Solving one of dentistry’s challenges: fear of injections

Of all the procedures performed on a routine basis, the one procedure that is universally perceived by patients as the most fear- and anxiety-provoking is the dental injection. In spite of the significant advances made during the past 100 years, our profession has yet to conquer one of the greatest challenges of dentistry — or has it?

Milestone Scientific after spending a decade researching and methodically studying this problem, now believes that with the introduction of its new product, the Wand/STA System instrument, it has finally conquered this age-old problem.

The Wand/STA System instrument represents the world’s first and only technology that uses the patented Dynamic Pressure Sensing (DPS) technology that accurately and safely performs a pressure-regulated intra-ligamentary dental injection.1

The new Wand/STA System can also perform all traditional dental injection techniques, i.e., inferior alveolar block, supra-periosteal infiltration, etc. All techniques are performed more efficiently, more effectively and virtually painlessly.2,3

Milestone’s new technology incorporates visual and audible real-time feedback, giving clinicians and tactile control. The experience for both patient and dentist is one that is significantly less stressful.3

Milestone Scientific created and defined a new category of dental instruments called C-CLAD (Computer-controlled Local Anesthetic Delivery) systems.4 These are the only dental injection instruments that have the published scientific data that substantiate the claim of eliminating or reducing pain perception when performing a dental injection.4,5

This technology has undergone the rigorous of clinical testing that has been provided in numerous universities and research centers throughout the world for more than a decade.

According to the company, these studies are published in some of the most highly respected dental journals in the profession. No other instrument, technology or device developed specifically to reduce pain and anxiety while performing a dental injection can currently make that statement.

With the introduction of C-CLAD technology, several newly defined injection techniques were also introduced to dentistry.6 The Wand/STA System has been optimized to perform these new dental injections.

The first of these techniques, the anterior middle superior alveolar (AMSA) nerve block, published in 1997 by Friedman and Hochman, is a contemporary technique to achieve maxillary pulpal anesthesia of multiple maxillary teeth from a single palatal injection without producing the undesired collateral anesthesia to the lip and face.6

Subsequently, Friedman and Hochman introduced a second injection, named the palatal-approach anterior superior alveolar (P-ASA) nerve block,7 in which pulpal and soft-tissue anesthesia of the central and lateral incisors are achieved by a single palatal injection.

The general reduction in pain perception for all injections has led to innovative ways to producing more efficient and effective dental anesthesia.

In addition to the new dental injection discussed above, the Wand/STA System instrument improves the success rate of traditional injections such as the inferior alveolar nerve block.8

Holding the Wand handpiece, which is shaped and has a pen-like grip, allows the clinician to easily rotate while simultaneously moving the needle forward, increasing accuracy by decreasing needle deflection.9

Added to the ability to use the new multi-cartridge injection feature, the Wand/STA instrument provides numerous advantages when performing traditional injection techniques.

The introduction of the Wand/STA System instrument represents a material improvement over previous versions of this technology.

Numerous innovative new features are available in the Wand/STA System. They include automatic purging of anesthetic solution that primes the handpiece prior to use, automatic plunger retraction after completion of use, a multi-cartridge feature allowing multi-cartridge injections and reduction of anesthetic waste.

Milestone Scientific has developed a novel training feature in the Wand/STA System instrument, providing clinicians with spoken instructional guidance on the use of the instrument, thereby substantially reducing the initial learning curve.

The Wand/STA System instrument is today’s most advanced C-CLAD technology and represents the next generation of computer-controlled drug delivery instruments for dentistry.10

References


The ‘Denture Comfort’ procedure

We’re all well aware of the difficulties that traditional dentures present to both you and your patients. There are more than 39 million Americans suffering every day with difficulties related to eating, speaking and painful sore spots.

Today, with a great focus on the relationship between dentistry and systemic health, we must take into consideration that edentulism has a direct impact on patients’ overall health with problems ranging from psychological to nutritional and digestive concerns.

