructed. The maxillary sinus and the jaw ridge were augmented in one appointment. At the next appointment, ten implants were placed according to the treatment plan. Six months after this intervention, the implants were exposed. As a result of a well-planned soft tissue management strategy, firm keratinized tissue had formed in adequate form. The permanent restorations for the upper and lower jaw were fabricated two months later (Figs 3 and 4).

Prosthetic phase

The determination of the occlusal plane and the ideal incisal edge was done by using the Ditramax system (Fig. 5).

The denture was set up with pre-fabricated teeth (SR Phonares II) (Fig. 6). The denture was designed to fit into the provisional removable denture and to test the occlusal plane and incisal edge (Fig. 7).

The provisional denture was made with the pre-fabricated teeth (Fig. 8).

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The provisional denture was made with the pre-fabricated teeth (Fig. 8).
Endodontics  |  Oral Surgery  |  Orthodontics  |  Paediatric Dentistry  |  Periodontology  |  Prosthodontics

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General Dental Practitioners Lecture Series 2016

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saline line allows the tooth arches to be integrated more easily in terms of esthetics and function.

Impression taking
Open tray impressions were taken with a special plaster (Snow White) and unsplinted impression posts. The considerable stiffness of the impression material completely immobilized the impression posts, which prevented any errors from occurring in the casting of the study models.

Articulation of the models
The articulator allows the kinematics of the jaw to be correctly simulated. The aim of the patient is the treatment is of a functional nature. It is intended to ensure the optimal occlusal integration of the restorations and the proper jaw movements during chewing, speaking and swallowing. In this particular case, the upper jaw model was positioned with the help of a facebow. Four impression posts were screwed on the implants in order to provide strong support and enhanced reliability. Alternatively, this step can take place directly on the immediately loaded provisional restorations. For this purpose, however, the model has to be mounted in the articulator of the dental practice. In the present case, the maxillary model was positioned in the correct relation to the hinge axis-oral plane.

Subsequently, the adjusted bite patterns in order to record the vertical dimension of occlusion. The centric relationship is regarded as the reference position for adjusting the muscles to the centric and functional jaw relationship. The maxillary model was mounted in the articulator with the help of an antagonist jaw and immediately loaded provisional restorations. For this purpose, however, the model has to be mounted in the articulator of the dental practice. In the present case, the maxillary model was positioned in the correct relation to the hinge axis-oral plane.

The restorations have to be immobilized when they are mounted in the articulator. The Artex system allows the articulator of the dental practice to be synchronized.

Recording of the major facial criteria
The Ditemax® system was used to transfer the precise model to the model of the tooth. The Facial maxillary axes were marked on the plaster base of the model (vertical and horizontal). The vertical axis represents the sagittal median plane. From the front, the horizontal axis is aligned parallel to the incisal plane and from the side to Camper’s plane. These markings, which should be very close to the working area, act as a guide for the dental technician in setting up the teeth. Therefore, the incisal line has a predictable parallel alignment to the bipulpary line.

The incisal axis is aligned parallel with the sagittal/median plane. The Camper’s plane markings indicate the alignment of the occlusal plane. All these elements provide a sound rationale for the tooth set-up according to esthetic and functional principles.

Tooth selection and set-up
We selected the tooth shade and the teeth on the basis of the SR Phonares® II tooth mould chart. Holding the teeth up against the lips of the patient quickly reveals whether or not the are in harmony with the facial features. The set-up of the teeth according to the Ditemax markings (Fig. 6) allows the situation to be clinically validated. In this case, particular attention was given to the esthetic integration of the dentogingival complex when the patient was smiling. The lip dynamics were shown with video clips. The functional criteria were also checked. The vertical dimension of occlusion had to be harmonious in order to achieve a balanced lower facial third and proper phonation.

Fabrication of the framework
We felt that a CAD/CAM-fabricated titanium framework (e.g. Procerat® from Nobel Biocare) would best fulfill this indication. The double scan technique allowed the implant model to be generated upon the tooth set-up to construct the framework. In the next step, the framework was machined and then tried on the model and in the patient’s mouth (Fig. 7).

The cast impression and the high-performance processing systems were used to ensure the optimal passive (tension-free) fit of the framework; this is decisive for the long-term success of the restoration.

Preparation of the framework
The areas that needed to be built up with Gingiva materials were blasted with aluminum oxide using 2 to 5 bar pressure.

Subsequently, the SR Link bonding agent was applied, followed by a thin layer of the light-curing SR Nexco® Gingiva Opalquer to mask the metal framework. The opalceram was polymerized and then a second coating was applied and polymerized. The resulting inhibition layer was removed.

The conventional flask technique with a heat-curing denture base material (Probase® hot) was used to produce the denture. After the polymerization process, the denture base was ground and space was made for building up the Gingiva composite. The surface was conditioned by blasting it with aluminum oxide (50 µm) at 2 bar (Fig. 8). Then, a bonding agent was applied, which was left to react for three minutes before it was light cured.

Veneering of the gingival areas
In order to achieve very lifelike results in the layering of the gingival tissue, saturated (inreive) materials were used (first SR Nexco Paste Intensive Gingiva) (Fig. 9). Next, translucent, light-curing Gingiva materials (SR Nexco Paste Gingiva, SR Nexco Paste Basic Gingiva) were used to impart the gingival areas with the desired depth (Fig. 10). The colours of brushes, and the patient was given special instructions regarding her oral hygiene.

For a long time, ceramics were considered to be the esthetic benchmark. With the introduction of state-of-the-art industrially fabricated acrylic teeth, which are specially designed for implant applications, the bar for esthetics has been raised in this category of materials. The teeth used in this case exhibit a true-to-nature morphology, which allows the restoration to be functionally integrated without any problems. Using the laboratory composite SR Nexco® to recreate gingival tissue is a good restorative approach. In contrast to ceramic materials, the composite resin is easy to handle and delivers exceptionally esthetic results (Fig. 15). The light weight of the material is an added bonus. An all-ceramic restoration (zirconium oxide framework, layering ceramic, gingival tissue) would best fulfill this indication. The surfaces of the teeth were characterized with a vertical and horizontal macrostructure. Particular attention was paid to mechanical polishing. Once the gingivectomy gel was removed, the restorations were finished with different polishing instruments (various grit sizes, pumice, leather buffing wheels and universal polishing pastes) (Fig. 11). In the present case, mechanical polishing was preferred to glazing with light-curing composite in order to preserve the natural aging of the surface.

Attachment of the permanent dental restorations
The dentures were inserted manually with the help of small unit abutments from Nobel Biocare (Fig. 12). The screw channels were sealed with Teflon and light-curing composite resin.

The position of maximum intercuspal was checked and the occlusal pathways were adjusted to the protrusive and laterotrusive movements. In addition, the restorations were checked in terms of the ability to clean them with interdental brushes.

The success of an implant-retained denture depends on the systematic coordination of all the surgical and prosthetic requirements.

A strict procedure needs to be followed in the treatment plan to the final outcome. Laying gingival portions with a laboratory composite represents a genuine improvement on previous materials and methods with regard to esthetics, handling and hygiene (Fig. 14).
**Case study: Herculite® XRV Ultra™ and OptiBond™ XTR**

**Supporting the future generations in dentistry**

By Kerr

A 52-year-old patient presented with a request to replace defective, old restorations and improve the aesthetics of the smile.

A decision was made to remove the old restorations from teeth 11, 12, 21 and 22, as well as performing crownoplasty to improve the final aesthetic results. For reasons related to the patient's health, the treatment was performed over two sessions.

For the bonding procedure, the 2-step self-etching bonding system OptiBond XTR was chosen. The clinical procedure consisted of the application of a self-etching primer that changes the morphology of the enamel surface depending on its pH, followed by the application of the adhesive.

The pH of OptiBond XTR Primer is 2.5 and decreases to 1.7 during application. Then it switches to a value of 7, due to a chemical reaction with the calcium ions of the dental tissues. OptiBond XTR performs very well on the dentine surface as well, dissolving the smear layer effectively.

The self-etching primer was applied using a microbrush with gentle and active brushing for at least 20 seconds in order to promote the remineralisation and the infiltration of the substrate ("continuous brushing technique"). The solvent was evaporated using an indirect and gentle air stream.

The adhesive was applied using a microbrush with active "scrubbing", waiting for 15–30 seconds in order to obtain the diffusion of the resin by capillarity into the substrate and the excess was removed through a capillary action into air stream and light substrate, and for 10 seconds, using the LED curing light Kerr Demi Ultra.

The main benefits of using the OptiBond XTR Bonding System are:

1. Fast application and predictable results
2. No need to rinse and therefore no risk of issues related to moisture control of the dentine surface
3. Good bond strength to both enamel and dentine

Knowing the functional and aesthetic features of Herculite XRV Ultra composite, the cavity was prepared by completely removing the previous restorations and any carious dentine, without removing the discoloured/secondary dentine, which will be perfectly masked by the opacity of the dentine shade of Herculite XRV Ultra.

The opacity of Herculite XRV Ultra Dentine shade is able to cover the dentine discoulouration without the need for further opaque shades. The application and sculpting of the composite was performed using the Kerr Comporeller, a useful modelling tool that consists of a handle and interchangeable tips with different shapes to use depending on the type of restoration. Moreover, thanks to the unique material of which they are made, the composite doesn't stick to the tips and therefore its placement is fast and easy.

Polishing and high-gloss polishing of the restoration was performed in few fast and simple steps. Unlike other materials, Herculite XRV Ultra makes it possible to obtain high aesthetic results with a natural appearance in few minutes.

The results achieved show that use of Kerr Herculite XRV Ultra composite materials in the anterior can achieve a significant aesthetic improvement of the smile using conservative techniques and without recourse to prosthetic solutions.

In addition, the use of Herculite XRV Ultra as an anterior restorative can achieve a significantly improved aesthetic smile without using indirect restorations.

The anterior can achieve a significantly improved aesthetic smile without using indirect restorations.

The following case was conducted under the supervision of Dr. Emiliano Rossi (Chief of Department of Dentistry in the same University, Padova).

**About the Author**

**Marco Bambace**

Is currently a student at the University of Padova (Department of Dentistry) in his fifth year of studies. He will achieve the degree of Doctor in Dentistry in 2016. With his talent for direct restorations, Marco Bambace performed this in vivo case using Kerr restorative products and filling accessories.

**Dr. Emiliano Rossi**

The following case was conducted under the supervision of Dr. Emiliano Rossi (Chief of Department of Dentistry in the same University, Padova).

**References**

- **Kerr Herculite XRV Ultra™ and OptiBond™ XTR**
- **OptiBond XTR**
- **Kerr Demi Ultra**
- **Kerr Opti1Step**
- **Kerr Opti2Step**

**Supporting Information**

- **Pre-operative views. Note the presence of large and faulty fillings and the lack of harmony between the substrate and the restorations.**
- **Placement of Kerr OptiDam rubber dam; anterior and occlusal views.**
- **Removal of old restorations and secondary caries on teeth 12 and 22.**
- **Stratification of the composite using an LED Kerr Demi Ultra curing light.**
- **Finishing with Kerr Optifile carbide burs.**
- **Surface finishing and shaping, using diamond burs (40,15 micron) and macro texture performed with carbide burs.**

**Technical Details**

- **Composite Materials:**
  - Herculite Ultra™
  - OptiBond XTR
  - Kerr XITC Ultra™
  - Kerr OptiBond XTR

- **Light Sources:**
  - Kerr Demi Ultra curing light
  - LED light

- **Adhesive System:**
  - OptiBond XTR

- **Instruments:**
  - Kerr Opti1Step polisher
  - Kerr Opti2Step polisher

**Aesthetics of the Smile**

The patient shows a completely renewed, natural and harmonious smile. The procedure was performed in 2 hours in a single appointment, with reduced biological trauma and economic expense.
Advanced Restorative Techniques and the Full / Partial Mouth Reconstruction - Part 1

As an introduction to a series of articles, Prof. Paul Tipton looks at restorative techniques and the impact of new dental materials

By Prof. Paul Tipton, UK

Most advanced restorative dentistry techniques, including that of full mouth reconstruction, have changed very little over the last 20 to 50 years. However, the impact of new dental materials, such as titanium and zirconia, has had a major influence on aesthetic dentistry and implantology during this time period. As a result, the profession may have an over-reliance on new materials rather than tried and tested techniques.

Some fundamental techniques are just as relevant today as when they were when I started my Masters degree in conservative dentistry at the Eastman Dental Hospital in 1987. During the course of this series of articles on advanced restorative techniques, some old techniques will be revisited in light of today’s aesthetic and restorative requirements and some newer concepts will be discussed in greater detail whilst dealing with the overall topic of full mouth reconstruction. This article previews the restorative techniques that will be discussed during the next 10 clinical articles on advanced restorative techniques.

Occlusal concepts

During my Masters degree at the Eastman and prior to that, my training in occlusion has been in gnathology and its principles as taught at the University of Michigan and by Derek Setchell, Richard Holton and staff at the Eastman Dental Hospital during the last 20 years. This includes the five principles of occlusion, which are:

1. Retruded contact position (ICP) = intercuspal position (ICP) around retruded axis position (RAP)

2. Mutually protected occlusion

3. Anterior guidance

4. No non-working side interference

5. Posterior stability.

The article on occlusion will review these concepts and also discuss when alternatives, such as long centric, are required (Figures 1-5).

Treatment of severe wear cases

One of the fundamental approaches to partial or full mouth reconstruction (and aesthetic dentistry) is envisaging the end result prior to starting the case. There is no better way to see the end result than the full and complete diagnostic wax-up. The aesthetic ability of both dentist and technician is stretched during this essential procedure. The article on diagnostics will review the procedures to complete a full mouth reconstruction at an increased vertical dimension so that the condyles are in their most relaxed, bone tolerated and this is easily accomplished in most cases as long as this increase is done around RAP or centre relation so that the condyles are in their most relaxed, bone braised and reproducible position. Increases and decreases in vertical dimension will be discussed showing positive changes in facial aesthetics as treatment is completed (Figures 10-12).

Full mouth reconstruction

Following on from diagnostic procedures in the previous article, the techniques of full mouth reconstruction will be reviewed including the use of various forms of articulators from the fixed condyle (average value) articulator through to the semi adjustable and on to the fully adjustable for the customisation of the condylar settings. The programming of these will also be looked at and discussed from ‘fixed’ settings to use of lateral and protrusive check bites, and finally the pantograph and newer ‘Cadi-ax’ machine (Figures 7-9).

Vertical dimension

Changes in vertical dimension are often required for either gaining restorative space during restorative procedures or for improving facial aesthetics. Occlusal splints are used to first verify that the increase in vertical dimension can be tolerated and this is easily accomplished in most cases as long as this increase is done around RAP or centre relation so that the condyles are in their most relaxed, bone braised and reproducible position. Increases and decreases in vertical dimension will be discussed showing positive changes in facial aesthetics as treatment is completed (Figures 10-12).

Dahl appliances

Bjorn Dahl first described the Dahl appliance in the early 1970s. Since then they have gradually been incorporated into the field of restorative dentistry although many Orthodontists still dispute their efficacy and relevance.
The article on Dahl appliances will cover its history and usage in today’s modern restorative dentistry, focusing on the use of traditional chrome cobalt ‘Maryland wings’ style of Dahl appliances and also the use of splinted temporary or prototype restorations used to gain space during crown procedures (Figures 13-15).

**Duralay bonnets**

Impression techniques demand a high degree of accuracy for the completion of the advanced restorative case. Often this is a difficult procedure for the restorative dentist when taking impressions both sides of the mouth at the same time (as a full arch impression where there are multiple teeth present) or undertaking an impression of mobile teeth as in the Linthi/Nyman bridge.

Both of these techniques will be reviewed and clinical examples shown of how the duralay bonnets and coat hanger wire technique can be used not only for impressions but also for jaw registrations (Figures 16-18).

**Periodontal prosthesis**

The article on the periodontal prosthesis, commonly known as the Linthi/Nyman bridge, reviews all the literature from the 1970s on this exciting technique, which allows multiple pontic replacement in fixed bridgework on often severely mobile and reduced number of abutment teeth. The science is overwhelmingly in favour of this type of bridge in certain situations where conventional dentures or implants are not possible (Figures 19-21).

**Peter Wohrle bridgework**

The duralay bonnet technique also crops up in this article on individual crowns cemented onto a pink porcelain fused to metal bridgework cemented onto gold copings and then onto abutments screwed into dental implants – hence the abbreviated name ‘Peter Wohrle bridgework’ for ease of use after the dentist who first described the technique. Several cases will be described using slightly different techniques to illustrate the technical difficulties in producing this bridgework but demonstrating the overall superior aesthetic result, optimal fit and maintenance potential (Figures 22-24).

**Aesthetic periodontics**

The last article in the series reviews the latest techniques in periodontology used to enhance optimal aesthetic restorative techniques. The periodontist is an essential team member of the aesthetic restorative practice and an increasing amount of patients are requiring pink as well as white aesthetics. Connective tissue grafting, pontic site development, crown lengthening etc will be reviewed and discussed with step-by-step protocols (Figures 25-27).

