Air-Flow kills biofilm

Subgingival application of the Air-Flow method allows smooth, efficient removal of bacteria in the periodontal pocket

Biodm is a dirty word

Thousands of bacteria strains deep down in the periodontal pocket are responsible for the development of various diseases. The magnitude is enormous and so is the need for periodontal disease management.

No need to mention the increased risk factor on systemic diseases such as diabetes, stroke, or premature birth.

Swiss-based Electro Medical Systems (EMS) is well known for Air-Flow®, the original method for supragingival air polishing. Yet, too few dental professionals are aware of the unique subgingival application of this mix of powder and air.

"Air-Flow goes subgingival," says EMS, and brings the point home. A unique nozzle delivers the air-powder mixture deep into the pocket where rinsing water washes out the eliminated biofilm. The device and consumables go hand in hand for extraordinary results without any stress or risk for the patient, according to the company.

The patented Dynamic Pressure Sensing nozzle has been especially designed for use in deep periodontal pockets (up to 10 mm). According to EMS, it creates optimum but gentle turbulence in subgingival areas and prevents soft-tissue emphysema via three horizontal nozzle outlets for air-powder mixture and one vertical nozzle outlet for water.

Abrasive — a bad idea?

There is also the Perio-Flow Method, and the company has specific features for its periodontal use. The glycine-based grains are extra-fine (25 µm). In addition, the grains have a particularly low specific density (d 50).

As a result, the original Perio-Flow Method is highly effective when it comes to abrading harmful biofilm, but will not do any harm to the tooth surface or dentin, explains the company. According to EMS, it is important to lay this misconception to rest; abrasion is not wrong, as long as, from the gingival crest to the deepest periodontal pockets, it has no adverse effects on the tooth.

A representative from EMS said that the company is very enthusiastic about the growing market acceptance of the Perio-Flow Method and that the company is proud to go beyond the boundaries of conventional periodontal disease management.

If your patients only knew

The wound surface of moderate periodontitis in the entire oral cavity equals the size of the palm of a hand. No wonder it affects the entire immune system, often with dramatic effects on the body as a whole.

Four out of five patients suffer from a form of periodontitis (50 percent severe).

If they knew that periodontitis is the most common cause of tooth loss, wouldn’t they ask for a way to prevent it?

If they knew too, come loose with the withdrawal of bone tissue. According to EMS, regular prophylactic treatment with the original Flow Method is proven to prevent peri-implantitis and its costly aftermath.

Thus, the implant patient is and continues to be a patient, too.*

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, Inc., after spending the past decade responsibly 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.

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.1-5

Milestone’s new technology incorporates visual and audible real-time feedback, giving clinicians an unprecedented level of control and information when performing a dental injection. The Wand/STA replaces the antiquated heavy metal dental syringe with an ultra-lightweight disposable handpiece weighing less than 10 grams for superior ergonomics and tactile control. The experience for both patient and dentist is one that is significantly less stressful.6

Milestone Scientific, Inc. created and defined a new category of dental instruments called C-CLAD (Computer-controlled Local Anesthetic Delivery) systems.

These are the only dental instrument technologies that have the published scientific data that substantiate the claim of eliminating or reducing pain perception when performing a dental injection.7 8

This technology has undergone rigorous testing and continues to be validated 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 injections were also introduced to dentistry.9 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.10

Subsequently, Friedman and Hochman introduced a second injection, named the palatal-approach anterior superior alveolar (P-ASA) nerve block,11 which pulpal and soft-tissue anesthesia of the central and lateral incisors are achieved by a single palatal injection.12

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.13

Fig. 1: Perio-Flow hand-piece and nozzle for subgingival use. (Photos/Provided by EMS)

Fig. 2: Wound surface of moderate periodontitis in the entire oral cavity.

Fig. 3: Implants are a poor investment without regular periodontal disease management.

* German Oral Health Survey, 2006

Solving one of dentistry’s challenges: fear of injections

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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.
Holding the Wand handpiece, with a pen-like grasp allows the clinician to easily rotate while simultaneously moving the needle forward, increasing accuracy by decreasing needle deflection.15

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.

References

Air-Flow® Kills Biofilm

Air-Flow® Perio-Flow®

The new Air-Flow Handy Perio gets rid of the enemy – with gentle action and utmost precision

Together with the Original Air-Flow Powder Perio, the new Air-Flow Handy Perio has unique Perio-Flow nozzle that.Trims down biofilm, even in the deepest periodontal pockets.