According to Dr. Carl Misch, study director of the two-stage dental implant technique that combines both loss is associated with illness; 17 percent of edentulous people take more retentive denture. The ADEA published in 2002, it was determined that all mandibular dentures should be retained with a minimum of two implants. This would greatly prevent any further bone resorption and provide for a more stable, long-lasting denture. The ADEA endorsed this form of treatment in 2004.

Abraham Barsky, MD, PhD, asks the question: why have so few dentists followed these recommendations? The answer is simple: the population we hoped to serve more often than not did not have the time, bone or money to afford conventional two-stage dental implants.

Here are just a few of the staggering statistics:

- 88 percent of people in the United States who could benefit from implants never receive treatment due to lack of time, bone or money
- Of the U.S. population who are aged 65 and older and have lost all of their natural teeth, 55.9 percent has an annual income of less than $15,000; 25.3 percent has an annual income between $15,000 and $24,999.
- Only 22 percent of older persons are covered by private dental insurance.

Piezon module assures that instruments can be used reliably and affordably. It is designed to be the interface between the patient’s ridge and denture. There is no need for adhesives with this protocol, which are known to cause bacteria and result in halitosis. The Tuf-Link silicone is so durable that patient’s do not need to have it replaced until their scheduled annual visits. These features distinguish Atlas from other products on the market, which, while sharing the slim diameter, rely on technology originally developed more than 30 years ago.

The Denture Comfort procedure was developed by Dentatus USA in conjunction with world-renowned researchers at New York University College of Dentistry (NYUCD) Department of Implant Dentistry to be a simple and affordable alternative to traditional, larger implant-supported dentures.

The Atlas implant system advances the art of dentistry by eliminating old technology associated with housings and O-rings. This improvement makes it far easier both for dentists to use the system and more comfortable for patients by reducing the number of visits. Insertion/removal of the denture of the easier and offers the patient a new advantage of being able to sleep with his or her dentures.

Tuf-Link silicone is the magical component in the system; it is the interface between the patient’s ridge and denture. There is no need for adhesives with this protocol, which are known to cause bacteria and result in halitosis. The Tuf-Link silicone is so durable that patient’s do not need to have it replaced until their scheduled annual visits. These features distinguish Atlas from other products on the market, which, while sharing the slim diameter, rely on technology originally developed more than 30 years ago.

Dentatus’ goal is to make available to the American people and abroad, dentistry that is affordable, accessible and life improving for the rather significant segment of people who are underserved in this area.

The company continues to seek out clinical research by leaders in the profession and focuses on product improvements and real-life patient needs as they become known.

Dentatus leads the way with more university based published data and clinical research than any narrow diameter implant currently available in the U.S. Narrow-body implants have come a long way since they were first introduced as transitional implants in 1995.

In 2004, Atlas received FDA approval for long-term use or any length of time as determined by the healthcare provider. They are manufactured and package certified to ISO 9001/ISO 13485, CE Marked and Health Canada Approved.

In 2005, Dr. Rohrer performed histological studies showing that these implants integrate just as conventional diameter, machined-surfaced implants. In 2007, a five-year study performed at NYU reported a 94 percent survival rate and 100 percent patient satisfaction.

It isn’t time you looked into this treatment option to restore quality of life for your denture patients. Dentatus makes it easy for you to get started with their half-day hands-on workshops.

All the materials for your first case are included in the registration fee, and the course will pay for itself once you perform your first case. For more information check out www.dentatus.com, call (800) 525-5156 or visit Dentatus at CDA booth No. 584.

The EMS promise: painless ultrasonic therapy

Switzerland’s Electro Medical Systems (EMS) wants to demonstrate how treatment with an ultrasonic scaler can be enhanced even more with the brand new Piezon Master 700. EMS points to the special refinements of integrated i.Piezont technology, which is designed to assure smooth interaction between the original Piezon handpieces and the EMS Swiss instruments made of biocompatible surgical steel to ensure the best in patient comfort.

The company says that the i.Piezont module assures that instrument movements are perfectly aligned with the tooth surface, and vibrates 32,000 times per second to make it extremely effective.