**Conclusions**

Restorative dentistry has gone full circle with old techniques revisited and amended for today’s dentistry. These techniques do not, however, get enough ‘air time’ in many journals as the importance of aesthetics takes over. It is my aim to help the reader understand these advanced restorative techniques and encourage them to put them into their everyday practice in order to help their patients and gain more clinical satisfaction.

For the writing of this article on advanced clinical techniques, I would like to thank certain members of my team, including Dr Ibrahim Hassair, BDS, M.Gold, Dr Anshul, BDS, MSc, specialist in endodontics.

**About the Author**

Prof. Paul A. Tipton BDS, MSc, DGDSP UK, gained his MSc from the Eastman Dental Hospital in 1989. In 1999 he was certified as a specialist in prostodontics. During the last 20 years he has established his private practice and established for Tipton Training Ltd on restorative, aesthetic and implant dentistry. Over 2,000 dentists have been through one of his one-year dental programmes of which there are four levels (for more details visit www.tiptontraining.co.uk).

Prof. Tipton is currently president of the British Academy of Implant Dentistry and in clinical practice at the Yorkshire Centre for Advanced Dentistry outside Leeds where he takes referrals for restorative, aesthetic and implant dentistry (www.centreforadvanceddentistry.com).
Clinical Management Approach of Molar Incisor Hypomineralisation. A Case report.

By Dr. Shaikha Alraeesi, UAE & Dr. Manal Al Halabi, UAE

Abstract
Molar incisor hypomineralisation (MIH) is a relatively common dental defect that appears in first permanent molars and incisors and varies in clinical severity. The specific aetiological factors remain unclear. Inappropriate diagnosis can result in mismanagement of the condition and results in early loss of first permanent molars (FPM) in particular. Therefore, the early identification of such condition will allow early intervention including monitoring and preventive interventions that might help in remineralisation of the hypomineralised tooth structure. These preventive measures can be instituted as soon as affected surfaces are accessible.

Clinical relevance statement
Failure of early diagnosis and dental management in cases of Molar Incisor Hypomineralisation (MIH) leads to rapid development of dental caries, increased pulpal inflammation and continuous enamel as well as restoration breakdown.

Objective statement
The reader should understand the Molar Incisor Hypomineralisation (MIH) condition and the availability of different management options of this condition.

Introduction
Molar Incisor Hypomineralisation (MIH) is a developmentally derived dental defect that involves hypomineralisation of 1 to 4 first permanent molars (FPM), frequently associated with similarly affected permanent incisors. The pattern of enamel defects consists of asymmetric, well-demarcated defects affecting the enamel of the FPMs and is associated with similar defects in permanent incisors and canines tips. (1)

~ Prevalence
Available modern clinical prevalence data for MIH mostly from Northern Europe, ranges from 3.6% to 25% and seems to differ between countries and birth cohorts. (2)

~ An etiology
An etiology of this condition is poorly understood, with many associated factors (including environmental changes, breast feeding, respiratory diseases, oxygen shortage of ameloblasts and high fever diseases) but few proven causative agents. (3)

~ Clinical Features
Fairly large demarcated opacities, whitish-yellow or yellow-brown in colour that may or may not be associated with post-eruptive enamel breakdown. Hypomineralised enamel can be soft, porous and look like cheese. Subsurface porosity leads to breakdown after eruption, especially under occlusal forces, resulting in exposed dentine and sensitivity. (4)

~ Management
Permanent molars affected by hypomineralisation are prone to rapid development of dental caries and repeated breakdown of restorations. Therefore, careful planning is required, taking into account the patient's age (behaviour management issues), degree of crowding and co-operation. Sensitivity of affected teeth plays a major role in difficulty of achieving anaesthesia and thus behavioural issues.

- Preventive
  • Diet advice
  • Higher fluoride toothpaste (at least 1450 ppm F)
  • Topical fluoride varnish
  • Casein phosphopeptide-amorphous calcium phosphate (CPP-ACP)

- Restorative
  • A small lesion can be treated with localized composite, where the enamel is soft, or fissure sealants, where the hardness of the enamel appears no different from the unaffected enamel.
  • GIC is recommended as dentine replacement or as an interim restoration due to ease of placement, fluoride release and chemical bonding.
  • For extensive lesions with post-eruptive breakdown especially if the cusps are involved, preformed stainless steel crowns (SSCs) are preferred as an effective medium-term restoration. SSCs can preserve the FPM until cast restorations are feasible. (5)

- To save the tooth or not?
  • The first decision in the management of the MIH FPM is whether the tooth should be saved or not. The decision to extract or restore will depend upon a number of different factors, some of these being the degree/extent of hypomineralisation, post-eruptive breakdown, sensitivity, age and cooperation of the patient, any

Fig. 1 (a, b, c, d & e). Showing a dislodged filling of 36. 16 yellowish brown hypomineralised lesions. 36 and 46 large composite fillings.

Fig. 2 (a, b & c). OPT radiograph showing: normal alveolar bone levels, a normally developing dentition, except lower left third molar. E's are near physiological exfoliation, more than 2/3 of the roots of 7's are calcified, 46 RCT'd, 36 composite restoration, 16.26 deep caries. PA radiograph showing: no signs of periodontal radiolucency in lower and upper left first molars.
The treatment plan was set in two phases including Short/ Medium term and long term. The short term will start with Emergency phase for restoring the 26 with GI as a temporary filling. An extensive preventive programme was implemented in addition to diet assessment, analysis, and advice and fluoride application. In several visit crown preparation was done under local anaesthesia for 36, 46, and 28. The stainless steel crowns were placed.

The treatment plan was set in two phases including Short/ Medium term and long term. The short term will start with Emergency phase for restoring the 26 with GI as a temporary filling. An extensive preventive programme was implemented in addition to diet assessment, analysis, and advice and fluoride application. In several visit crown preparation was done under local anaesthesia for 36, 46, and 28. The stainless steel crowns were placed.

The treatment plan was set in two phases including Short/ Medium term and long term. The short term will start with Emergency phase for restoring the 26 with GI as a temporary filling. An extensive preventive programme was implemented in addition to diet assessment, analysis, and advice and fluoride application. In several visit crown preparation was done under local anaesthesia for 36, 46, and 28. The stainless steel crowns were placed. Patient's occlusion was checked for any discrepancy in each visit.

As S.S is considered to be of high carries risk status she was kept on regular recall programme including revisit visites and fluoride varnish application every 5 months, radiographs every 6 months. See Figures 5 (a, b, c, d & e).

Long Term Treatment Plan and Future Considerations
- Regular long-term diet monitoring and reinforcement of oral hygiene practices.
- Periodic review of the restorative options with radiographic assessment.
- Review the first permanent molars status.
- Monitor erosion and development of dentine.
- Educate patient and parents about the poor long-term prognosis of first permanent molars these teeth and available future treatment options.

Discussion
Children with MIH have higher treatment needs and significant challenges in behaviour management than other children. S.S was a quiet girl who was apprehensive in the beginning of the dental visit but willing to have the treatment. S.S was diagnosed as MIH in first permanent molars. Using non-pharmacological behaviour management techniques including relaxation, role play, distraction helped to acclimatize S.S to dental treatment. These techniques are widely used in children's dentistry and well accepted by parents. The technique works well combined with behaviour shaping. S.S was rewarded with a gift after each appointment as positive reinforcement for her good behaviour and cooperation. 26 was temporized with glass ionomer to relieve discomfort, stabilize the situation and to reduce bacterial count present in the oral cavity.

Failure of achieving complete anaesthesia of first permanent molars was related to the nature of MIH. S.S received supplemental intraligamental infiltration. The interventions density in the pulp of hypomineralised molars is significantly greater than of normal molars. This can explain why lower left 6 was hard to be anaesthetised. Due to poor quality of the FPM teeth of S.S and significant tooth break down full coverage by preformed metal crowns was done. Preformed metal crowns prevent further tooth loss, control sensitivity, establish correct interproximal and proper occlusal contacts, are not costly and require little time to prepare and insert.

Conclusions
- The presence of MIH molars not only requires the dentist to identify problems at the early stage of life but also to clarify the problem thoroughly and explain the treatment options to the patient and child.
- It is advisable to consider children with a poor general health in the first few years after birth at risk for MIH. These children should be monitored more frequently during eruption of the first permanent molars.
- Whilst many potential approaches exist for the restorative management of molar incisor hypomineralisation, few are yet supported by good quality clinical research data. Preformed metal crowns have been recommended as the prosthesis of choice in MIH afflicted posterior teeth with post-rupture enamel breakdown in majority of the literature available.
- The use of nitrous oxide inhalation sedation can be a useful adjunct in obtaining satisfactory anaesthesia in MIH patients. Nitrous oxide was not used in the case of S.S due to parental refusal because of limited financial resources.
- Had this patient presented earlier, consideration for enforced extraction of FPM would have been considered.

References
Evaluation of dental implant therapy – peri-implantitis

By Dr. Olivier Carcuac, UAE

Peri-implantitis is one of the most common complications affecting patients with dental implants. The condition is characterised by an inflammation in peri-implant soft tissue and loss of supporting bone. Despite several similarities in clinical features with its counterpart at teeth, the disease progression of peri-implantitis is faster than that of periodontitis. Peri-implant mucositis is the precursor to peri-implantitis as is gingivitis to periodontitis.

Clinical and experimental studies demonstrated that peri-implant mucositis and gingivitis lesions are similar in size and cell composition (Lang et al 2011). Both lesions may progress and thereby influence supporting tissues at teeth and implants. Established peri-implantitis lesions exhibit critical histopathological differences when compared to periodontitis lesions (Berglundh et al 2011). Pre-clinical in vivo studies comparing the two lesions have used experimental techniques to induce periodontitis and peri-implantitis. In one such study, Carcuac et al (2015) demonstrated that disease progression differed at teeth and implants over a six-month period. Bone loss was more pronounced at implants with modified surfaces compared to teeth and implants with non-modified surfaces. Histological analysis also demonstrated that periodontitis lesions were well contained and separated from the alveolar bone by a zone of non-inflamed connective tissue, while a similar border between the lesion and the supporting bone was absent in peri-implantitis sites (Figure 1). The lateral and apical portions of the peri-implantitis lesion extended to the bone crest, the surface of which was lined with osteoclasts. The histopathological discrepancies between the two types of lesions may be explained by the structural differences in the supporting tissues at teeth and implants. In a comprehensive study based on human soft tissue biopsies obtained from 40 patients with severe periodontitis and 40 patients suffering from severe peri-implantitis, Carcuac et Berglundh (2014) reported further differences between periodontitis and peri-implantitis lesions. In contrast to periodontitis samples, peri-implantitis lesions were more than twice as large and contained significantly larger area proportions, numbers, and densities of macrophages, plasma cells and neutrophil granulocytes than periodontitis lesions (Figure 2). These findings indicate a more severe disease character for peri-implantitis, which may, in part, explain the higher rate of progression.

Peri-implantitis is diagnosed, as is periodontitis, in the presence of bleeding on probing and loss of supporting tissues. The discussion regarding the diagnosis of peri-implantitis usually focused on radiographic thresholds of bone loss. In this context, recommendations for clinical research and diagnostic guidelines for everyday clinical
practice have been confused. Studies evaluating the prevalence of peri-implantitis used so-called case definitions. While there is consensus concerning the use of bleeding on probing as a clinical criterion, the use of at least seven different radiographic thresholds of bone loss has been suggested to determine peri-implantitis (Tomasi et Derks 2012).

Following a meta-analysis of data from different studies (Derks and Tomasi 2015) recently reported that about 22% of patients with dental implants suffered from peri-implantitis. Similar results have been presented in other literature reviews (Mombelli et al 2012). In a recently published nation-wide project, data from 596 patients were used to study the prevalence of peri-implantitis (Derks et al 2015). While about 45% of the patients presented with signs of peri-implantitis, 14.5% had moderate/severe forms of the disease (bleeding on probing and ≥2 mm bone loss) at ≥2 implants.

Risk factors for peri-implantitis

Susceptibility to periodontitis is one of the strongest risk factors for peri-implantitis. Several studies have demonstrated that such patients are overrepresented among those suffering from peri-implantitis. It should be kept in mind, however, that adequate supportive measures prevent peri-implantitis also in periodontally susceptible individuals. Thus, provided that periodontal therapy is successful and that patient compliance is maintained on a high level implants have a favourable prognosis with little risk of peri-implantitis.

An additional potential risk factor for peri-implantitis is the design of the prosthetic reconstruction. Without proper access for self-performed oral hygiene, the risk of peri-implantitis is increased. Thus, when designing the prosthetic reconstruction, it is imperative to satisfy the requirement of access for self-performed infection control.

A more controversial risk factor for peri-implantitis is the surface characteristics of the implant. While convincing pre-clinical data are available, we lack clinical documentation and comparative clinical trials, in particular. In a series of experimental studies it was demonstrated that spontaneous progression of peri-implantitis at implants with modified surfaces was more pronounced than at implants with non-modified surfaces (Berghult et al 2007, Albo et al 2007). Results from preclinical research should be interpreted with caution. This is the case for studies demonstrating potentially negative outcomes but also for studies revealing positive effects of implant surface modifications. Results from clinical reports including patient groups with different types of implants indicated that patients with rough-surface implants experienced more problems than those carrying implants with less rough surfaces (Baelum et al 2004, Marnone et al 2015). Data presented in a Spanish study suggested differences not only in the occurrence of peri-implantitis at different implants, but also differences regarding the time of onset (Mir-Mari et al 2012). In order to identify risk factors related to patients, clinicians, and/or implants, large and randomly selected patient cohorts are required. The nationwide project aforementioned includes such an evaluation of effectiveness (Derks et al 2015). Results of the different regression analyses revealed that several of the clinician-, patient-, and therapy-related factors were associated with moderate/severe peri-implantitis. Patients presenting with periodontitis were more likely to suffer from moderate/severe peri-implantitis. Factors related to clinicians were associated with moderate/severe peri-implantitis: patient provided with prosthetic therapy performed by general practitioners presented with a higher odds ratio (4.5). In addition, certain implant brands were associated with a higher risk for peri-implantitis: Straumann implants show the lowest rates of moderate/severe peri-implantitis when compared to Nobel Biocare, Astra Tech and the other implants represented in this observational study (including Biomet 5i, CrestoTi, Xive, Friialit, Lifecore, Implamed and API). Finally, a higher odds ratio (2.5) for moderate/severe peri-implantitis was observed for implants with a reduced distance (≤4.5 mm) from the prosthesis margin to the crestal bone as measured in baseline radiographs.

References

Editorial note: The full list of references is available from the publisher.
Maintain your patients’ confidence and satisfaction with their dentures by helping them overcome daily social, emotional and physical challenges.

Help your patients eat, speak and smile with confidence with the Corega® denture care regime.
Dentine hypersensitivity protection, now in a daily mouthwash

The first Sensodyne mouthwash containing 3% potassium nitrate and fluoride, proven to provide ongoing protection from dentine hypersensitivity with twice-daily rinsing1–5

* Rinse twice daily after brushing with a fluoride toothpaste.

Sinus Lift. Don’t Dream It: Do It!

By Dr. Dominique Caron, UAE

Do you know you are about to perform your next sinus lift procedure? Once it is done, you will wonder why you have been waiting for so long. The issue that often fails is: one, two, three teeth missing, framed by no tooth, weak teeth, living teeth...

What is the best option to be ethical and efficient?

First option: a bridge. It means to damage several teeth, to do root canal treatments, to overload several roots, as well, the pontics are hard to clean, and the cosmetic effect is not always perfect...

Never forget: PRIMUM NON NOCERE! First don't harm!

The smart way, of course, is to do implants: you will fix the problem where the problem is, without damaging the neighbors.

This solution would be nice except that it cannot work like this. The sinus may “disagree” and will have no strength. What you dream of is that: “strong implants fit into a strong support”.

Simple, except that you never did it!

If you are ethical:
- You will leave the bridge to stone age
- You will manage to have the implants done in the best conditions.

To do so you can subcontract the implants surgical step with a colleague who knows how to do it, it is safe and professional, but who can you fully trust?

However, if you feel there is nothing beyond you and that you have learned, that you have been on training courses, you will need to take the plunge! I don't know if you feel the same but during a lecture everything seems easy, quick, simple. It is like magic!

But now that you are alone without safety net, you don't know where to begin. It is time for you to become your own specialist.

All this is first a matter of state of mind: YES YOU CAN!

Yes, all what we have to do in this dental case is simple: it is a matter of screws and plank. If you can assemble an IKEA cupboard, you can do implants. You should never lose the sight that we do on every day basis is a matter of building and civil engineering works. It is just at a very smaller scale. Nevertheless, we have the same constraints and an additional foe: “the bacteria”.

Don’t lose your common sense, consider the stair case step by step and “THINK SIMPLE”. You don’t have a plank thick enough for your screw, add a back plate! The idea is the same, may be some more details to take into account, and the support is a living body you are supposed to “keep alive”...

