A breakthrough new orthodontic product line — SeLECT Defense™ — with implications for improved oral hygiene was released by ClassOne Orthodontics during the AAO Annual Session in Boston, with an international launch scheduled for July 1.

Product development — Texas teamwork

In close collaboration with ClassOne Orthodontics, the revolutionary product line was developed and patented by researchers at Texas Tech University and Texas Tech University Health Sciences Center in Lubbock, Texas, through licensing and co-development with Selenium, Ltd., and is now marketed exclusively by ClassOne Orthodontics.

“SeLECT Defense is the next big advance in orthodontic treatment,” said Kenny Gallagher, president of ClassOne Orthodontics. “Research shows that parents and their children are concerned about oral hygiene during orthodontic treatment. This product is going to virtually alleviate that concern.”

Product performance

SeLECT Defense technology is used in orthodontic treatment to enhance brackets, ligature ties and closing chain to help reduce plaque buildup and improve oral hygiene.

The patented formula also is mixed in with adhesives, cements and primer to prevent tooth decalcification or demineralization. SeLECT Defense products do not require the doctor or staff to perform any special steps when applying them to patients — they are used exactly as standard orthodontic products.

In laboratory tests, SeLECT Defense technology has proven to dramatically reduce microbial development, commonly known as plaque, and eliminate the appearance of white spots, which can form during orthodontic treatment.

University of Texas Health Science Center study

Researchers at the University of Texas Health Science Center at San Antonio, Texas, conducted a 28-day mouth-simulation study of products with SeLECT Defense to determine the effectiveness of preventing microbial formation on teeth.

The results were extraordinary. SeLECT Defense technology offered 100 percent prevention of the development of clinically visible white spot lesions around orthodontic brackets with elastomeric rings, while 40 percent chlorhexidine varnish, a commonly used coating, offered limited protection.

Microscopic examination of the teeth surfaces showed that SeLECT Defense technology reduced enamel demineralization (or white spot formation) around orthodontic brackets by 86 percent when the tooth is brushed twice daily and by 80 percent when the tooth is not brushed.

By comparison, the application of 40 percent chlorhexidine reduced demineralization only by 60 percent even when the teeth are brushed and by 66 percent without brushing.

Furthermore, SeLECT Defense technology was not removed by tooth brushing within the period of the study.

Regulation

ClassOne received FDA clearance in July 2008 to market SeLECT Defense.

Leading orthodontists participation

In developing the product, ClassOne invited some of the country’s leading orthodontists to take part in a SeLECT Society Advisory Committee to provide expert opinion and direction.

“As an orthodontist, you are always looking for ways to improve the patient experience and outcome,” said Dr. Robert “Tito” Norris, DDS, of San Antonio. “I am very excited about the potential this product has to improve oral hygiene in my patients during orthodontic treatment.”

For more information, call (800) 343-5291 or visit www.selectdefense.com.

ClassOne Orthodontics’ new technology helps reduce plaque buildup

tops renames practice management system

topsXtreme becomes topsOrtho

tops” recently announced a new name for its orthodontic practice management system.

“Tops will continue to offer the fast, stable and secure software known and loved by orthodontists and their staffs,” said tops Founder and CEO Dr. Mark Sanchez. “But we think ‘ortho’ provides a better idea of what our product does.”

tops also has freshened up its company and product logos and recently launched a new Web site, www.topsOrtho.com.
Myofunctional Research Co. turns to Class II interceptive appliance

One would think there is little left to accomplish for Myofunctional Research Co. (MRC), after having produced a wide range of myofunctional orthodontic appliances and changing the way orthodontic treatment is performed. MRC appliances, including the T4K®, the TRAINER System®, the 4-Braces® and the MYOBRACE®, cater to children of all ages.

The Japanese Journal of Clinical Dentistry for Children recently ran an 18-page article on the T4K appliance. The study showed the appliance can treat many different malocclusions without the use of fixed appliances. The common results in the cases published showed anterior arch development, opening of a deep bite, Class II correction and improved anterior dental alignment. This concurs with the articles published by Dr. German O. Ramirez-Yañez, DDS, MDSc, PhD, on cases from other ethnic groups.