The intelligent feedback control minimizes damage to the tooth surface. The result is a uniquely smooth tooth surface and maximum soft-tissue protection. As EMS explains, this is the formula for incomparable precision and therapy that is practically painless thanks to optimum instrument movements.

The balanced Piezon handpieces show how substantially improved illumination of the oral cavity can be achieved with the six LEDs arranged around the tip of the handpiece.

In the words of the manufacturer, which describes itself as the leading maker of dental hygiene systems, this advance enables dentists to handle ultrasonic instruments with even greater precision.

This means even greater precision for periodontal and root canal treatments, calculus removal, cavity preparation and other conservative treatments.

The seamless housing of the Piezon Master 700 has an aesthetic, ergonomic and hygienic design, which promises a high degree of operator comfort. The touch panel can be rapidly and precisely operated by simply touching the self-explanatory operating elements or tapping on the desired action. This enables the system to meet all the requirements in respect to ease of use, and especially hygiene.

The two replacement bottles with a capacity of 550 ml or 500 ml for holding various antisep tic solutions are resistant to UV radiation and can be cleaned easily. It is quickly thanks to their snap-shut caps.

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XTend ceramic kits and turbines for high-speed handpieces

With the XTend™ ceramic line of turbines and kits, ProScore offers dentists the best quality do-it-yourself products for high-speed handpieces in the market. Not only are XTend ceramic products backed with the best warranties in the business—one year for turbines and six months for rebuild kits—XTend products outperform steel bearings, last longer and produce less noise and vibration.

The Ceramic Bearing Technology incorporated in XTend ceramic products provides many handpiece performance benefits:

- Reduced wear: ceramic balls are twice as hard as steel balls.
- Increased durability: ceramic balls are 40 percent lighter than steel balls, which reduces the internal forces and loads caused by high-speed rotation.
- Longer life: ceramic bearings perform better than steel under marginal lubrication.
- Quieter and smoother operation: noise and vibration are reduced as a result of lower loads.

ProScore’s other EZ Solutions offer dentists various do-it-yourself repair and maintenance options.

EZ Press III™ and EZ Rebuild™ Kits
The EZ Press III Repair System is the answer to the high costs and down-time associated with sending high-speed handpieces out to be repaired. Allowing the dentist to easily change those parts that have worn out, the EZ Press III utilizes simple procedures, requires no guesswork and ensures precision placement of the bearings on the spindle.

EZ Install™ Turbines
For an instant repair, dentists can replace cartridges chairside with EZ Install Turbines, which are manufactured with the highest quality parts and quality assurance procedures in the market, including dynamic balancing. The result is a high-performance, long-lasting turbine that outlasts others in the market.

Smart Cleaner
Smart Cleaner is a one-of-a-kind maintenance tool that not only helps prevent residue buildup in handpieces and coupler waterlines, but also clears away obstructions if they occur. Simply connect the handpiece or coupler to the Smart Cleaner and activate the hand pump to clear obstructions and debris.

EZ Care™ Cleaner and Lubricant
EZ Care Cleaner was formulated to flush debris and remove build-up from the handpiece’s internal rotating parts, improving long-term handpiece performance and sterilization efficacy.

BEAUTIFIL Flow Plus

Shofu presents BEAUTIFIL Flow Plus, an all-in-one flowable base, liner and final restorative. Approved for all indications (Class I-V) based on physical properties that rival leading hybrids on the market.

- Stay-put’ handling and superior adaptation
- ‘Stay-put’ handling and superior adaptation

Traditional methods of filling and packing hybrids are time consuming and technique sensitive. BEAUTIFIL Flow Plus were either clinically equivalent or superior to leading hybrids on the market.

Clinical proven benefits
Shofu’s proprietary GIOMER technology ensures that clinicians have all of the materials they need for competitive success at CDA booth No. 2450, call (800) 726-7365 or visit www.scoredental.com.
The device gently holds the patient’s mouth open, keeps the tongue out of the working field, illuminates the oral cavity and guards the patient’s airway—all while continuously evacuating saliva and excess moisture.