It is appreciated. (Joke)

The most accurate and safe in the market is the cone beam system.

With a Cone Beam, you have:
- Safety: 70 to 100 times less radiations than with a CT scan.
- Accuracy: the image is much more detailed and you can navigate in 3D to lookout for the exact information you need. Then you will be able to set virtually your implants to stick perfectly with the needs.

On the crest, don't stay exactly in the middle, but little on the palatal side. The buccal flap will protect the implants more efficiently. Extend your inci-

sion at least one tooth front and one tooth back to have an easy access without a long vertical incision.

Make sure the incisions will not be close to the graft. You need to see easily what you are doing, it is a priority. The more you peel off the gums, the less you cut, the better your patient will heal. So you should always be smooth!
I will come back later on this technique. Peel of the gums smoothly on the buccal side with the periosteat. Take off high enough to help you “SEE WHAT YOU DO”.

Surprisingly, you will see it is helping a lot!

Now, big question: graft and implant in 1 or 2 times?

You came to all the conferences of CAP, you read a lot, you have watched many videos.

The result may be as follows: “The more you try to learn, the less you know”!

For the same question in the same conditions, you may be told anything and its opposite... Maybe this is not really helping but the state of mind is often: big graft, big delay!

Or, as a second ceiling, you set an absorbable membrane. For good,”resorbable” in 2-3 months, in time with the natural process.

- You did not stab it, you win. Go straight to the drilling of the socket with a tool as a shield between the drill and the membrane.

One more, I can tell you what I have done for more than 20 years. Don’t lose your common sense: a graft set in the bottom of a sinus is like a loose cargo in the bottom of a hold.

As soon your patient walks or goes down the stairs, you can imagine how it is shaking. Beyond the mechanical properties of the graft itself, what we will talk about in a minute, you can expect the fragile Schneiderian membrane will not be a great help.

Once more you should be practical. Put a screw in the middle! If your graft is rolling, there will be no healing, not fiber growth, no new blood vessel, and you will fail.

A stable graft is compulsory to get a predictable healing, with a stake in the middle; you make it a stiffer.

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A stable graft is compulsory to get a predictable healing, with a stake in the middle; you make it a stiffer.

One more benefit: you will save 5 months on the process and you have now a welcoming cavity for your counter plate and the way in.

Look at the membrane it should move following the pace of the breathing like bellows: 2 options:
- You stab the membrane, you rip it up. You need first to set a patch to protect it.
- A stable graft is compulsory to get a predictable healing, with a stake in the middle; you make it a stiffer.

Now softly lift off the membrane from the bottom of the sinus, the same way you would lift a carpet! Once more avoid “Parkinson” and take your time... This step is important, it is not a race! You will see many “movie stars” proud to say they are very fast. As a matter of fact, the quicker you work, the better is the healing, but the main point is to be accurate and smooth. The stop watch comes next...

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Now a big question:
What kind of graft?

You have attended many lectures, read many reports, gone on internet: each time the material considered is the best and fits 100%.

All the materials are the best! How can you make your mind?

To enter the problem in a relaxing way: “EVERY KIND OF GRAFT CAN MATCH” and the market is wide.

First of course you have the bones:
- Autologe bone: seen as the best.
- No immunogenic reaction, but you need to harvest. If you take the graft on the chin or the ramus you may have pain, inflammation and paraesthesia. If you use the hip or the skull, you get involved in a heavy process, too heavy.

Allo graft, xenograft, a graft in a sprayer are dry bone deespecified with slow remodeling and a granular display which is not helping or a cubic display not easily matching.

You have coral, hydroxyapatite, calcium carbonates, brucitites, phospho calcic, ceramics, tricalcium phosphates, biphase ceramics, polymers, bioglass, calcium sulfates, composites... The list is long...

All materials can fit. Anyway, same as for your car. Four wheels and an engine means a car. Except some brands are better than the others!

Again think simple: What do you need? The graft must be:
- Easy to use
- Hemostatic

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Again think simple: What do you need? The graft must be:
- Easy to use
- Hemostatic
New coating could eliminate implant failure risk

By Dental Tribune International

TORONTO, Canada: Although their success rate has been reported as about 98 percent, dental implants can fail owing to biological and technical issues over time. In many cases, the body’s inflammatory response causes rejection. Canadian research has now presented a new implant coating that helps disrupt this immune mechanism to prevent both the risk of implant failure and the need for anti-inflammatory drugs.

The disruptive new anti-inflammatory polymer was developed by Dr. Kyle Battiston, a postdoctoral fellow at the Faculty of Dentistry and a recent graduate from the Institute of Biomaterials and Biomedical Engineering at the University of Toronto. It was originally designed as a tissue-engineering scaffold that allows tissue engineers to grow cells successfully.

Battiston and his colleagues were able to coat implants with the biomaterial, which is derived from a family of polymers found to reduce inflammation, specifically when it interacts with white blood cells, and discovered that the coating calms the body’s immune response.

“We’ve learned this family of materials can retain its anti-inflammatory character while adapting diverse physical properties,” said Battiston. The material could thus be used for a wide variety of medical treatments.

Battiston plans to market the coating through his new startup company kSP2 within the next five years.

According to the American Academy of Implant Dentistry, 5 million Americans already have dental implants and this number is growing by 500,000 a year. About 10 percent of all U.S. dentists place implants today. The association estimates that the U.S. and European market for dental implants will reach $4.2 billion by 2022.
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Cast mounting using MaxAlign: The clinical component

By Dr. Les Kalman, Canada

The importance of records cannot be overstated. Records are a legal requirement, are vital in assisting with diagnoses, and facilitate treatment planning, patient comprehension and laboratory communication.1,2 The clinician has the choice between virtual or tangible records, which may include casts, a facebow, articulation and photographs.3,4 Accurately mounted diagnostic casts provide an immense amount of information for treatment and that information will have an impact on the final prostodontic plan.5

Just as the correct mounting of casts provides valuable information, so too does incorrect mounting provide inaccurate information. In addition, incorrect mounting may result in false diagnoses and possibly even altered treatment plans, based on errors in inter-arch space, occlusal contacts and force directions (Fig. 1).3 Laboratory communication with the clinician remains an important aspect, yet this has been lacking.6 Without records, communication with the laboratory can be even more limited. Communication tools must be employed7 to provide information so that laboratory technicians can satisfy laboratory requirements. Lack of information results in guesswork, assumptions and incorrect dental work that is ultimately returned to the dental laboratory.8

Background: MaxAlign
The MaxAlign application (Max, Whip Mix) is a communication tool for the clinician that captures essential patient information. It is a tablet-based technology that offers a unique set of records, enabling the accurate mounting of casts complete with a patient image. Max provides a calibrated photograph with clinical information and a novel technique for the mounting of casts. This case report will explore the effective use of Max to acquire clinical information that is vital for the laboratory, third-party insurance, the clinician and the patient.

Clinical protocol
A healthy 36-year-old female patient with a non-contributory medical history presented for consultation regarding elective anterior aesthetic treatment. Records consisted of alginate impressions using stock trays, which were poured in JADE STONE (Whip Mix), and utilisation of Max.

The Max app was downloaded onto a Samsung tablet (provided) and launched (Fig. 2). Patient information was input (Fig. 3). The tablet was positioned in the tablet clamps (provided) and the clamps were tightened to ensure a vertical orientation (Fig. 4). The tablet must be placed such that the Samsung logo is on the right, so that the camera is located to the right. The patient was in the upright position, with the occlusal plane parallel to the floor, while the tablet was placed on the instrument delivery stand (Fig. 5). Max has anatomical guides for positioning: maxillary incisor midline and edge, location of orbits and inferior facial outline.

The delivery stand was positioned close enough to the patient for her facial features to line up with the guides on Max (Fig. 6). Cheek retractors were employed to offer a clear view of the dentition (Fig. 6). Once the patient was in the correct position, the “arm auto capture” button was pressed. The tablet then captured a photograph, with a flash, of the patient (Fig. 7). Once the photograph has been taken, the clinician has the ability to maximize patient position by sizing or moving the image. The width of the central incisors can be selected from the boxes (Fig. 7). Once completed, the image is saved.

The next step is to verify occlusion. This was done with standard 8 mm shimstock while the patient is in maximum intercuspation (Fig. 8). The contacts were observed and input into the second Max screen (Fig. 9). This screen represents the quadrants of the dentition, and each box represents a tooth. In order to record occlusion, one touches the box that corresponds to the teeth contacting (Fig. 9). The image and record of occlusion are saved and the operator has the...
A triple burst of better gingival health

The new Philips Sonicare AirFloss Ultra gives your inconsistent flossers everything they need for improved interproximal health. With our new high-performance nozzle design and triple-burst technology, it creates three bursts of micro-droplets to remove plaque biofilm.

Clinically proven as effective as floss for improving gingival health** and is shown to improve gum health in 4 weeks***. AirFloss Ultra can be filled with water or antimicrobial mouth rinse, for targeted treatment. And inconsistent flossers say it’s an easy addition to their daily routine. After all, the best solution is one they’ll use regularly... and effectively.

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Proud partner of the FDI World Dental Federation.

* Survey of U.S. patients
** When used in conjunction with a manual toothbrush and anti-microbial rinse in patients with mild to moderate gingivitis. AirFloss Ultra is designed to help inconsistent flossers develop a healthy daily interdental cleaning routine. For more information, please visit www.philips.com/airfloss/faq or reference the QR code.
*** Vivo study to assess the effects of Philips Sonicare AirFloss Ultra, when used with antimicrobial rinse, on gum health and plaque removal.
† In a lab study, actual in-mouth results may vary.

95% said it was easy to use*

97% showed improved gum health**

99.9% plaque biofilm removal in the treated area†
option to exit the app or proceed with the laboratory component. If the mounting will be delegated to a laboratory, this concludes the clinical component of Max. The clinical information can then be e-mailed to the respective laboratory as a JPEG or PDF file. The laboratory would utilise the information according to the instructions in Max, as well as the peripherals, to mount a set of casts accurately (Fig. 10).

Discussion
Based on the records and examination, the following were determined: class I occlusion, 20% overbite, 0/2 mm overjet, canine guidance and evidence of a parafunctional habit. The diagnosis included mildly discoloured anterior composites and bruxism. The patient was presented with several treatment plans, ranging from preoperative whitening followed by minimally invasive composite replacement.

> Page 36

Fig. 5. Patient–tablet position.
Fig. 6. Max capture mode.
Fig. 7. Patient image.
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to anterior porcelain veneers. An occlusal splint was also recom-
manded. Although she was undecided on the treatment modality, the records obtained with Max provided valuable in-
formation for the clinician, the patient and third-party insur-
ance. If treatment is to proceed, important information on oc-
cclusion, guidance and aesthetic determinants will be accurately
conveyed to the laboratory. Utilisation of the clinical com-
ponent of Max provided a very simple approach to capturing
the clinical data. The process was straight-forward, the ana-
tomical guides proved very use-
ful and the record of occlusion provided additional crucial in-
formation that is often omitted. There were no software glitches
or errors during operation. The
patient also found the process
extremely quick and comfort-
able.
Max has several safeguards to
ensure optimisation. There
is a sensor to ensure it is prop-
erly positioned when taking the
photograph of the patient. If it is
not properly positioned, image
capture will not occur. Calibra-
tion may be required in order
to ensure that the sensor is cor-
rectly set. This is achieved by po-
sitioning the tablet vertically in
the stand and then pressing the
“calibrate sensor” button.
The sensitivity of the position-
ing sensor may also be adjusted
with the “adjust sensitivity” but-
ton.
If the clinician has become frus-
trated and must take the image
immediately, there is a “force
capture” button that will over-
ride the sensor and take an im-
age.
Future development may con-
sider the option of saving the im-
age in STL format. This would
enable various output options
and use with other digital image
and design software.

Conclusion
Max provides a novel and inno-
\vative approach to the mounting
of casts using a tablet, reinforc-
ing the anatomical and aesthetic
considerations when establish-
ing a simulated patient case.
The accurately mounted tan-
gible casts provide substantial
information for diagnostic and
treatment planning, beneficial
to dental students, new gradu-
ates and experienced clinicians.
Compared with traditional ap-
proaches, such as facebow
transfer, Max provides an easy,
efficient and accurate method
for clinical information acqui-
sition that has benefits for both
the clinician and patient. Its ease
of use would perhaps encourage
clinicians to consider utilising
Max as a vehicle for obtaining
crucial clinical data. This would
enable greater overall com-
munication, improved success
in prosthesis fabrication, and a
more satisfying experience for
the patient and clinician.

Editorial note: The list of refer-
ences is available from the pub-
lisher.

About the Author
Dr. Les Kalman is an assistant
professor at the Division of Re-
storative Dentistry and chair of
the Dental Outreach and Com-
munity Service programme at the
Schulich School of Medi-
cine and Dentistry at Western
University in London, Canada.
On the 11th of December, the first CEREC Ortho training took place in the Raffles Hotel (Dubai – U.A.E.) organized by Sirona and conducted by Dr. Darren Cannell and Dr. Andy Stafford (New Castle – U.K.) with around 11 participants representing 4 Dental Centers in Dubai – U.A.E., and 1 Dental Center in Doha – Qatar. The event was a huge success due to the simplicity of the Software, and the existing knowledge the participants had; either with CEREC, or with Invisalign (or both separately). Now, these experiences unite, with Sirona and Invisalign joining efforts and experience to insure a successful and smooth introduction and launch of this Software as one of the first regions World-Wide to officially launch CEREC Ortho Software. The 2nd Ortho Training is scheduled very soon, to welcome existing and new CEREC users from the U.A.E., Kuwait, Bahrain and Saudi Arabia.

Interview with Xavier CherbaVaz: “We strongly believe in education, we are committed to be more present in the region.”

On the 11th of December, the first CEREC Ortho training took place in the Raffles Hotel (Dubai – U.A.E.) organized by Sirona and conducted by Dr. Darren Cannell and Dr. Andy Stafford (New Castle – U.K.).

The special course attracted 11 participants representing 4 Dental Centers in Dubai – U.A.E., and 1 Dental Center in Doha – Qatar.

DTMENA/CAPPmea: Could you tell us where is Ormco today?

Xavier: Ormco is the largest company worldwide in orthodontics at this point, existing for over 50 years. At this moment the company has 2400 and we organize symposium here in Dubai – U.A.E., and 5 December 2015 at the Jumeirah Emirates Towers in Dubai, U.A.E. Dental Tribune Middle East & Africa Edition | January-February 2016

Dr. Darren Cannell General Manager Sirona Dental Systems Trading LLC Dubai – U.A.E.
Office: +97143752255 Web: www.cappmea.com Email: amro.adel@sirona.com

DTMENA/CAPPmea: Do you spend lots of time with the end user?

Xavier: Yes, we travel all the time to reach our customer. We spend a lot of time with the end user. We are the innovating company, we try to launch new product, but also try to simplify the life of our client. Today, the training part is a big part. So we try to spend as much time with them as possible in order to teach them about the new developments.

In the country where we are, orthodontics is a niche market, with limited number of people, they are all specialists. So generally there is in each country corresponding body where we know the orthodontists. Ormco is existing for over 50 years where we have relation where in almost each country someone has a product from us, which is a single spring or bracket or wires, maybe not all the range but some for sure. Orthodontics is a service industry so bring close to the customer is the top priority for us.

Our primary focus is to work with orthodontists, now in some countries there are also cases where GPs are doing orthodontics, like let’s take Spain for example there is no orthodontists, there are mainly dentists. They don’t have a title of orthodontics because it doesn’t exist, in Italy, the specialization exists for only 4 years so for them is also something new so before there were mainly GPs. We are working market by market, France is specialist market, people with strong specialty, scientific bodies so we work with them a lot. We are the company that adapts by markets.

DTMENA/CAPPmea: During last year’s Symposium you shared with us that there are aspirations on organizing education programs. How is this going on?

Xavier: It is going very well at this point. Over the past four years, there were no courses in the region, only few. In 2014 we organized 25 courses we had close to 1500 people coming to our courses, orthodontists. This year we have organized 50 courses and we have 2400 and we organize that all across the countries from Qatar to Egypt to Lebanon. Our aim is to be as close to the costumer as possible, so we organize courses as much as we can to their offices. Here we have selected Dubai as it is convenient to come and this is Symposium.

DTMENA/CAPPmea: Do you already have plans for the next Symposium?

Xavier: Yes, of course. Next year we will have another Symposium in India, it will be the first one, we had one in South Africa last year and this was also the first one. Traditionally, when we enter the market for the first time, we organize Symposium and then a range of courses with different speakers in order to adapt to local needs from basic level to the advanced.

