A new solution for dentin hypersensitivity

By Fred Michmershutzen, Online Editor

In an interview with Dental Tribune, Dr. Fotinos S. Panagakos, director of clinical research and strategy within the Research and Development division of Colgate-Palmolive, discusses dentin hypersensitivity, its effect on patients and the dentists who treat them — and a new product that can help alleviate the condition.

How did you get interested in the area of dentin hypersensitivity?
The Colgate-Palmolive company has been very interested in the area of dentin hypersensitivity for many years. We have had a potassium-based sensitivity toothpaste available in most countries for consumers to alleviate the pain associated with dentin hypersensitivity. Recently, Colgate launched a new dentin sensitivity product, Colgate Sensitive Pro-Relief Paste, based on the Pro-Argin® technology. The Pro-Argin technology consists of arginine, a naturally occurring amino acid, and insoluble calcium in the form of calcium carbonate.

These ingredients are delivered in a prophylaxis paste containing a mild abrasive system and can be applied with a prophylaxis cup or a cotton-tipped applicator to teeth that exhibit dentin hypersensitivity.

Mechanism of action studies have shown that this technology physically seals dentin tubules with a plug that contains arginine, calcium carbonate and phosphate. This plug, which is resistant to normal pulp pressures and to acid challenge, effectively reduces dentin fluid flow and thereby, reduces sensitivity.

Recently, a number of studies have been published supporting the launch of this new product. Laboratory tests demonstrating the product’s mode of action, as well as clinical trials demonstrating instant and long-lasting relief of dentin hypersensitivity, have been presented to the dental profession as evidence that the Pro-Argin technology provides instant and lasting relief of dentin hypersensitivity.

The reader can access the full range of research studies on the Colgate dental professional Web site, located at www.colgateprofessional.com.

Can you please explain what causes dentin hypersensitivity and, specifically, what is going on with a patient biologically?
Dentin is normally covered by enamel, cementum, and periodontal ligament tissue. Due to any number of factors, including abrasion or periodontal disease causing gingival recession or erosion removing the enamel, the underlying dentin and dentin tubules can become exposed.

An external stimulus — such as a change in external temperature or air movement — or a physical stimulus can cause discomfort for the patient. The external stimulus is usually transitory and the discomfort subsides shortly after the stimulus is removed.

The accepted theory of how dentin hypersensitivity pain is transmitted suggests that pressure or ionic changes in the fluid that exists in the dentin tubules stimulates the pain experienced by the patient. This is often referred to as the “hydrodynamic theory.”

Inside the dentin tubule, a change in osmotic pressure causes fluid movement, which is transmitted as a stimulus to the odontoblastic process and fires the afferent nerve ending in the dentin tubule.

Please describe how this condition affects patients — and how it affects the dentists who treat them.
Dentin hypersensitivity is growing in incidence and is often a chief concern among patients. Dentin hypersensitivity’s main effect on individuals is the impact on quality of life. Patients have to avoid certain foods and beverages that may trigger a painful response, thus reducing the type of foods and drinks one can enjoy.

In the dental office, what is normally a routine visit may end up being a very uncomfortable appointment for a patient with dentin hypersensitivity. Simple procedures, such as scaling and a prophylaxis, may be painful. And, at times, the pain associ...
CADapalooza '10
www.cadapalooza.com

Dallas, TX / June 17-19, 2010
THE BIGGEST SHOW IN DENTISTRY!!

See dentistry like never before – bigger and better than ever on the world’s largest high definition screen! Join your peers in what will be the event of the year in CAD CAM Dentistry as you sit in comfort at the all-new colossal Cowboys Stadium and see top visionaries in business and dentistry as they present current innovations and future applications in CAD CAM Dentistry.

Visit cadapalooza.com for more information.
32A  Webinar Preview

DENTAL TRIBUNE | FEBRUARY 2010

Dentin Hypersensitivity — New Management Approaches

TUESDAY, MARCH 30, 2010
7:00PM (EST)

1 CE CREDIT

Featured speaker:
Fotinos S. Panagakos, DMD, PhD
Director of Clinical Research Relations and Strategy
Colgate-Palmolive Company

Dentin hypersensitivity continues to be a problem for patients and practitioners alike. The increase in erosion, patient aging and recurrences, and periodontal disease all have resulted in an increased occurrence of dentin hypersensitivity. Correct diagnosis and effective treatment are critical to relieving a problem, which can seriously impact a patient’s quality of life.

FURTHER DETAILS AND REGISTRATION AT WWW.DTSTUDYCLUB.COM

INTRODUCING COLGATE® SENSITIVE PRO-RELIEF™ DESSENSITIZING PASTE WITH PRO-ARGIN™ TECHNOLOGY

Learn about Colgate’s latest breakthrough technology and the science behind the treatment of dentin hypersensitivity in this FREE CE Webinar.

Colgate
YOUR PARTNER IN ORAL HEALTH

www.colgateprofessional.com