Additionally, the company announced that Isodry, a non-illuminated dental isolation system, was named by www.drbicuspid.com as "Best New Instrument" in its 2011 Dental Excellence Awards. Isodry was introduced in February 2010 and was also named by Dentistry Today magazine as one of its "Reader’s Choice Top 50 Technology Products" for 2010.

Both Isolite and Isodry dental isolation systems use the patented Isolite Isoflex mouthpiece. The super soft mouthpiece used with the device makes for a more comfortable experience for the patient, and allows dental professionals to work more efficiently with greater control over the oral environment.

Introductory kit offer
For a limited time only, BEAUTIFIL Flow Plus is available in two introductory kit offerings. The standard kit (PN 2000S) contains two 2.2 gram syringes of both viscosities (F00 and F05) in shades A2 and A3, and the pedo kit (PN 2000P) contains two 2.2 gram syringes of both viscosities in shades A1 and bleach white.

Both kits contain samples of Shofu’s top-selling products, including BeautiBond, One Gloss, Super Snap and the hybrid material BEAUTIFIL II. The introductory kits are valued at $160 but retail for just $99.95.

For more information contact Shofu Dental Corp. at (800) 827-4658 or visit www.shofu.com.
Schick digital radiography: the elite solution

Schick’s CDR Elite digital radiography system combines truly outstanding image quality, an easy-to-use design and a robust, hard-wearing construction to provide an intraoral radiography experience that is truly “elite.”

CDR Elite was developed with guidance from a panel of leading dental radiologists and validated by an extensive range of dental practitioners from all fields.

It is quick, providing instant X-rays. It reduces radiation; provides high-quality images for enhanced diagnosis; enhances patient communication and increases case acceptance; is easy to use for both the clinician and staff; eliminates the repetitive costs of film, chemicals and disposal of those chemicals; and eliminates time wasted while waiting for film to be developed.

CDR Elite images provide bold bone trabeculation, crisp lamina dura and a clear, clean DEJ to meet the diagnostic needs of every clinician.

Schick’s CDR Elite system is designed to focus on ease of use, diagnostic image quality and durability.

Simple and easier sensor placement, even for vertical bitewings, comes from an optimally located sensor-cable interface and a new color scheme that provides high visibility in the oral cavity.

Embracing the success of Schick’s unique removable cable technology (introduced with the CDR Plus-Wire), CDR Elite incorporates this technology on all three sensor sizes, ensuring that every clinician and every dental practice can enjoy the simplicity and convenience of a one-step cable-replacement process.

CDR Elite integrates fully with Schick’s intuitive and easy-to-use CDR DICOM imaging software, as well as Eaglesoft and Patterson Imaging, which all feature multiple tools for enhanced diagnostic capabilities and patient communication.

The dentist can add other Schick products such as iPan, CDR PanX and USBCam2 for a complete digital solution.

distinct sizes that are designed to fit patients varying in size, from small children to large adults.

“Proper dental isolation is one of the most underrated factors affecting the longevity of dental work,” said Thomas Hirsch, DDS, co-creator of Isolite. “Compared to other dental isolation methods, such as the rubber dam or manual suction and retraction, Isolite is faster and easier for dental professionals and easier on the dental patient.”

For more information about Isolite Systems and its products, including a video tour and clinical videos, please visit www.isolitesystems.com or call (800) 560-6066. See a live demonstration during the California Dental Association Fall meeting at booth No. 234.

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Introducing ProMax 3D Mid
2-D and 3-D fusion in one unit

The new PLANMECA ProMax® 3D Mid is a CBVT unit including 5-D imaging, panoramic, extra-oral bite-wing and cephalometric all in one machine that can accommodate all of your clinical needs.

The PLANMECA ProMax® 3D Mid:
• provides an extended selection of 3-D volume sizes combined with traditional 2-D panoramic and cephalometric imaging;
• and has the unique ability to meet all of your diagnostic needs, including implantology, endodontics, periodontics, orthodontics, as well as dental and maxillofacial surgery and TMJ analysis.