We strongly believe in education, we are committed to be more present in the region. This is what we did in last three years and what we continue to do. Ormco is the largest company worldwide so we have almost every philosophy of product to serve the orthodontics.
Interview with leaders in damon system usage:
Dr. Stuart Frost, Dr. Jeff Kozlowski & Dr. Philippe Van Steenberghe

By DentalTribuneMEA/CAPPmea

DUBAI, UAE: During the 2nd MENA Symposium, many advanced users of Damon System were present to share their experience and challenges with the product. DentalTribuneMEA/CAPPmea had an opportunity to sit with three of them and ask several questions.

During the interviews, the doctors shared what they would like the delegates to remember from their lectures and also how much the treatments methods have changed over the years. Additionally, they shared with us their best career advice they have ever received.

DTMEACAPPmea: Could you tell me a little about your lecture? What was the main objective you would like the delegates to remember?
Dr. Stuart Frost, USA: I think, I wanted the participants to understand that before they ever put the bracket on the tooth they need to visualize in their mind what they want the case to look like in the end. So I shared with them the quote from Helen Keller where she said that “The only thing worse than being blind is having sights but no vision”. It is all about vision and visualizing the case.

DTMEACAPPmea: Your focus is strictly orthodontics. Do you think that the treatment methods have changed a lot over the years?
Dr. Stuart Frost, USA: I have graduated from dental school in 1982, I practiced dentistry for 5 years and then after that I became an orthodontist. So I have been orthodontists since 2000 and in 15 years we have seen a lot of changes in orthodontics, new technologies, new they have been in the practice for 20 years. So, I think it is wrong to forget what you have learned, but I also think it is wrong to not to learn what is new and what is changed. So here are some things that have changed: I don’t use bands on posterior teeth anymore, it is more comfortable for the patient. I will almost always place the upper and the lower braces at the same time when I used to start with the upper braces and months later with the lower braces. It is easier for the patient and also fewer appointments. The use of disarticulations and elastics has helped us to treat the problems.

“Dr. Jeff Kozlowski, USA: During the lecture, I was trying to give practical ideas on how to look at things. I find that sometimes it is hard to make specific rules because every patient is different. One of the main things that we teach with Insignia is about customizing your treatment for each individual patient. What I want people to take away with them is that it is very important to think what specifically you want to accomplish for that individual patient and how you can use your mechanics to make it effective. Simply, be creative and think about good treatment planning and mechanics.”

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Dr. Jeff Kozlowski, USA: During the lecture, I was trying to give practical ideas on how to look at things. I find that sometimes it is hard to make specific rules because every patient is different. One of the main things that we teach with Insignia is about customizing your treatment for each individual patient. What I want people to take away with them is that it is very important to think what specifically you want to accomplish for that individual patient and how you can use your mechanics to make it effective. Simply, be creative and think about good treatment planning and mechanics.

DTMEACAPPmea: Your focus is strictly orthodontics. Do you think that the treatment methods have changed a lot over the years?
Dr. Jeff Kozlowski, USA: It would be wrong of me to say that what we learn in our residencies does not play a part in how I practice today, because it does, but I am very conscious when I hear orthodontists say “That’s how I was trained during my residencies” when brackets and wires that make it more comfortable for the patients and treatment is more simple.

Dr. Philippe Van Steenberghe, Belgium: I wanted to tell delegates that they absolutely need to use elastics as it is part of the magic of the Damon System. The Damon System without the elastics doesn’t work the same way. For the patient it is the winning option because the treatments are faster, a lot easier and the patient can see a rapid progress.

“Dr. Philippe Van Steenberghe: During the lecture, I was trying to tell delegates that they absolutely need to use elastics as it is part of the magic of the Damon System. The Damon System without the elastics doesn’t work the same way.”

DTMEACAPPmea: Your focus is strictly orthodontics. Do you think that the treatment methods have changed a lot over the years?
Dr. Philippe Van Steenberghe, Belgium: I have been orthodontists since 2000 and in 15 years we have seen a lot of changes in orthodontics, new technologies, new structures of the Damon System without the elastics doesn’t work the same way.” - Dr. Philippe Van Steenberghe

”It is all about vision and visualizing the case.” - Dr. Stuart Frost

"The Damon System without the elastics doesn’t work the same way.” - Dr. Philippe Van Steenberghe

Indian Delegates: RIS Members Only
Foreign Delegates Welcome

Dr. Philippe Van Steenberghe, Belgium

Dr. Stuart Frost, USA

Dr. Jeff Kozlowski, USA

Dr. Skander Ellouze

Dr. Gunkeerat Singh

Dr. CS Ramachandra

Understanding Passive Self-Ligation (The Damon System)
• From a spin-off device of mechanics of success through implementation of mechanics to treat even the most difficult cases of orthodontic régimes.
• Evidence-based differences between Damon mechanics and traditional orthodontic mechanics.
• Understanding how to translate prior research to optimize efficiency and predictability of mechanical tools.
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Clinical Evaluation of Self-Ligating Damon System and the Competition
Talking about a product class not seen before in the market. Damon System is the only option to treat in a way that is comfortable for the patient and makes treatment time shorter, easier and faster.

Managing Class III with Damon, The Passive Self-Ligating System
Damon System is the only choice that is the predictable to patient practicing orthodontist. There was a compromise to invent a system which would allow the Damon bracket and reduce the number of wires to the clinic. Self-ligating brackets are currently developed to obtain Safe, Secure, Quick and Efficient Ligatures. It is mainly it was realized that because of the combinations of low friction and high light Damon stepped by a R&D team, one can influence the clinical desirable parameter to an extent which was thought impossible by conventional mechanics. In this presentation, we are aiming to make a point on a new horizon of possibilities associated with Passive Self-Ligating - the Damon System, esp. in Class III cases.

Managing Class III with Damon, The Passive Self-Ligating System

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By DentalTribuneMEA/CAPPmea

DENTAL TRIBUNE Middle East & Africa Edition | January-February 2016

ORTHODOX TRIBUNE

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that used to take us lots of time in less time. I think the orthodontics has changed a lot, I also think there are orthodontists that haven’t changed with the profession and that some programs, training programs haven’t done a good enough job of changing as the profession has changed. In my opinion the good orthodontist would do a combination of re-membering what they have learned at school with learn- ing new things.

Dr. Philippe Van Steenber-ghe, Belgium: Yes, the objec-tives are really not the same, the profession itself become richer. We can obtain every- thing, we have to learn to do it.

DTMEA/CAPPmea: What is usually your audience at such events, are the delegates older or younger? Does it in-fluences your presentation?

Dr. Stuart Frost, USA: I try to find out from whoever is put ting on the course what the au-dience is. Many times the audi ence is a mix of older dentists or orthodontists that has been treating cases for 50 years and all the way down to residents that are still at school. I want to find out what that audience is so I can be able to talk to all ages of orthodontists and help to apply it to them.

Interview with Tarek Haneya:
“...being closer to the customers and dealers is key to success...”

Dubai, UAE: DTMEA / CAPPmea: It was a pleasure to talk to Tarek Haneya, Area Sales Manager - Middle East & Turkey from Ormco.

DTMEA/CAPPmea: Dear Tarek, please be able to interview you. It has been 3 years now since the opening of the Dubai office where you started as the Area Sales Manager for the region Mid-dle East & Turkey. How do you evaluate your activities since 2013?

Tarek Haneya: First of all I’d like to thank you for being here and sharing this successful event with Ormco. Ormco has been growing in the region since we opened Dubai office, we learnt that being closer to the cus tomers and dealers is a key to success, today we are winning more of the market share and we are leading the business in most of the markets in the region.

DTMEA/CAPPmea: One of the reasons for opening in MEA was the need to be pres ent in the day to day business in the region, how do you rate Ormcos’ amongst the competitors in the industry?

Dr. Jeff Kozlowski, USA: I try to teach by my mistakes, I have learned from my own mistakes. I look how I have done the case, there are no bad mistakes just things that you could have done better, could have done differently. So I try to expose those when I pres ent, it helps the audience to see the thought process instead of saying “oh that’s how he did it”, it should be: “that’s how he did it but this how he could have done it or this is how we could have made it better”. That’s gives them discovery you had from learning from your mis take. It shortens their time to learn it because they hear about the mistake before they make it. Maybe the mistake is a wrong word, different appro ach would be better.

Dr. Philippe Van Steenber ghe, Belgium: I always do the same when the audience is mixed. I come back to the ba sics like definitions, calculation and then from theory and slowly to practical. It is like seeing the movie, first time when you see the story and the second time you put more at tention of the roles of the actors and during the third time you see more details. What I mean is that in different presentation people will be attracted by dif ferent parts.

DTMEA/CAPPmea: What is the best career advice you have ever received and would like to share with your colleagues?

Dr. Stuart Frost, USA: I think the best career advice I can share are 3 things. You need to know who you are as a person and then kind of what you practice you want to have and then set goals and where you want to be in five years. I think all that helps us to have a good practice.

Dr. Jeff Kozlowski, USA: My career advice in the orthodon tics is this: You can do be whatever you want to be. If you don’t like orthodontics then do something else. If you love orthodontics and want to do more of it then do more of it.

Find the way to have more pa tients to come to your office. If you want to open an office and work one day a week, you can do it. You can open one day a week, to have two staff mem bers you can take six days off a week and you probably could make enough money to sur vive and be happy and travel. My career advice is, it is not only for the orthodontists, you can be whoever you want to be and it doesn’t matter where you are in your career, you can decide what really makes you happy.

Dr. Philippe Van Steen bergh, Belgium: To take time to learn the basics and not di rectly go to digital orthodontics. It works the same as when learning piano or dance.

DTMEA/CAPPmea: Apart from this bi-annual event, how do you further educate your potential and existing clients?

We are running lots of educa tional courses within the region, for example in 2015 we have organized 30 different courses to educate our end us ers, and we participated in all main congresses within the region in which we also had pre congress type of course along with (lunch and learn) a VIP dedicated courses for our top accounts.

DTMEA/CAPPmea: With the new year just beginning, what are the plans of Ormco in 2016?

In addition, to what I men tioned further, we will contin ue doing our job being closer to customers, with special focus on selected markets where we are planning to be presented much stronger than 2015. For example India will be an area of focus and we will have our 1st ORMCO Symposium in India in April 2016 and many more regions with such exciting projects and events.

DTMEA/CAPPmea: Can the business be any different?

I would like to thank you again for being here with us. For all valued readers and followers: stay tuned with us, you are the biggest part of our success.

I would also like to mention the Ormco mission statement that guides us in our daily work (Creating beautiful smiles through leading innovation and passionate collaboration with our customers).
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Tooth wear, the Dahl principle, the Inman Aligner and a real option for interceptive dentistry

Dr. Tif Qureshi discusses a different way of looking at preventative occlusal treatment through alignment and bonding

By Dr. Tif Qureshi, UK

In my opinion, simple anterior orthodontics has been overlooked for many years as potentially one of the most important and useful areas in dentistry. This can be highlighted by the suggestion that many dentists simply do not identify or recognize that the increased crowding in the anterior region over time can lead to, or is linked to, a collapse of lower inter-canine width that can then lead to loss of canine guidance and the development of group function with the potential issues that can sometimes cause.

This loss of guidance can happen in a relatively short period of time as the canines lose their protective function once they tip forwards. It is likely a combination of factors lead to this but there seems to be very little data collected, however this is a phenomenon that is clearly visible when examining many patients every single day.

If we think forward when looking at a case such as that featured in Figure 1, several problems could start to potentially develop over time.

Firstly, the crowding could worsen, leading to increased risk of periodontal disease. The likelihood of differential tooth wear is also increased as the teeth crowd further. Areas already worn down are more likely to wear faster because of the softer nature of the sub-surface enamel.

Exposed dentine is also likely to stain more as open tubules are likely to allow ingrowth of particles that over time, commonly cause intrinsic staining. If the canines continue to tip forwards, there will be a loss of canine guidance that might well cause the transition to group function which could become traumatic if not monitored (and possibly treated). Many patients left untreated eventually need large amounts of work, up to and including full mouth dentistry. So if patients are in a situation where lower crowding is starting or has started, surely it makes sense to align the lower teeth, upright the canines and then apply retention to ensure this is less likely to relapse (Figures 2-5). Figures 4 and 5 show another case in alignment and with an a resulting increase of inter-canine width.

If the edges are already worn, it is also possible to restore the tips to seal the exposed dentine and improve aesthetics. In cases with more extensive wear, this can be combined with the Dahl principle where space can be reclaimed by opening the anterior bite, disengaging the posterior teeth and allowing the posteriors to over erupt and the anterior to intrude a little.

The Dahl principle

ModifiedLucia jigs have been used as deprogrammers to be the mandible find centric relation (CR). Direct composites can also be used as an anterior deprogrammer. Resin composites - because of their resilience and ease of manipulation even though their final thickness are - represent an ideal material to restore the palatal surfaces and the worn lower anterior incisal and canine edges too.

Dahl (1975) suggested creating space to treat localised anterior tooth wear by separating the posterior teeth using an anterior bite plane for 4-6 months.2 A combination of passive eruption of the posterior teeth and intrusion of the anterior teeth allow the re-establishment of posterior occlusion while holding the anterior space.3 Dahl actually uses, they can wear but to separate the posterior teeth, but we can now achieve the result with a hard or adhesive anterior direct composites. By identifying the difference between maximum interproximal position and CR, using pressure to gently guide the mandible, the position of the direct composite can be set slightly posterior to maximum interproximal position. This will create anterior contact on the incisal edge build-ups and possibly create pre-retention on the posterior teeth. These premature contacts can be equilibrated to improve the fit of the denture, but the residual space will eventually close through passive eruption over a few months. I have used this principle for over 15 years on over 500 patients. The important part of the Dahl principle is not to use it on ag gradients worn full mouth cases.

During the “cosmetic boom” years, virtually every single veneer case I placed on the upper teeth had composite tip build-ups on six to eight lower anterior teeth to treat any wear and re-establish guidance before fitting the upper ceramics. I used up to 2.5mm of composite anteriorly and this seemed to cause a combination of extra- duction and possibly intrusion anteriorly. I rarely ever placed ceramic directly on the teeth I wanted to improve aesthetics and function with non-invasive composites I was able to place due to the usual life span for these was about five to eight years and most patients were totally satisfied with this when compared against tooth preparation and the cost of veneers.

It is important to emphasize that the Dahl principle is really only reliable and useful when there is anterior tooth wear. For large posterior tooth wear cases, the patient required the whole vertical to be opened and all teeth treated, but for many patients starting to develop wear in the anterior region (which can lead to potential crowding), this is a very interesting interceptive treatment and the question has to be why this is not offered a lot more.

The following case highlights its potential use. In the next article, we will address a case with the loss of inter-canine width.

Case report

A 45-year-old female (Patient C) presented complaining of “crooked front teeth”. Her main concern was her lower teeth. She asked for them to be “straighter”. She also complained of jaw joint pain and a “clicking” jaw.

On examination, it was clear that there was mild to moderate crowding of the lower anterior spaces. Space calculation showed 3.5mm of crowding, which is a substantial tooth movement but needed to be allowed to allow the teeth to align. Space calculations can be carried out by Handenich technique, manually or using a digital space calculator, such as Spacesize. These space calculators are an excellent way for clinicians to visualise how much actual crowding there is and exactly where the teeth need to go as this becomes a perfect prescription for the lab setup.

The width of only one tooth needs to be measured and the program will use this for calibration. The dentist then simply places credits on the teeth done by a single click that measures the mesial-distal width of each tooth being moved (known as the required space, or “the teeth”) and then the program allows a curve to be intuitively set up that follows the line of the ideal curve (known as the available curve “the curve”). The curve needs to be set through the landmarks - meaning teeth that are well-placed occlusally and aesthetically. This will prevent the teeth from being flared out and ensure correct occlusal control. The program then does the sums and subtracts the required space from the available space. This figure is the amount of crowding present and hence the amount of space that might need to be opened.

In this case, there was clearly also a deep bite emerging and reducing anterior and canine guidance. On discussion with the patient, close anterior photos were examined. It was pointed out that the anterior teeth were all at different heights. Often before alignment, patients do not see this. Their eyes are focused on the crowding and they do not realize that the irregular outline is equally due to differential wear. This discussion is very important because the anterior extrusion (IPR), expansion or dominant effect.

In my experience, most adults have some degree of differential wear. After alignment, I rarely grind teeth to level them off as this is clearly destructive and will only lead to reducing guidance and increasing posterior interferences over time. Instead, I nearly always build up the bite anteriorly with composite and induce the Dahl effect. Those treating adults with orthodontics must be able to re-build the tooth structure or co-plan with a restorative dentist to ensure the patient’s guidance is protected.

The patient wanted an Inman Aligner as she wanted her teeth to align quickly and also to be able to see the improvement in appearance for periods at work. We also quoted for eight composite tips to improve the aesthetics, treat the deep bite and induce the Dahl effect to establish better ante-

Figure 1. Patient A before treatment showing inter-canine collapse and crowding.
Figure 2. Immediately after alignment and bonding.
Figure 3. Six years with retention post-treatment.
Figure 4. Patient B before treatment.
Figure 5. Following alignment and increase of inter-canine width.
Figure 6. Patient C in occlusion with deep bite. Note the posterior contacts.
Figure 7. Patient in occlusion with Dahl composite added to lower anterior teeth. Note posterior contacts in 3 months.
Figure 8. Occlusal view before.