What about Class III?

For many years, Dr. Chris Farrell, BDS (Sydney), founder and CEO of MRC, had been asked by dentists and orthodontists to develop a Class III appliance. The T4K and Infant Trainer had proven to be effective in very early Class III correction, but the maxillary development and anterior cross-bite correction was not quite complete — usually requiring further maxillary expansion to obtain a positive anterior overjet.

In 2007, Dr. Farrell responded to this demand with the development of the appliance for interceptive Class III correction: the i-3™. This incorporated the well-known principles of the Frankel appliance as well as unique design elements for ease of use.

Two design aspects were included — a Frankel cage using MRC’s patented inner frame technology and a tongue raiser to force the tongue into the maxilla. The primary cause of most Class III is a lowered tongue position, which drives excessive mandibular growth.

Two years ago, the i-3 was released, and practitioners were instantly reporting delight at how well it corrected a Class III malocclusion in the late primary to early mixed dentition. This confirmed the primary etiology of Class III is not genetic mandibular overgrowth, but lowered tongue posture — a theory already understood by a minority.

CDEO Arturo Alvarado Rossano, specialist and professor in orthodontics and prosthetics craniofacial orthopedics in the faculty of dentistry, Universidad Nacional Autónoma de México, was the first to research the i-3, and he published the first case study in 2008.1

Dr. Alvarado and others started using the i-3 on secluded Class II cases with deficient maxillary development. They experienced successful results in treating Class II correction as well as Class III. This discovery then precipitated the development of the new i-2™ appliance.

Interceptive treatment for Class II — the i-2

The INTERCEPTIVE SERIES™ appliances by MRC are designed to be used around the time of a child’s most rapid growth spurt — described by Dr. Robert Ricketts as ages 5–8.

The i-2 targets high sides and a Frankel inner frame, which actively expands the maxillary arch form. The tongue raiser, a feature shared with the i-3, actively raises tongue posture in conjunction with the tongue tag, which is common to all MRC appliances incorporating the Myofunctional Effect™.

For more extreme Class II malocclusion, there is the extended lower flange and lip bumper. This is an improved feature to exploit another of Frankel’s ideas from the FR-II. This bumper extends further into the sulcus than the TRAINER appliances to deactivate the lower fibres of the orbicularis oris. Class II malocclusions typically have strong overactive musculature in the mentalis area. The i-2 targets this with the extended lip bumper.

Farrell notes: “It is always interesting developing appliances for more specific goals such as Class III and Class II. Finding that sound understanding and role of the oral musculature, tongue and mode of breathing allows for a very effective appliance when combined with the world-leading CAD design technology MRC has pioneered during the last 20 years.”

An increasing demand from orthodontists and dentists worldwide for more effective and easier to use (myo)functional appliances has driven MRC to lead the way with a comprehensive range of appliances for all ages and all malocclusions. MRC has recently shifted its focus into practice management systems driven MRC to lead the way with a comprehensive range of appliances for all ages and all malocclusions.

ClearCorrect, Inc., recently began the national rollout of its FDA-cleared transparent orthodontic aligners, also known as clear braces or invisible braces. The company is supporting the rollout with a series of local hands-on certification workshops for orthodontists. ClearCorrect provides clinicians with the following advantages:

- Developed by leading dentists in clear aligner orthodontics
- Lower lab fees
- No midcourse correction fees
- No refinement fees
- All treatment products include initial retention at no extra charge
- Superior training and certification
- Responsive customer service

The company has carefully prepared for the launch by developing an informative and user-friendly Web site, www.ClearCorrect.com, which has sections for clinicians and patients alike.

The ClearCorrect certification workshops are scheduled throughout the country so orthodontists can attend without losing valuable time in their practices. Upon completing the course, clinicians are not only certified as official ClearCorrect providers, but they earn eight hours of continuing education credits as well. For experienced ClearCorrect practitioners seeking a fast track to certification, there are one-hour online Webinars available.

For a schedule and to enroll online, visit www.clearcorrect.com/doctors/becomeaprovider.html.

References