The volume sizes range from ø3.4 x 4.5 cm to ø16 x 16 cm. This wide selection of volume sizes allows for optimizing the imaging area according to specific diagnostic task — always complying with the best practices of dentistry including the ALARA (as low as reasonably achievable) principle to minimize radiation.

Versatility
• Adjustable KV and MA.
• Pediatric Mode automatically reduces volume according to child’s anatomy.
• Works natively in MAC OS environment.

• Provides volume sizes for every clinical application.
• Cephalometric upgrade available.

Ease of use
• Simple, effortless patient positioning.
• The intuitive graphical user interface offers preprogrammed target sites and exposure values for different image types and targets.
• Fully integratable with third-party software.
• Comes with a complete software system for diagnosis.

SmartPan, unique panoramic imaging
• A unique SmartPan imaging system also uses the same 5-D sensor for panoramic imaging, eliminating the need to change sensors. The SmartPan system automatically calculates nine different panoramic curves in 1 mm shift.
• The user can browse between the panoramic images and select the most suitable for diagnosis after the exposure.

For an in-office consultation or more information call (650) 528-2500 or visit www.planmecausa.com.

Products to fit your entire practice

Keystone Industries is proud to announce the addition of the Gelato line of oral health care products and the Prehma line of disposable and surgical products to its overall offering.

Keystone has long been a major supply source for the dental laboratory industry and, in recent years, has made strategic acquisitions that have expanded the product offerings into the dental operatory arena.

With the addition of the Gelato and Prehma lines, Keystone now has the ability to offer products in almost every item class, including anesthetics, articulating, cements, cosmetic dentistry, disposables, endodontic products, small equipment, evacuation products, finishing and polishing, impression materials, infection control, lab products, matrix materials, preventives, surgical products, waxes and office products.

Here are a few of Keystone’s products, all of which are made in the United States.

Gelato APF Fluoride Gel
This is an economical and 60-second acclimated phosphate fluoride gel that contains 1.23 percent fluoride ion. The smooth and creamy thiotropic formula will not run, preventing patient gagging. It is available in cherry, mint, orange vanilla, pina colada, bubble gum, strawberry, grape, cotton candy, mango smoothie and marshmallow.

The formula is gluten-free.

Gelato Home Care Rinse & Gel
This 0.63 percent stannous fluoride perio rinse 10 oz (284 g) tube with pump comes in two natural flavors: mint and raspberry. It is antimicrobial and alcohol-free and relieves tooth sensitivity, reduces gingival inflammation, helps inhibit plaque build-up, prevents remineralization and promotes re-mineralization. The formula is gluten-free.

Gelato Topical Anesthetic Gel
This is a 1.23 percent acclimated phospho-fluoride formula provides excellent broad-spectrum, anti-microbial oral rinse that has been proven safe and effective for treating gingivitis. The time-released formula continues to work after rinsing, reducing redness and swelling of gums.

Gelato Foam Fluoride
The 1.23 percent acidulated phosphate fluoride formula provides comfort and consistent and efficacious coverage. The foam remains in the fluoride tray under bite pressure to eliminate patient gagging. It is available in these flavors: cherry, bubble gum, grape, mint, strawberry and cotton candy.

High-volume evacuator (HVE) tips
The HVE tips are available in nine distinctive colors: light blue, white, dark blue, mauve, green, orange, yellow, red and purple. They also come in assorted color packages.

The proprietary vented/non-vented design with soft edges reduces suction of soft tissue and provides greater patient comfort. They are also available in vanilla-mint scent.

High-volume evacuator tips are available in nine colors. (Photo/Provided by Keystone Dental)

Gelato Topical Anesthetic Gel
This gel has no bitter aftertaste and is fast-acting with no systemic absorption. It is available in seven flavors: cherry, pina colada, bubble gum, mint, mango, strawberry and raspberry.