> Page 43
ior and canine guidance.

The Treatment

Her Inman Aligner treatment took 10 weeks with three sessions of IPR and no more than 8.5mm of adjustment per appointment. This staged IPR approach is far safer than performing all of it in one go, as often less IPR is needed than expected. It avoids excess space formation and the destruction of contact point anatomy, which is often seen when IPR is done all at once. Anatomically respectful IPR should be performed by anyone creating space to move teeth. The patient was also instructed to remove the aligner for at least four hours a day.

At seven weeks, the patient started whitening with Zoom! DayWhite (Philips Oral Healthcare) when not wearing the aligner. Whitening can be highly effective if the right instructions are given to the patient. Dry teeth will whiten better, so we not routinely tell patients to swallow, then suck to remove the aligner for at least one hour. This is something I have done for the last couple of years and it has made whitening far more predictable and the results have been consistently better.

A short-acting hydrogen peroxide gel that requires only 45-minute application each day is ideal. With sealed rubber trays, it does not matter if the day is ideal. With sealed rubber oxide gel that requires only a short-acting hydrogen peroxide gel, it has made whitening far more straightforward.

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Note how upper alignment has improved on its own by just aligning the lowers correctly.

Personally, I have always preferred to build free-hand. I try to visualize the original anatomy of the teeth before they were worn. The new initial contact position is posterior to maximum intercusal position. Very minimal feather preps were used to literally just roughen the bonding surface.

The teeth were then etched, bonded and an initial outline of the load bearing areas were built up with a nano-hybrid composite.

A dentine shade, then an incisal enamel shade, is layered over. The composite is then polished with fine bars and smoothed with Soflex discs and Pogo rubbers.

Eight composites were placed in this way. They were built up using different amounts but in a way that aligned the incisal outline and that opened the bite in the anterior teeth. It was important that their contacts are fairly even but with more load on the canine and premolar and a long centric contact on the incisors. At this point, the patient’s posterior teeth were discarded and a visible space was present.

The patient continued to wear her Inman Aligner and an impression was taken for a jig that would hold a stainless steel retrainer to be fitted next time.

A bonded retainer was fitted to the lingual surface from canine to canine and the patient was instructed on the use of interdental brushes.

The results

The patient was seen after 5 weeks to ensure there were no premature posterior contacts. On return after a few months (Figure 6), it was noted that the posterior teeth were now in full contact again. Lateral excursion showed good predictable guidance and anterior guidance was also now completely dischelating the posterior.

Whether this has happened due to passive eruption, anterior intrusion or even some repositioning of the condyle can be argued. The point is that the patient’s deep bite was reduced, her occlusal symptoms disappeared and the aesthetics had massively improved. She had improved canine and anterior guidance and, one year on, she has had no issues, chips or even stains.

A potentially difficult treat-ment plan turned into a simple non-invasive technique and the photographs show a pleasing result. The patient reported an improvement in symptoms. However, we always give the patient a bite guard to wear in case of periods of bruxism.

Conclusion

We have all read articles showing cases like this that eventually end up preppe heavily for ceramic restorations. Patient like this left untreated long term will become more worn and eventually might need full mouth or extensive treatments. While I certainly cannot profess the Dahl principle to be the answer to all occlusally compromised cases, I suspect that with the recent trend towards non-invasive treatments and rapidly rising litigation, this kind of less destructive solution might become more popular.

The key is to pick up on likely candidates early and treat them with alignment and bonding or just bonding to help prevent wear in later life. In my opinion, if patients know the benefits and the problems they could save themselves from, there would be millions of potential candidates for this kind of treatment.

Editorial note:
The full list of references is available from the publisher.

About the Author

Dr. Tif Qureshi is in private practice in the UK and is the Immediate Past President of the British Academy of Cosmetic Dentistry. He leads the Global Inman Aligner Training Program.

Inman Aligner Certification Course

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Dr. Gun Norell, Sweden

26 February 2016

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- The working of the Inman aligner
- Arch evaluation, space calculation, inter-proximal reduction, expansion and retention
- Case presentations: A large portfolio of cases will be shown and will be discussed
- Inman Aligner before and after photographs and clinical evaluations
- Legal issues and indemnity

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**Team Building**

By Dr. Ehab Heikal, Egypt

Team building begins with leadership. As the clinic owner, the dentist is viewed by the team as the leader. The team looks to the dentist as a role model in every area, including quality care of patients, attitude, customer service and desire for change. The dentist sets the tone for the clinic, whether by choice or not. Effective leaders give their team members the tools and opportunities necessary to enhance their performance.

**TEAM BUILDING STEP BY STEP**

In terms of building a superior team, there are several things you can do that can pay back now and in the future.

**Monthly staff meetings**

Monthly staff meetings are a critical element of team building. These should be approximately two hours in length and include an agenda that is followed strictly. Areas to be discussed should include clinical goals, customer service, office improvements and necessary training. The dentist should be particularly attentive to comments made at the meeting by staff members, as the dentist will learn a number of things that often are seen only by the team. For example, many patients share information at the front desk that they do not share with the dentist or the clinical team.

It must be made clear that full participation by all team members is necessary for successful staff meetings. The dentist should ask team members for their opinions, encourage them to participate and make it clear that the meeting is about the entire office. To accomplish this, a “safe” environment must be established so that staff members participate fully. Starting each meeting with team members and reporting something that has happened in the office opens everyone’s mind to better ideas and positive interactions.

**Daily meetings**

Every clinic should have 10-minute morning meetings. These should center primarily on that specific day. The benefit of morning meetings is that they organize the day, send a clear message to the team that this is an organized office, create an opportunity to discuss any potential problems and provide a calm and focused beginning to each day. Even the best-run dental offices at times tend to be hectic, and this should be the 10 minutes during which everyone is able to communicate. Finally, since they focus only on that particular day, the morning meetings are not run by the dentist but by the scheduling coordinator.

**Job descriptions**

The dentist should establish a job description for every team member in the practice. The dentist should take time to develop these carefully or to identify another source that can help create accurate job descriptions. A job description is not as simple as a mere statement of what the candidate is to do. It also should include a philosophy statement; a list of required skills; a list of other job activities; and a list of responsibilities, accountabilities and other information about how job performance will be evaluated.

When each team member understands his or her job description, he or she has the opportunity to live up to it. A practice that never clearly identifies what the job is and what is required of the team member in that position will have a higher level of conflict. Owing to the hectic pace of most dental clinics, new employees often must learn as they go, which can lead to misunderstanding and poor performance if the right systems are not in place.

**Performance reviews**

Every clinic should have regular performance reviews for each dental team member. I suggest that these occur twice a year. Performance reviews should reflect the job description and cover four key topics:

- What has gone right in the last six months?
- What does the team member need to improve during the next six months?
- How can the office perform better overall?
- How can the dentist or office manager do a better job?

These four topics will focus the discussion on the concept of continuous cyclical improvement. It is identified in the management science known as “total quality management.” The goal is not to criticize the team member but rather to focus on how the team member, office manager and dentist all can do a better job in working together. This approach focuses on how to build a better team rather than strictly on the team member. If the team member is not doing an acceptable job, the dentist or office manager must step in and work with the person to improve performance.

When each team member understands his or her job description, he or she has the opportunity to live up to it.

**Social activity**

Another way to build a superior team is to have at least one quarterly social activity outside the office for the entire team. This is not a reward for excellent performance, but a team-building opportunity. For that reason, continuing education (though important) would not count as the social, out-of-office activity. Ideas for this activity include a dinner with the entire team, a trip to a sporting event or an all-day meeting at a separate location to talk about the future of the clinic. These types of activities provide an excellent opportunity for team members to step out of their office roles and work together. It has been observed that practices that do this tend to be higher-performing offices.

Dentists often have little time to focus on team building during productive patient days. Communication and encouragement are keys to building a strong team. By taking the steps described above, dentists can eliminate many gray areas that can lead to misinterpretation and demoralizing team building. The result is a happy dentist and an even happier office team focused on the goals and direction necessary for clinic success.
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**Arrangements for IDS 2017 are well underway**

By Dental Tribune International

**Cologne, Germany:** From 21 to 25 March 2017, the 37th International Dental Show (IDS) will be held in Cologne. After a record result last year, preparations for the world’s largest and most important trade fair for the dental industry are already in full swing again. The organisers have announced that the application deadline for exhibitors has been moved forward to 31 March 2016, as hall planning will begin in April.

Over 2,200 companies are expected for next year’s IDS, with strong international representation. Organiser Koelnmesse has already received many inquiries from potential new exhibitors from abroad.

In 2015, 2,199 exhibitors from 59 countries and around 150,000 trade visitors from 152 countries attended the show. According to a representative survey, about 90 per cent of the exhibitors from IDS 2015 are planning to participate at IDS 2017,” said Dr Martin Rickert, Chairman of the Association of German Dental Manufacturers, which co-organises the event.

Koelnmesse announced further results of the independent exhibitor and visitor survey in 2015, according to which 99 per cent of the participating German suppliers had reached their key customers in their domestic market and 82 per cent their key accounts from abroad. Of the foreign exhibitors, 98 per cent had made contact with their international customers and 95 per cent with their German key accounts. About 95 per cent of the exhibitors established new contacts with potential German buyers during the show, while 70 per cent of the German and 98 per cent of the foreign suppliers acquired new international contacts.

Moreover, more than three-quarters of visitors interviewed indicated their intention to visit the 2017 IDS. About 80 per cent of German and foreign attendees rated the exhibition as either very good or good, mainly owing to the comprehensive product range and numerous new products showcased. Overall, 95 per cent of the visitors surveyed would recommend visiting IDS to business partners.

As in previous years, Dental Tribune International (DTI) will be keeping its readers around the globe up to date by providing the latest news from the show. In addition to its IDS today newspaper, which will be published in collaboration with DTI’s German affiliate OEMUS MEDIA, regular e-newsletters will be sent out during the five-day show to ensure comprehensive coverage. Exhibitors interested in print and online advertising for IDS 2017 may consult the DTI Media Kit or contact the DTI sales team directly for special offers.
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Mixing work with pleasure - the SWISS DENTAL EDUCATION WEEK makes it possible

By MediAccess AG

MediAccess AG invites you and your family from July 10 to July 14, 2016 to Zurich, Switzerland's international metropolis, to participate in a unique training event exclusively designed for dentists from the Arab world. Attendees can look forward to a selected range of prominent and engaging speakers addressing topics such as aesthetic restoration, endodontic treatment methods as well as CEREC, the CAD/CAM system. The SWISS DENTAL EDUCATION WEEK offers you a one-of-a-kind opportunity to broaden your professional horizon while discovering Switzerland's many and varied attractions. The course venue, the Zurich Marriott Hotel, is situated in the heart of the city of Zurich and offers an array of amenities such as 24-hour room service and professional catering provided by Mangosteen Catering.

MediAccess AG has been providing internationally recognized and certified dental training programs for more than a decade. The company's wealth of experience guarantees high quality specialist events in great ambience for participants to relax and network with one another, gain expert knowledge and enjoy the event's proceedings. As a practicing dentist, company owner and Swiss native Dr. Nils Leuzinger, knows the issues at the heart of the profession. This enables him to closely respond to emerging trends and choose current issues as well as the profession's finest speakers for the events' selected programs.

Situated in the heart of Europe, the small and yet immensely diverse country of Switzerland offers breathtaking sceneries, a well-established and highly efficient infrastructure as well as a broad range of cultural activities that attracts millions of tourists every year. Zurich in particular, as Switzerland's largest city and the country's most important economic centre, draws an ever increasing number of visitors from all over the world. The city's sights and attractions, such as the Old Town, Grossmünster church and Lake Zurich are all centrally located and easy to reach.

Based on current World Vision statistics, 4.3 million Syrians are refugees and another 8.6 million have been displaced within Syria. Nearly half of both groups are children. Most of the refugees are in the Middle East, Turkey, Lebanon, Jordan, Iraq and Egypt. Slightly more than 10 percent of refugees have traveled to Europe. Children affected by the Syrian conflict are at risk of becoming ill or malnourished, or being abused or exploited.

In December, Henry Schein also announced a donation of $250,000 in health care products over the next two years to the America’s Dentists Care Foundation. Through its Mission of Mercy clinics, the foundation provides free oral health care to underserved American citizens. Henry Schein's donation is to include examination gloves, surgical masks, gowns and medical gauze.

Henry Schein helps refugees

By Dental Tribune International

Elvillle, N.Y., USA: Global health care products and service giant Henry Schein has pledged to donate products worth $550,000 to World Vision for care of refugees living in Europe and the Middle East. The nonprofit humanitarian organization will receive products for its local partners providing care in refugee camps or communities with large populations of displaced people. Over the next three years, Henry Schein will provide gloves, masks, gowns and gauze for approximately 7,500 people.

World Vision has been one of Henry Schein's strategic non-governmental organization partners since 2014. During this time, the company has donated more than $1 million in health care supplies to support World Vision's relief efforts in the Democratic Republic of the Congo, Ghana, Somalia, Swaziland and Zimbabwe. The new initiative forms part of the company’s global social responsibility program, called Henry Schein Cares.

In December, Henry Schein also announced a donation of $250,000 in health care products over the next two years to the America’s Dentists Care Foundation. Through its Mission of Mercy clinics, the foundation provides free oral health care to underserved American citizens. Henry Schein's donation is to include examination gloves, surgical masks, gowns and medical gauze.

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INTERIOR DESIGN
In August 2015, Oral-B held its first MEA Dental Consensus. The unique event included a panel of MEA leading dental academics and gathered for a two-day scientific consensus based on the Delphi methodology of achieving unanimity. The research proved several interesting factors with a highlight on evidence suggesting that oscillating-rotating power brushes improve oral health by reducing plaque and gingivitis in the short-term and long-term. As a parallel event, Oral-B further held the second annual Emirates Flediatric Dental Club meeting facilitating a standing ground for the UAE’s pediatricians to develop further the dental profession in the region. Dr. Kazi on the EPDC meeting, “Looking at the current dental challenges of our region, pediatric dentistry needs development and stimulation starting at university level. We are proud to be able to contribute through the support we offer yearly to the EPDC - a great initiative for the region.”

Throughout the fourth quarter of 2015, Oral-B actively participated in the Beirut International Dental Meeting organized by LDA in Lebanon with two lectures by current president of the LDA Prof. Carlos Khairallah ‘A Systematic Approach for Long Lasting Veneers’, Prof. Mourir Doumm’ Panorama sur 25 ans de sante dentaire publique au Liban’ and a workshop on prevention using power brushes by Professor Khaled Balho. The education then continued at the 7th Dental Facial Cosmetic International Conference organized by CAPPMEA (in cooperation with EMA, AID, IAS SDS and LDA) with a module on Preventive Dentistry and Aesthetics with lectures given by Dr. Samar Mashabi, KSA and Dr. Asim Al Ansari, KSA on ‘Breakthrough Strategies for Preventing Early Childhood Caries’ and ‘Evidence-Based Dentistry: is it for me?’ respectively.

Dr. Kazi further comments “Prevention and an evidence based approach to dentistry is key for performing successful and long-term dentistry. It is always better to keep your teeth than having them replaced. No matter how good any treatment is, it is never like your own teeth and a preventive approach towards dentistry is the best way of keeping your own teeth in your mouth for as long as possible”

December 11-14th was yet another milestone in the activities of Oral-B in the region. The Up To Date scientific exchange seminars took place for a four day road show through the cities of Jeddah, Riyadh, and Dammam in Saudi Arabia as well as Abu Dhabi in the UAE. With a main focus on prevention and oral health maintenance several keynote speakers lectured including Prof. Avijit Banerjee, UK (Kings College London), Dr. Hassan Halkwani, KSA (Riyadh Dental College) and Prof. Khaled Balho, KSA (King Abdul Aziz University Jeddah).

With 2015 just behind us, Oral-B already has another education event planned at the upcoming UAE International Dental Conference & Arab Dental Exhibition - AEEDC organized by Index Conference & Exhibitions, where the Oral-B Symposium will take place with the theme of “The Caries Journey; to Identify, Restore & Prevent” featuring Asst. Prof. Elias Berdoueses, UAE, Prof. Colin Murray, Prof. Constantine Oulis, Greece, UAE, Prof. Dimitrios Tzakis, UAE, Dr. Ajay Juneja, UAE, Prof. Crawford Bain, UAE. This will take place in Conference Hall-C from 9am-3.45pm on the 3rd of February 2016.

Further in 2016, the Oral-B has an extensive line up of educational events coming up which will soon be announced for the region on the website: www.cappmea.com/uptodate
SWISS DENTAL EDUCATION WEEK –
An update on modern dentistry

10TH OF JULY –
14TH OF JULY 2016

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Switzerland-8808 Pfäffikon
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Dear Colleagues,

On behalf of the Conference Organizing Committee, I am honored and delighted to welcome you to the 16th King Saud University International Dental Conference, the 27th for the Saudi Dental Society to be held on 5-7 January 2016 in Riyadh International Convention and Exhibition Center, in Riyadh, Kingdom of Saudi Arabia. I believe we have chosen a venue that guarantees a successful technical conference amid the culture and scenery of Riyadh. This year’s conference theme is “Regenerative Dentistry” which will broadly cover all dental disciplines from fundamental research to visionary applications that will highlight global dental scientific interactions and collaborations.

As always, this Conference included a diversity of topics presented by authors from different institutions and countries. This brings a plurality of interests and perspectives to a single location, therefore, I encourage you to take advantage of this great opportunity to contribute, through presentations, discussions and interactions, to the development of new innovative ideas in the dental practice, research and applied technology.

We are pleased to have invited eminent speakers worldwide to share their expertise in their respective areas of specialization, i.e. scientific and poster presentations whereby submitted abstracts were strictly screened and reviewed by the Scientific Abstract Review Committee from over 100 abstracts to assure that the meeting will be a major scientific event. In order to guarantee the quality of future research and new practical applications, an open discussion and hands-on workshops between experienced colleagues, young dentists and professionals is highly encouraged.

We welcome you all to an inspiring conference experience and your interaction will promote a creative exchange of ideas that is worth rewarding.

I look forward to a pleasant and memorable collaboration for the 16th King Saud University International Dental Conference, the 27th for the Saudi Dental Society in the city of Riyadh, Kingdom of Saudi Arabia.

Dr. Mohammad I. Al-Obaida
CO-Chairman, Organizing Committee
President The Saudi Dental Society

---

A pleasure to welcome you to The Kingdom

“This Conference included a diversity of topics presented by authors from different institutions and countries.”

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SPEAKERS LINE UP

Prof. Tota Shimizu DDS
Dr. Paul Sharpe
Prof. Gianluca Gambarini
Prof. George Huang
Dr. Marco Martignoni
Dr. Mitsuhiro Tsukiboshi DDS PhD
Dr. Faleh Tamimi Marino BDS PhD
Prof. Saad S. Al-Nazhan PhD
Dr. Mohamad A. Alshehri
Prof. Thakib A. Al Shalan
Dr. Mohammed A. Alshehri
Chairman, Organizing Committee
Chairman, Scientific Committee
Chairman - Registration Committee
Chairman, Exhibition Committee
Chairman, Accommodation and Food Committee
Chairman, Press Committee

ORGANIZING COMMITTEES

Dr. Hamdan S. Alghamdi
Chairman, Audio Visual Committee

Ms. Amal A. Al-Dreess
Conference Secretary

Ms. Emma Samson-Isom
Secretary, Scientific Committee

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<td>Characteristics of stem cells and dental stem cells</td>
<td>Biofilm control at the gingival frontier: new data</td>
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<td>PROF. GEORGE T.J. HUANG</td>
<td>PROF. SEBASTIAN CIANCIO</td>
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<td>2:20 - 3:10</td>
<td>How to avoid complications in bone regeneration</td>
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<td>DR. FALEH TAMIMI MARINO</td>
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<td>3:10 - 3:30</td>
<td>PRAYER / BREAK</td>
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<td>10:00 - 11:00</td>
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<td>Bio-teeth: the generation of natural replacement teeth</td>
<td>Stem Cells: Translation in Clinical Dentistry</td>
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<td>PROF. PAUL SHARPE</td>
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<td>DR. MARCO MARTIGNONI</td>
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<td>8:30 – 9:00</td>
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<td>Periodontal Regeneration</td>
<td>Dental Mesenchymal Stem Cells in Tooth Growth and Repair</td>
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<tr>
<td>9:00 - 10:00</td>
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<td>Bone Augmentation around Implants: When, How and What?</td>
<td>Stem Cells and Tissue Engineering in Endodontics</td>
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<tr>
<td>DR. JAN WILLEM HOEKSTRA</td>
<td>PROF. GEORGE T.J. HUANG</td>
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<td>10:00 - 11:00</td>
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<td>Surface Modifications for Titanium Bone Implants</td>
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<td>DR. BART VAN OIRSCHOT</td>
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<td>11:00 - 12:00</td>
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<tr>
<td>3D Endodontics: Concepts and Techniques</td>
<td>Effects of Various Thicknesses on Load to Fracture of Posterior CAD/CAM Lithium Disilicate Glass Ceramic Crowns</td>
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<td>PROF. GIHALUCA GAMBARINI</td>
<td>DR. NADIA AL-ANGARI</td>
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<td>Soft Tissue Grafting to Improve Implant Esthetics</td>
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<td>830 - 9:00</td>
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<td>Decayed 1st Permanent Molar- The Role of the Pediatric Dentist in Multidisciplinary Management</td>
<td>Cone Beam CT Based Dentistry</td>
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<td>DR. HUDA O.A. AL-THABIT</td>
<td>DR. MITSUHIRO TSUKIBOSHI</td>
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<tr>
<td>Prosthetic and Digital Dentistry for Immediate Anterior Implants: Comprehensive Esthetic Management Solutions</td>
<td>&quot;Esthetic Endodontics&quot; Evidence-Based Protocol to Follow 3-Dimensional Canal Anatomy</td>
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<td>DR. ALESSANDRO AGNINI</td>
<td>DR. TOTA SHIMIZU</td>
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<td>Management of Simple and Complex Implant Cases in the Light of the New Technologies and New Materials</td>
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<td>DR. ANDREA MASTROROSAS AGNINI</td>
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<td>11:00 - 12:00</td>
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<td>&quot;To Bone or not to Bone&quot; The Role of Bone Grafting in the Endodontic Surgery</td>
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<td>DR. TOTA SHIMIZU</td>
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<td>12:00 – 12:30</td>
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<td>DISTRIBUTION OF AWARDS</td>
<td>Psychosocial Work Environment and Oral Health in the English Longitudinal Study of Ageing (ELSA)</td>
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<td>DR. ESRAA T. AL DALOOJ</td>
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<td>Oral Lesions in Patients with Cutaneous Psoriasis and their Co-relation with their Blood Group in Aseer Region &quot;A Controlled Study&quot;</td>
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<td>DR. NADA M. AL HUSSAIN</td>
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<td>PRAYER / LUNCH</td>
<td>Protocol of Dealing with Patients in Dental Clinics</td>
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<td>DR. KAISAR E. KABBACH</td>
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KING SAUD UNIVERSITY 16th INTERNATIONAL DENTAL CONFERENCE
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CAPP and its partners redefine the dental world

By Dental Tribune MEA | CAPPmea

Dubai, UAE - Last year marked the 10th year anniversary of Centre for Advanced Professional Practices (CAPP). In 2015, CAPP has enjoyed its most successful year of its existence starting 11 years ago - achieved via the hard work of its employees and a true customer focused approach. CAPP is proud to have served the dental community of thousands: from dentists, dental technicians, dental assistants, to corporate businessnes, entrepreneurs and governmental organizations. In 2015, CAPP organized and managed three major events which were rated with an average score of 88% by the participants.

10th CAD/CAM & Digital Dentistry Int'l Conference

The 10th edition of the CAD/CAM & Digital Dentistry International Conference took place in Jumeirah Beach Hotel on the 08-09 May 2015. It once again claimed the space as the most significant scientific conference in the Middle East. The event was visited by 1,825 (+15% vs 2014) elite dental professionals and industry players coming from 22 countries, 17 international speakers, 59 sponsors and exhibitors brought the latest developments from the dental industry to the participants. The scientific program provided the international multitude of dentists interesting up-to-date presentations with the latest opinions, techniques, trends and developments from renowned key opinion leaders. The meeting, with its friendly atmosphere provided an excellent networking place.

Additionally, on the eve of the 10th CAD/CAM & Digital Dentistry Int'l Conference, CAPP celebrated its 10 year anniversary by awarding 28 dental professionals for their contributions to Digital Dentistry since the first event in 2005 as part of the Excellence Awards 2015. The celebrations took place under the majestic skyline of Burj Al Arab and the friends, family and industry players coming from 22 countries. 17 international Dental Professionals and exhibitors completely filled the venue.

The 11th edition of the conference will take place in Jumeirah Beach Hotel on the 06-07 May 2016.

3rd Asia Pacific, CAD/CAM & Digital Dentistry Int'l Conference

The 3rd edition of the Asia-Pacific, CAD/CAM & Digital Dentistry International Conference was a true success. It took place at the Suntec, Singapore on the 04 and 05 of December 2015. Positive feedback was received from over 600 (+15% vs 2013) dental professionals and industry leaders who attended the conference. Additionally, held during the conference Dental Technicians and Lab Owners.

The event showcased several innovating novel products and techniques targeting the improvement of the dental technician role.

7th Dental Facial Cosmetic Int'l Conference

The 7th Dental Facial Cosmetic International Conference 2015 in Dubai (15-14 November 2015) was the largest scientific conference ever to be organized by CAPP - it was visited by a total of 2,465 participants (+61% vs 2014) who listened and proactively interacted with the 55 speakers coming from USA, Saudi Arabia, India, Brazil, UK, Switzerland, Chile, Greece, Italy, UAE, Denmark, Germany, Singapore, South Africa and Costa Rica. The venue was as usual the magnificent Jumeirah Beach Hotel. The 45 sponsors and exhibitors completely filled in the Convention Center and they showed the dental professionals the latest in the dental world. The feedback received was excellent and a quote received from one of the delegates sums it all up: “Totally worth coming”!

Several significant events took place during the five days of Continuing Dental Education including the 4th American Academy of Implant Dentistry Global Conference, Inman Aligner Symposium, 3rd Dental Hygienist Day, 19 Hands-On Courses, Election of Emirates Dental Society, 25th Annual Meeting of ICD and the Excellence awards 2015 in Aesthetic Dentistry.

During the conference CAPP by organizing the Excellence Awards 2015 in Aesthetic Dentistry brought together the regions very best and most committed dental clinicians in Aesthetics Dentistry. The award has been designed to recognize the winners for their outstanding commitment to aesthetic dentistry and their ongoing pledge to provide their patients with the highest possible healthcare.

CAPP had the honour to host Operation Smile UAE (OSUAE). OSUAE is an international children’s charity committed to saving lives and allowing children with clefts to smile properly for the first time. The charity does this by providing free surgeries and after care to those affected. Since the founding in 1982 the OSUAE has provided more than 200,000 free surgeries to children and young adults around the world and over 2 million comprehensive healthcare evaluations. The organization recruited many new medical volunteers.

The 8th Dental Facial Cosmetic International Conference will take place in Jumeirah Beach Hotel on the 04-05 November 2016.
Delegates enjoying the splendid lunch at Jumeirah Beach Hotel

The Scientific Session at the 10th CAD/CAM & Digital Dentistry in Jumeirah Beach Hotel Dubai

The winners of the Excellence Awards 2015 in Aesthetic Dentistry

Dr. Iyer Shankar, AAID, USA

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Hands-on courses

Dr. M. Al-Obaida, President of Saudi Dental Society greeting Prof. Elie Maalouf, President of Lebanese Dental Society at 7th DFCIC

Dr. Alaha Sulim Alaswaidi, President of Emirates Dental Society, MOH, UAE

3M - Gold Sponsor

The winners of the Excellence Awards 2015 in Digital Dentistry

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10th CAD/CAM 7th DFCIC

CAPP thanks all sponsors, delegates, speakers & exhibitors!

SPONSORS
ABOUT CAPP

Centre for Advanced Professional Practices (CAPP) is an American Dental Association (ADA) C.E.R.P Recognized Provider, specializing in CME and CPD dental programs – conferences, hands-on courses, workshops and self-instruction programs. For the past 11 years CAPP has facilitated over 590 CME programs educating over 59,000 international participants. Ever since 2005 CAPP has experienced year-on-year growth and in 2015 alone CAPP educated nearly 15,000 international dental professionals.

With the opening of CAPP Asia in 2012, the company’s reach has expanded to the Asia-Pacific region and beyond.

In 2012, CAPP joined the global family of 96 publishers by becoming the proud owner of the Dental Tribune Middle East & Africa edition, and has since been delivering six print editions annually to over 20,000 dental professionals (120,000 copies annually) in the Middle East and Africa region and delivers a newsletters to over 41,000 active subscribers every two weeks (approx. 984,000 e-mail annually). Through its international website, the latest industry news reaches the largest dental community worldwide—an audience of over 1,000,000 dental professionals.

WHAT DOES CAPP DO

CONFERENCES

• CAD/CAM & Digital Dentistry Int’l Conference | Dubai & Singapore
• Dental-Facial Cosmetic Int’l Conference
• Dental Technicians Int’l Meeting
• Dental Hygienist Seminar
• Various Dentistry Awards

CONTINUING DENTAL EDUCATION

CAPP offers over 60 hands-on courses per year across a broad spectrum of subjects. Classes vary in length from one-day seminars and short courses to weekly classes and degree programmes. All programs are certified from the authorized accreditation entities.

DENTAL TRIBUNE MEA

Dental Tribune Middle East & Africa is part of the globally renowned Dental Tribune International Publishing Group – a combined network including more than 100 trade publications that reach more than 1,000,000 dental professionals in more than 98 countries in 29 languages. The unique publishing platform combines print and online media, offering a multitude of marketing channels to reach the largest dental community worldwide.

mCME SELF INSTRUCTION PROGRAM

CAPP together with Dental Tribune provides the opportunity with its mCME - Self Instruction Program, a quick and simple way to meet your continuing education needs. mCME offers the flexibility to work at one’s own pace through the material from any location at any time. The content is international, drawn from the upper echelon of dental medicine, and also presents a regional outlook in terms of perspective and subject matter.

CORPORATE MARKETING, PR & EVENTS

CAPP offers multi-faceted collaborations with leading brands in dental industry such as Oral-B (P&G), Philips, Colgate, Wrigley’s and GSK (just to name a few) to engage with the community of dental professionals. CAPP supports the companies by helping them to establish accredited year-round programs for dental professionals. In addition, CAPP’s database of 41,000 dental professionals in MEA, provides the opportunity to every company to reach the majority in the region.

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## CALENDAR 2016

11 Years of Successful Continuing Dental Education

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<td>06-07 May 2016</td>
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<td>06-07 May 2016</td>
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<td><strong>Certification &amp; Advanced Hands-On Courses</strong></td>
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### Other Events
- **Centre for Advanced Professional Practices (CAPP)**
  - ADA CERP Recognized Provider
  - A service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education.
  - ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

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### Additional Information
- **CAPP Dental Academy / Hands-On Courses**
- **DUBAI OFFICE | CAPPFZ L.L.C.**
- **SINGAPORE OFFICE | CENTRE APP ASIA Pte. Ltd.**

### Events
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  - Part of the 11th CAD/CAM & Digital Dentistry International Conference
- **4th Dental Hygienist Seminar 2016**
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Classic versus modern: Comparison of new method of professional dental cleaning

By Adina Maurer, Germany

The early work of prophylaxis pioneers Axelsson and Lindhe in the late 70s already described the content and procedure of a dental prophylaxis session. Due to scientific and technological progress, new possibilities are available today that enable professional dental cleaning in a more efficient, effective and gentle way (minimally abrasive and traumatic) with increased pressure.
Stannous fluoride has a long history of use in oral products for protection against caries, sensitivity, plaque, gingivitis, and oral malodor.1 Crest with Fluoristan, introduced by Procter & Gamble (P&G) in 1955, contained SnF2 and was the first dentifrice to receive the American Dental Association (ADA) Seal of Acceptance for the therapeutic prevention of caries. Stannous fluoride is the only fluoride source to provide benefits against caries, sensitivity, plaque, and gingivitis. It was the potential of this multi-benefit therapeutic agent that motivated P&G scientists to work for more than three decades to overcome the early limitations of SnF2-based dentifrices. These limitations included formula stability, an astringent taste, and mild extrinsic staining of teeth in some patients.

One breakthrough along the way was the discovery of polyphosphates, such as NaHMP, as cosmetic agents. Pyrophosphates were used in Crest Tartar Control dentifrices to provide tartar control benefits. Compared to pyrophosphate, NaHMP is a polymer with more potential attachment sites to the tooth surface. This ability to adsorb and desorb to tooth enamel, which provides surface stain resistance and minimizes calcium precipitation of plaque to provide tartar control benefits. NaHMP was successfully used in Crest toothpastes to improve whitening benefits. The successful formulation of NaHMP and stabilized SnF2 in a single dentifrice formulation is the key breakthrough leading to the introduction of CPH dentifrice in 2003.

How does CPH dentifrice perform?

CPH dentifrices containing a system of stabilized SnF2 and NaHMP have been shown to provide a full range of therapeutic and cosmetic benefits (see Figure 1). The efficacy of CPH dentifrice was demonstrated in randomized, blinded, controlled, and independent clinical studies. Based on these clinical studies, CPH dentifrice has been awarded the Seal of Acceptance from the ADA in five categories: caries; gingivitis; and plaque; oral malodor; sensitivity; and whitening. In fact, CPH dentifrice is the only toothpaste on the market to earn acceptance in all five categories.