It contains 20 percent benzocaine for effective temporary pain relief during procedures such as local anesthetic injections, periodontal curettage, impression taking, scaling, intra-oral radiographs, root planning and prophylaxis.
CareCredit®, the nation’s leading patient payment program, continued its support as founding donor of the American Dental Association Foundation Give Kids A Smile® Fund with its fifth consecutive $100,000 donation.

The donation was made at the Give Kids A Smile National Advisory Board meeting, Feb. 23, in Chicago.

The funding will help the American Dental Association Foundation continue to make grants that support the Give Kids A Smile Program.

The American Dental Association’s Give Kids A Smile program has several objectives:

- To raise awareness of the high level of oral disease suffered by children primarily from low income families;

Funds put toward goal of ‘cavity-free kids by 2020’
• to demonstrate dentistry’s commitment to addressing access to care;
• to enable volunteer dental teams across the country to provide free dental care, screening, and education to children in need; and
• to urge policymakers to increase funding for children’s oral health.

In 2010, with the help of CareCredit’s contribution, the ADA Foundation awarded grants to the Hispanic Dental Association (HDA), the National Dental Association (NDA) and Oral Health America.

The HDA is using its grant to fund local dental-student-led oral health programs in Los Angeles, San Antonio and Boston, to expand their mobile dental van program and participation in local health clinics.

The NDA is enhancing the Deamonte Driver Dental Project, a memorial to a young boy who died from an infection in his brain that was caused by untreated dental decay, to reach more elementary schools and expand mobile dental van services.

Oral Health America’s grant funds have been distributed to Smiles Across America sites in California, Minnesota and Nevada, which has enabled thousands of children to receive education, preventive care and restorative services.

“Dental disease among children is a serious issue in the United States. When a child has disease and pain, it makes it difficult for him or her to eat, sleep and learn. CareCredit became the founding donor of the American Dental Association Foundation Give Kids A Smile Fund to help increase children’s access to treatment throughout the year.”

“Each year we are so impressed with how the grant recipients use these funds to reach out in their community,” stated Cindy Hearn, board member and senior vice president of marketing at CareCredit.

“The ADA Foundation and its Give Kids A Smile Fund greatly appreciate CareCredit’s continuing support. CareCredit’s generosity will play a key role in helping Give Kids A Smile achieve its goal of cavity-free kids by 2020,” stated Dr. David A. Whiston, president of the ADA Foundation.

Today, CareCredit is offered in more than 86,000 enrolled dental practices. CareCredit is exclusively selected for their members by most state and national dental associations, and is also recommended by leading practice management consultants.

For more information on CareCredit, call (800) 500-5046 ext. 4519 or visit www.carecredit.com/dental.

Information on Give Kids A Smile can be found at www.givekidsasmile.ada.org.

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**Nikon D7000 clinical camera package**

The Nikon D7000 fits into the Nikon lineup between the D90 and the D300s in regard to price and size, but beats both of them when it comes to features. The D7000 takes the resolution up to 16.2 megapixels (compared to the 12.3 mp resolution of the other two cameras) and adds full 1080p HD video capture (the D90 and D300s have 720p HD video).

Nikon has also introduced User Modes (U1 and U2) on the D7000. This has been a popular feature on the Canon 40D, 50D and 60D. For clinical use, one can use the User Modes to pre-program the camera and simplify switching between portrait and closeup views.

The User Modes are also nice in case someone changes settings on the camera. To get back to the proper settings, you simply turn the dial to another mode and then back to the User Mode and then all of the pre-programmed settings are restored.

The D7000 has two SD memory card slots, and you can program the camera to use the slots in Backup Mode (each image is written to both cards), Overflow Mode (when the first card is full, the camera switches to the second card) or RAW Slot 1-JPG Slot 2 Mode (RAW files are written to the first card and JPGs to the second card).

The camera system features Nikon’s 85mm macro lens and a Metz wireless macro flash.

For more information, please visit www.photomed.net or call PhotoMed at (800) 998-7765.