Efficacy demonstrated in technical studies, clinical trials

Over 80 publications and research presentations support the efficacy of CPH dentifrice. The results show CPH dentifrice is:

1. Effective in preventing and reducing the incidence of caries. Use of a fluoride- containing dentifrice is known to be effective in reducing caries and reversing early carious lesions by promoting remineralization and preventing demineralization.2

In addition, fluoride may also limit the production of acid associated with cariogenic bacteria.3 Stokey et al. conducted a two-year clinical trial with 935 subjects. A dual-phase protocol of CPH dentifrice (CPH) versus a standard sodium fluoride (NaF) dentifrice.4 Efficacy benefits were also demonstrated by Welef et al. in an in situ study.5

2. Effective in building protection against den tal hypersensitivity. Laboratory studies show SnF2 reacts to form precipitations that include dentinal tubules and provide sensitivity relief. Figure 2 shows high magnification scanning electron micrographs (SEM) of a tooth before and after the use of CPH dentifrice.1

Independent clinical studies ranging from short-term studies to six-month clinical trials, have shown significant improvements in plaque, gingival inflammation, and bleeding after use of CPH dentifrice related to both positive and negative controls.6,7

4. Effective in reducing bacterial activity. The antibacterial action of SnF2 inhibits the breakdown of residual proteins in the mouth to form volatile sulfur compounds responsible for oral malodor.8,9 Series of clinical studies involving a total of 75 subjects showed significant reductions in halitosis overnight after using CPH dentifrice compared to a standard NaF control.10

A longer-term study of 71 subjects showed significant reductions in halitosis after four weeks and three weeks of CPH use compared to a standard NaF control.11

5. Effective in reducing formation of salivary calculi. Laboratory studies have shown that NaHMP significantly reduces the crystal growth and mineralization of plaque either in aqueous solution or in a dentifrice compared to a conventional anti-tartar dentifrice containing pyrophosphate.6,16 The results show CPH dentifrice is effective for both the CPH and positive control patients in the home environment? These questions have been addressed in two recent home-use studies.12,13 These studies showed that CPH dentifrice is effective for both the CPH and positive control patients in the home environment.

Practice-based assessment. A practice-based assessment of CPH dentifrice was conducted among dental professionals.14 Practice-based assessment consists of patients giving an oral, subjective statement of their satisfaction with the product. In this study, 80% of the dental professionals thought about CPH.15 What do patients and professionals think about CPH? The efficacy of CPH dentifrice is supported by extensive body of clinical evidence. However, its success ultimately depends upon its effectiveness and acceptability to users in the home environment. The question is do the benefits measured or observed in a controlled clinical environment by clinical specialists translate into product acceptance in the home? The other words, are dental benefits observed by patients and dental professionals in clinical studies evident when used in the home environment? These questions have been addressed in two recent home-use studies.15 These studies showed that CPH dentifrice is effective for both the CPH and positive control patients in the home environment? These questions have been addressed in two recent home-use studies.15,16 These studies showed that CPH dentifrice is effective for both the CPH and positive control patients in the home environment.

When asked why they would recommend CPH to more of their patients, some responses given were:
• “I believe patients can benefit from Crest Pro-Health” and 96% said they would recommend CPH to more patients now that they had experienced the product themselves (see Figure 6).

Independent clinical studies ranging from short-term studies to six-month clinical trials, and long-term sensitivity relief as measured by tactile and thermal methods compared to standard fluoride negative controls. Results from one clinical study showed a 44% decrease in thermal sensitivity and up to a two times greater tolerance in tactile sensitivity after eight weeks of use.17

3. Effective in reducing plaque and gingivitis. These benefits are due to the broad spectrum antibacterial action of CPH dentifrice and its proven ability to limit the production of acid associated with cariogenic bacteria.18,19 CPH dentifrice reduces the development of gingivitis. Gingivitis, if left untreated, can lead to periodontal disease, which can eventually lead to tooth loss. Emerging research suggests that poor gingival health can be linked to systemic conditions.20,21 Figure 5 demonstrates that the antibacterial action of CPH dentifrice remains strong for 16 hours to control a live/dead assay.22

Numerous clinical studies, ranging from short-term studies to six-month clinical trials, showed significant improvements in plaque, gingival inflammation, and bleeding after use of CPH dentifrice related to both positive and negative controls.6,7

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Eighty percent of the dental professionals indicated they would recommend CPH dentifrice to their other patients. That jumped to 91% of dental professionals who noted improvements in their patients’ oral health or staining.

Usage study among dental professionals. Before receiving a tube of Crest Pro-Health (Clinical Gum Protection variant) for their personal use, approximately 2,000 dental professionals completed an optional online survey about their experience using the product:
• 96% of dental professionals rated their experience with the product as “excellent/very good/good”
• 91% said they had recommended CPH dentifrice to patients in the past and 96% said they would recommend CPH in the future.

When asked why they would recommend CPH to more of their patients, some responses given were:
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in controlled clinical trials translates into effectiveness and acceptability among both patients and dental professionals.

Recent studies have shown that dental care routines that include CPH, an Oral-B oscillating-rotating power toothbrush, and regular use of dental floss can further enhance oral care benefits to patients.

These findings show that you can be confident in recommending CPH dentifrice to your patients, knowing that the vast majority are likely to notice and appreciate benefits of a clean, healthy mouth and gums.

References

Editorial note:
The full list of references is available from the publisher.

Author’s acknowledgment: To Ms. Anita Gay for assistance with manuscript preparation.

Figure 3. Summary of patient survey results from practice-based evaluation of CPH dentifrice. The percentage of patients rating the CPH dentifrice as “excellent/very good/good” in each category shows the high effectiveness and acceptability among patients who used the product at least three months and completed the survey. (Courtesy of Journal of Dental Hygiene26)

Figure 6. Summary of in-home usage study of CPH dentifrice among dental professionals. Results showed the product is highly effective and widely accepted among dental professionals participating in the study. More study participants indicated they would recommend CPH dentifrice to their patients after using the product at home.

About the Author

Kimberly Bray is professor and director for the Division of Dental Hygiene at the University of Missouri-Kansas City School of Dentistry. She currently teaches in three degree programs including two degrees with distance learning options.

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comfort for patients and dental staff. Hand instruments that have only limited tissue-preserving properties can be replaced in preservation therapy by ultrasonic instruments (Piezon, EMS Electro Medical Systems, Munich) and air polishing (Air-Flow with low abrasive erythritol-based Plus powder, EMS) for the benefit of dental staff and patients. In the following article, the classical method (Axelsson / Linhe) is compared to the modern method (guided biofilm therapy) based on a patient case.

Using the example of a 20-year-old patient with braces, increased plaque deposits and a hypertrophic gingiva, the author describes the procedure, the implementation and time management of a structured, professional prophylaxis session. The upper jaw was treated with the simplified, more efficient, air-flow technology and erythritol powder (Plus, EMS) and the lower jaw with Piezon No Pain (Piezon/PS tip). This development in ultrasound technology is referred to as “Piezon No Fuss” in the new generation. An intelligent technology that enables lightning-fast, continuous power adjustment. The EMS instrument measures the resistance (approximately 125 times per second) provided by hard deposits and feeds the resistance value back to the built-in module in the EMS device (continuous feedback). The intensity of the instrument tip is thus adjusted to the “difficulties” of the hard deposits that are to be removed. Once the resistance (tartar, calculus) which the device reduces the power automatically. This therefore enables air-flow therapy even in difficult to reach areas, which tertar, calculus, in supra- and subgingival areas were removed with less risk of injury and trauma to the patient. Case after case, the patient learned to use the new technology and to improve the cleaning process.

Conclusion

A particular shift is currently taking place when it comes to the procedures and implementation of professional preservation therapy, which makes it necessary to critically re-think the professional oral hygiene, the instruments and the treatment methods from the basis of the respective findings. This depends on individual factors and circumstances and must be differentiated according to risk groups (individual, age-specific, risk-based prophylaxis).
Oral health and diabetes discussed at premier event in Singapore

By Dental Tribune International

SINGAPORE: Among developed nations, Singapore has the second-highest proportion of diabetics, according to a recent report by the International Diabetes Federation. As the condition continues to be a growing concern owing to the increasingly sedentary lifestyle and high-calorie diets of Singaporeans, the city-state was the ideal place for the Joslin-Sunstar Diabetes Education Initiative (JSDEI) to hold its first Diabetes, Oral Health and Nutrition symposium in Asia.

The one-day event took place last week at the Swissotel The Stamford. Attended by Singapore Chief Dental Officer Patrick Tseng and Japanese Ambassador Haruhisa Takeuchi as part of the S$50 celebrations (a number of events to commemorate 50 years of diplomatic ties between Singapore and Japan), it provided the latest information on the two-way relationship between diabetes and oral health. Over 500 international leading medical and dental health care global experts, including Dr George King, Senior Vice President, Chief Scientific Officer and Director of Research at the Joslin Diabetes Center in Boston in the US, among others, presented the latest findings on the interrelationships, innovations and interactions between periodontitis and diabetes.

Future strategies on oral and systemic health, as well as how JSDEI’s efforts at strengthening the ties between the medical and dental fields were also discussed.

According to the initiative, increasing evidence supports the existence of an association between periodontal disease and diabetes. The latest research has shown that not only are people with diabetes more susceptible to serious periodontal disease, but the condition may also have the potential to affect blood glucose control and contribute to the progression of diabetes.

Recognising that early and proper treatment of periodontal disease can have a profound effect on the control of diabetes and its complications, the Sunstar Foundation established the JSDEI in April 2008 with the Joslin Diabetes Center, the world’s largest diabetes research and clinical care organisation dedicated to the prevention, treatment and cure of diabetes, affiliated with the Harvard Medical School, to engage in education and research to improve knowledge and practices in this field.

In addition to its symposium in Asia, it has organised an annual event under the same name in Europe.

Established almost 40 years ago, the Sunstar Foundation for Oral Health Promotion has achieved international recognition for the significant benefits to society gained through its efforts to improve oral care and promote dental health through various activities.
Dentine hypersensitivity protection, now in a daily mouthwash

The first Sensodyne mouthwash containing 3% potassium nitrate and fluoride, proven to provide ongoing protection from dentine hypersensitivity with twice-daily rinsing¹⁻⁵*
PRECISION CLEAN BRUSH HEAD PROVIDES

UP TO 5x

GREATER REDUCTION
IN PLAQUE BIOFILM ALONG THE GUMLINE

* vs. a regular manual toothbrush

continuing the care that starts in your chair
Non-surgical repair of a cervical resorptive defect utilizing a fast set self-curing bioceramic root repair material

By Ilya Mer, Russia and Martin Trope, USA

Abstract:
This paper describes the conservative treatment of a cervical root resorption defect with premixed bioceramic putty. The patient presented with a sinus tract associated with a cervical resorptive defect. Usually these lesions are treated with an external approach that results in destruction of the marginal attachment. After disinfection, a new pre-mixed bioceramic material that does not discolor was used internally to seal the defect. Follow-up shows that the sinus tract is not present and that there is bone fill in adjacent to the bioceramic material. Clinically the tooth has maintained its natural color.

Key words: Cervical root resorption, treatment, repair, pre-mixed bioceramic

Introduction
Bioceramics are ceramic materials specifically designed for use in medicine and dentistry. They include alumina and zirconia, bioactive glass, coatings and composites, hydroxyapatite and resorbable calcium phosphates, and radiotherapy glasses (1-5). Bioceramics are widely used for orthopedic applications (joint or tissue replacement), for coatings to improve the biocompatibility of metal implants, and for function as resorbable lattices that provide a framework that is eventually dissolved as the body rebuilds tissue (4). There are numerous bioceramics currently in use in dentistry and medicine. Alumina and zirconia are bioinert ceramics used in prosthetics. Bioactive glass and glass ceramics are available for use in dentistry under various trade names. In addition porous ceramics such as calcium-phosphate based materials have been used for filling bone defects. Also some calcium

> Page 2B
silicates (MTA (Tulsa Dental)) and Bioaggregate (DialDent) have been used in dentistry as root repair materials and for apical root filling materials.

Properties of Endodontic Bioceramic Materials

Endodontic bioceramics are not sensitive to moisture and blood contamination and therefore are not technique sensitive (5). They are dimensionally stable and expand slightly on setting, making them one of the best sealing materials in dentistry (5). When set they are hard allowing full completion of a final restoration and are insoluble over time ensuring the superior long-term seal. The pH when setting is above 12 due to the hydration reaction forming calcium hydroxide and later dissociation into calcium and hydroxyl ions (6). Therefore when unset the material has antibacterial properties. When fully set it is biocompatible and even bioactive. When bioceramic materials come in contact with tissue fluids, they release calcium hydroxide that can interact with phosphates in the tissue fluids to form hydroxypatite.

Few clinicians realize that original MTA is a classical bioceramic material with the addition of some heavy metals. MTA is one of the most extensively researched materials in the dental field (7,8). It has the properties of all bioceramics i.e. high pH when unset, biocompatible and bioactive when set and provides an excellent seal over time. However, it has some disadvantages. The initial setting time is at least 3 hours. It requires mixing (resulting in considerable waste), it is not easy to manipulate, and is hard to remove. Clinically, both gray and white MTA stain dentin, presumably due to the heavy metal content of the original material or the inclusion of blood pigment while setting (Fig. 1a,10).

Finally, MTA is hard to apply in narrow canals, making the material poorly suited for use as a sealer. Efforts have been made to overcome these short-comings with new compositions of MTA or with additives. However, these formulations affect MTA’s physical and mechanical characteristics.

2nd Generation Bioceramics: Endodontic Pre-Mixed Bioceramics

These products are available in North America as Endosequence® BC Sealer™ (BC sealer), Endosequence® Root Repair Material Paste™ (BC RRM Paste Syringable) and Endosequence® Root Repair Material Putty™ (BC RRM Putty) (Brasemera, USA Dental LLC, Savannah, GA).

Recently, these materials have also been made available outside North America as TotalFill® BC Sealer™, TotalFill® BC RRM Paste and TotalFill® BC RRM Putty. All three forms of bioceramics are similar in chemical composition (calcium silicates, zirconium oxide, tantalum oxide, calcium phosphate monohydrate and fillers), have excellent mechanical and biological properties and good handling properties. They are hydrophilic, insoluable, radiopaque, aluminum-free, high pH, and require moisture to set and harden. The working time is more than 50 minutes, and the setting time is 4 hours in normal conditions, depending on the amount of moisture available. In addition, TotalFill® Fast Set Putty™ has recently been introduced into the market that has all the properties of the original putty but has a faster setting time (approximately 20 minutes).

Studies on Endodontic Pre-Mixed Bioceramic Materials

to date, more than 50 studies have been performed on Pre-mixed Endodontic Bioceramic materials. The vast majority of these studies have shown that the properties conform to those expected of a bioceramic material and are similar to MTA.

Case Report

A 29 year old Caucasian female presented pointing to Tooth 11 complaining that her tooth had become discolored about 4 years previously and bleaching with hydrogen peroxide performed. Clinical and radiographic examination revealed a sinus tract that traced to a resorptive defect in the cervical area of the tooth (Figure 1).

With the patients input and consent a treatment plan was devised to perform a retreatment on Tooth 11 and then surgically remove the resorptive defect. The patient understood that due to the position of the defect that the prognosis was fair.

The retreatment was initiated by removal of as much gutta-percha as possible and disinfecting the root canal. Bleeding was seen from the resorptive defect. The canal was sealed and the defect were filled with calcium hydroxide and the access sealed with IBM (Figure 2). Two weeks later the patient presented asymptomatic. The sinus tract had disappeared and the resorptive defect was free of active bleeding. The treatment was continued and calcium hydroxide placed into the root canal. Since the resorptive defect was dry and accessable, it was decided to fill the resorptive defect with BC putty from an internal approach (Figure 5).

When the patient returned in another two weeks the sinus tract was still not present, the bioaggregate was fully set and appeared to be sealing well. The root canal was completed and the access cavity sealed with a bonded resin (Figure 4).

At the six month and fifteen month follow-up the patient was asymptomatic. Probing was normal and sinus tract was not present. Bosy fill in of the resorptive defect was seen (Figure 5).

Discussion

Cervical root resorption is extremely difficult to treat. In most cases, it requires treatment from an external approach because it is so difficult to get a good seal between the external surface where the resorptive tissue originates and the inner resorptive defect. The external approach is usually very destructive to the attachment apparatus and sometimes actually shortens the life of the tooth.

The bioaggregate is easy to manipulate and was able to flow into the defect when it was free of blood. The material uses the body fluids to set and its slight expansion on setting provides an excellent seal.

The superior seal and bio-active nature of the bioceramic material explains the bone fill into the resorptive defect against the BC material.

References

Irrigation dynamics in root canal therapy

By Prof. Anil Kishen, Canada

Irrigation dynamics deals with the optimization of the flow, penetration, exchange and the forces produced within the root canal system. Current modes of endodontic irrigation include the traditional syringe-based irrigation or so-called ‘physical’ irrigation. Passive ultrasonically assisted irrigation. Since the nature of irrigation influences the flow of irrigant up to the working length (WL) and interaction of irrigant with the root canal wall, it is mandatory to understand the irrigation dynamics associated with various irrigation techniques.

Endodontic irrigants are liquid antimicrobials used to disinfect the histological voids within the root canal. The process of delivery of endodontic irrigants within the root canal is called irrigation. The overall objectives of root canal irrigation are to remove debris and inactivate endotoxins, and dissolve tissue remnants and the smear layer (chemical cleaning) in the root canals, as well as to allow the flow of irrigant entailing the mechanotransduction system, in order to detach the biofilm structures and balsa and exchange irrigant within the root canals (physical effects).

While the chemical effectiveness will be influenced by the concentration of the antimicrobial and the duration of action, the physical effectiveness will depend upon the ability of irrigation to generate optimum streaming forces within the entire root canal system.

The final efficiency of endodontic disinfection will depend upon both chemical and physical effectiveness.[3–5] It is important to realise that even the more effective irrigant will be of no use if it cannot penetrate the apical portion of the root canal. The requirement of sufficient penetration to the WL is a key prereq- uisite for achieving optimum chemical effect, because the chemical efficacy of the irrigants are known to be rapidly inactivated by dentine, tissue remnants or smear layer.[20–27] Investigations have explained the limitations in the irrigant refreshment apical to the needles.[21, 28–50] Enlarging the root canal to place the needle to a few millimetres from the WL, and ensuring adequate space around the needle for reverse flow of irrigant, is therefore necessary to achieve effective irrigation coronal to the needle tip.[19, 51] Furthermore, increasing the volume of irrigant delivered could help to improve refreshment rates.[20, 52]

The effect of curvature on irrigant exchange has been studied indirectly by Nyug and Sedgley.[53] They report that only severe curvatures, in the order of 24°–28° hampered the flow of irrigants. If the canal is enlarged to at least size 50 or 55 and a 50-gauge flexible needle placed near the WL, it is used, when reverse flow of irrigants can be expected even in severely curved canals.

Large needles when used within the root canal hardly penetrate beyond the coronal half of the root canal. Current- ly, smaller-diameter needles (28–50 gauge) have been recommended for root canal ir- rigation.[20, 21] This is mainly because of their ability to ad- vance further up to the WL. Furthermore, there is no quantitative data on the minimum shear stress required for the removal of microbial biofilm from the ca- nal wall. Yet, the nature of wall shear stresses produced with the root canals during irrigation provides an indication of the mechanical debrie- dement efficacy.

In open-ended needles, an area of increased shear wall stresses develops apical to the needle tip. In closed-ended needles, a higher maximum shear stress is generated near their tips, on the wall facing the needle outlet.[54] Thus, in open- and closed-ended neddles, optimum debriement is expected near the tip of the needle.[16, 54] Consequently, it is necessary to move the needle inside the root canal, so that the limited area of high wall shear stress transforms as much of the root canal wall as possible. The maximum shear stress decreases with an increase in canal size or taper. Thus, over- zealous root canal enlargement above a certain size or taper could diminish the debrie- dement efficacy of irrigation (Figs. 1a–d & 2a–d).

Enhancing irrigation dynam- ics using physical irrigation methods

Fluid dynamics studies on api- cal negative-pressure irrigation (c) and passive ultrasonically assisted irrigation (d) showed the highest magnitude of re- versal velocity, constant at least 3 mm coronal to the tip placement.[55]

Conclusion

The requirements of adequate irrigant penetration, irrigant exchange and minimum risk of apical extrusion oppose each other and a subtle equilibrium is re- quired during irrigation. Ide- ally, in a canal enlarged to size 50 or 55 and taper 0.04 or 0.06, an open-ended needle should be placed or 3 mm short of the WL, to ensure adequate irrigant exchange and high wall shear stress, while reducing the risk of extrusion. In the case of a closed-ended needle, placement should be within 1 mm short of the WL, so that optimum irrigant ex- change can be ensured. The apical negative-pressure irrig- ation should not generate marked wall shear stress values, but allowed the flow of irrigant continuously up to the WL. It was the safest mode of irriga- tion when used close to the WL. The passive ultrasonically assisted irrigation generated the highest wall shear stress. The combination of passive and active irrigation could contain optimum disinfection and to circumvent the limitations of one method is recommended.
FKG Dentaire: Advocating for more conservative and successful endodontic treatment

By FKG

Dubai, UAE: Cutting edge endo instruments and continuous investments in Research and Development has resulted in booming FKG Dentaire sales globally. Thinking out of the box, willing to create a new path, FKG Dentaire is committed to conservative dentistry and focusing on the interests of both the patient and the dentist has led to the latest launch of FKG’s simplified endodontic files: XP-endo Finisher and BT-Apisafe ISO25.

FKG Dentaire has decided to upgrade its Dubai Center. In addition to an increased number of work stations, partnerships have been established with other leading endodontic manufacturers like Global Microscope, Rki, as well as several other world renowned dental companies.

The Dubai Center started its 2016 activities by receiving groups of dentists and endodontists from Greece and Poland thereby welcoming FKG Dentaire’s first and last lecturers from the Balkan endo’inn. The 2-day training centered around the theme “Endodontics: Theory to Practice” and included presentations by Dr. Andreas Krokidis, Dr. Martin Trope and Pr Roger Rebeiz.

On February 3rd, Pr Martin Trope and Pr Roger Rebeiz will discuss in a joint lecture apical limit, apical enlargement, canal shape and obturation techniques. On February 4th, Pr Roger Rebeiz will lecture on “Treating infected root canals and periapical radiolucents lesions” and will do a three hour Advanced Specialty Course.

FKG Dentaire will have a major stand on the Swiss Pavilion (Booth N° 8E10) and has brought top endodontic lecturers to Dubai!

• On February 2nd, Pr Martin Trope will lecture on “Modern Endodontics: Theory to Practice” and will do a three hour Advanced Specialty Course.

Dental professionals who desire to be informed of FKG Dentaire’s new products and events, or eager to join our Endo training can visit www.fkg.ch and follow FKG Facebook page www.facebook.com/FKGDentaire.

FKG Dubai Training Center opens to Eastern European and Greek clients

By Dental Tribune MEA / CAPPMEA

Dubai, UAE: FKG Dentaire’s Middle East, Africa and India office welcomed 50 Endodontists all the way from Poland and Greece for two days in Dubai.

A combination between high level endo-training and leisure as the attendees were invited by Magdalena Uhlmann, FKG Area Sales Manager Eastern Europe, Balkans and Scandinavia, together with distributors Multidental-Med (Poland) and Dental Expert (Greece).

The Swiss manufacturer is famous for the development and production of dental products for dentists, endodontists, and laboratories. Founded in from the heart of the watchmaking industry in Switzerland, FKG has a reputation for top quality products which include various international certifications.

On 15th of January 2016, the regional MEA team led by Alexandre Mulhauser (Middle East, Africa and India Director) and Olivia Mulhauser (MEA and India Office Manager & Sales Assistant) hosted a group of 50 dental professionals from Poland and Greece who were

invited to a FKG dedicated and tailor-made event organized by Magdalena Uhlmann as well as Multidental-Med and Dental Expert.

The program of the delegation included two speaker presentations by Dr. Andreas Krokidis who lectured as part I of the morning session on “I Race: From glide path to 3-D obturation in a predictable and safe way”. Dr. Bartosz Cerkaski, Poland lectured the second part of the morning session on “NiTi Sequences selection strategies for safe and precise root canal preparation and obturation”. The afternoon session followed, with a hands-on course on the iRace, BT-Race and TotalFIHR BC SealerTM provided by the expertise of both lecturers and clinicians, Dr. Bartosz Cerkaski and Dr. Andreas Krokidis.

Finally, Thursday 14th of January 2016, concluded the 2-day endo-training, with a yacht trip out into the waters, organized by the FKG team as a thank you for participation to the two groups and lecturers.
Together towards pink-white esthetics

“Communication is the answer to complexity.” This article demonstrates, once again, the importance of good cooperation between the dentist and the dental technician.

By Dr. Jorge André Cardoso, DT Oleg Blashkiv, Dr. Rui Ne-grão and Dr. Teresa Taveira, Portugal

In prosthetic dentistry, effective communication between the clinician and dental technician is of paramount importance. This article presents a case which, among other things, involved soft-tissue remodelling in the anterior region. Consistent close cooperation between the dentist and the dental technician and their concerted action provided the basis for a successful outcome.

Case presentation

A 52-year-old female patient presented to our practice with an unsightly, defective anterior bridge extending from tooth 12 to tooth 21. The bridge had been placed seven years ago. As she was unsatisfied with her smile, the patient was looking for an esthetic, more natural-looking alternative. The veneer of the metal-ceramic bridge had a very opaque and yellowish appearance. In tooth 21, the metal margin was exposed cervically due to gingival recession. Alveolar ridge atrophy in the area of the missing right central incisor (pontic) had resulted in a considerable vertical reduction. The shape and shade of the teeth needed improvement and harmony between white and pink tissues had to be restored (Fig. 1).

Treatment plan and mock-up

Since smile improvements involve complex procedures, it is advisable to simulate the final result by means of a direct composite mock-up. This important step enhances the trust and confidence of the patient. A mock-up provides the patient with a clear idea of what the effect of the planned restoration will be once it has been seated in the mouth. In our opinion, this step cannot be entirely replaced by digital design previews. The mock-up allows the lab technician to obtain a better understanding of the individual clinical situation. Later on, the mock-up can be used as a template in the fabrication of the lab wax-up and/or the provisional restoration.

In the case at hand, the mock-up revealed that in order to achieve a more balanced appearance, tooth 22 needed to be integrated into the restoration (Fig. 2). And even more importantly, it showed that not only the correct position, shape and colour of the teeth were key factors in achieving a harmonious smile in this case, but also the correct gingival architecture and emergence profiles.

Consequently, the patient was informed that, in order to achieve a satisfactory result, the soft tissue morphology had to be increased in the pontic area. The patient fully agreed to the treatment plan suggested.

The treatment plan involved:

1. the removal of the existing restoration
2. the placement of a provisional bridge and soft tissue grafting in the pontic area (soft tissue management that would take several months)
3. the insertion of a new ceramic bridge and a laminate veneer on tooth 22 and, if needed, also on tooth 15

Connective tissue graft and immediate provisional bridge: Very frequently, tooth extraction can be established as the possible cause of alveolar ridge atrophy. In this particular case, there was a considerable lack of volume to be found in the pontic area. To re-establish the soft-tissue architecture, two surgical interventions were planned. Immediately after having performed the first connective tissue graft, a provisional, lab-fabricated bridge was placed. The bridge was constructed on the basis of the mock-up information. It was reinforced with metal wire. The soft tissue contouring phase that followed took several months. Initially, the provisional exhibited an inner concave surface to provide sufficient space for the soft tissue. In order to prevent any possible loss of information, the pontic area of the provisional restoration was filled with a silicone-based impression material and then placed over the prepared teeth on the model (Figs. 7 and 8). This would provide the technician with a good approximation of the final shape of the pontic.

In order to determine the correct location of the contact
Figs 8a and b: Lab communication: Transfer of the basal shape of the pontic
Figs 12a and b: Lateral view of the inclined final restorations
Fig. 13: Frontal view

then using it in the fabrication of the restoration. However, using this distance can lead to a very large contact area with a short papilla if the bone is missing. The result is an unnatural, square tooth shape. Therefore, this is important information for the dental technician. When applied wisely during ceramic layering, interproximal pink, brown and yellow stains can create a very natural illusion and thus help to overcome this problem. In the course of the treatment in this case, it became clear that the restoration of tooth 13 was unnecessary to achieve the desired outcome.

The try-in of the restoration revealed that the zeniths of the gingival contours were misplaced. The use of slide share software (e.g. Keynote) allowed us to transmit visual information to the dental technician on the following issues:

- the desired gingival zenith - the desired interproximal stains (to mask the interproximal spaces) - the position of the buccal ridges, which is of paramount importance for the visual perception (Fig. 9)

Final restorations
Even though cementing the veneers first has certain advantages in colour stabilization, in this particular case both types of restorations were cemented simultaneously. The veneer for tooth 22 was pressed from IPS e.max® Press lithium disilicate glass-ceramic (shade LT, A2) and completed with IPS e.max Ceram. The pressable ceramic is available in various degrees of opacity and enables esthetic restorations to be fabricated that blend seamlessly with the remaining dentition. Variolink® Esthetic LC, a light-curing luting composite (in a neutral shade), was used to cement the laminate veneer (Figs 10 to 15). The porcelain-fused-to-zirconia bridge (IPS e.max Zirconia veneered with IPS e.max Ceram) was cemented with the self-adhesive, self-curing resin cement SpeedCEM® (in shade Transparent) according to the instructions of the manufacturer.

Conclusion
Smile improvements are very challenging, particularly if, in addition to restoring the white esthetics, a harmonization of the gingival architecture is required. Only by choosing a multidisciplinary treatment approach will be mutually beneficial communication between the dentist and dental technician. This is an essential prerequisite to achieve the desired success.

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The Dental Technician Profession – My vocation

By Stanislav Shishkov, Bulgaria

With the rapid pace of life nowadays, the dental technician profession is evolving fast with a focus on Aesthetics on all levels. Patients are well informed, have high requirements for aesthetics, occlusion and function. In order to realize the desires of the patient we ‘the dental technician’ must be extremely professional and capable of working in a team.

The dental technician occupation is a wonderful profession consisting of talent, theoretical knowledge, good teamwork and continuous desire for improvement. To achieve successful teamwork, one’s personal traits are of a big importance for the team to function properly. There must be a good communication between dentists and dental technicians as it involves a two-way exchange of knowledge, innovative techniques for medical treatment and important information about the preferences of the patient and the realistic possibilities of the realization.

In good synergized teamwork, success is inevitable and that success is shared amongst all. We must enjoy the successes of the dental team and the creative achievements of other colleagues.

As the dental technical work has several stages, the team have to be responsible and carry out each individual task perfectly at each stage in order to achieve excellent results. Based on my experience, I agree that dentistry should be a balance between the incoming new technologies and human resources. Talent cannot be replaced by any equipment or machine. Beautiful smiles need a lot of love, extraordinary talent and professionalism.

Undoubtedly, the upcoming new technologies in dentistry and dental technician field are very helpful in facilitating an easier labor process and shortening the technological time for finishing of the end product. The ongoing competitive race between the dental manufacturers for constant improvement of software and good quality graphics and precision in construction results to the quick development and creation of even better and more useful products in our profession.

However, I strongly believe that in the near future, there will be no shortage of the dental technician professional as more and more colleagues are realizing that following a postgraduate training and education is one of the best investments. From the machines used in the dental technician profession to the application ceramic brush used, there is a need for intellect and talent which we have to evolve. We must not forget that we work for the people, for their health and happiness.

The dental technician profession is a medical profession from person to person, not just a business, but a profession which has to be exercised regularly with dedication and love. For me it is a vocation.
CEREC Premium SW 4.4: More options for your practice lab

By Sirona

Sirona’s new CEREC Premium SW 4.4 now allows dentists with a practice lab to treat cases that go beyond what could previously be handled chairside. This is now possible due to the extended range of indications, a larger selection of processing tools and the support of the infos X5 and infos Blue extraoral scanners.

Sirona is now offering even more options for the practice lab with the expanded CAD/CAM software CEREC Premium 4.4. It links the integrated patient-oriented workflow of the CEREC chairside software with the wide range of indications of inLab software. From crowns to bridges and other sophisticated restorations, all work steps can be carried out using just one software in combination with the versatile CEREC milling units.

Patient-oriented workflows

The expanded indications allow the practice lab to also construct and produce crown copings, bridge frameworks, bridges with anatomical connectors, bars and telescopes. This means indications previously sent outside the practice can now be performed in the practice. Dentists may use the CEREC Omnicam or CEREC Bluacam for intraoral scanning, but the CEREC Premium SW 4.4 also supports Sirona’s extraoral scanners infos X5 and infos Blue, enabling even most complex cases.

Many new or further developed tools also improve the machining process. By means of the innovative “Biojaw” algorithm or access to dental tooth databases the dentist receives excellent initial proposals. The clinical quality is improved as a result of the higher degree of detail, sharper preparation margins and the ability to create the smallest fissures during the grinding process. User friendliness was also increased via new side panels and improved tools.

More treatments in less time

The new features of CEREC Premium SW 4.4 and the seamless treatment process ensure shorter, simpler and therefore patient-oriented workflows because restorations for a wide range of indications can be prepared in one session or on the same day. Like all CEREC software, CEREC Premium SW 4.4 allows an optimal digital workflow by sending and receiving digital impressions and restoration data via the Sirona Connect Portal. The portal forms the link between CEREC and inLab system components.

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