Focus: Dental Hygiene Therapies & Treatments





Managing Pathogenic Biofilms to Improve Periodontal Therapy Outcomes

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Oral health therapies are constantly evolving, and as new research emerges it presents us with an opportunity to evaluate our current methods of assessment and treatment to ensure that we are serving our clients to the best of our ability.

In November 2016, Bradley Bale, Amy Doneen, and David Vigerust published a paper that established a relationship between specific oral pathogens and arterial disease.¹ Their review demonstrates the need to properly assess risk factors and evaluate our current methods of diagnosis and treatment. It is no longer acceptable to assess periodontal disease based on clinical signs alone.

Periodontitis is one of the most common, chronic inflammatory conditions with associations to systemic diseases.^{2,3} Therefore, it is our obligation as dental health professionals to understand and address the multifaceted nature of this disease and the risk specific periodontal pathogens pose.

Halitosis affects 50% of the population to varying degrees. Although multifactorial in origin, 90% of breath odour is caused by the same pathogens that cause periodontal disease, but manifests with a significant level of volatile sulfur compounds.⁴ Treatment can be complex. Pathogens reside on the tongue, gingiva, in periodontal pockets, and tonsillar areas. Therefore, treatment could be enhanced by a method that targets whole mouth biofilm. When indicated, an OraVital[®] targeted prescription rinse may reduce halitosis by 80% and bleeding by 87%, and may shrink periodontal pockets by 1 mm to 2 mm.⁵ OraVital's rinses are compounded using various antibiotic/antifungal combinations, including metronidazole, tetracycline, amoxicillin. and/or azithromycin in combination with nystatin. Both independent dental hygiene clinics and dental practices are now utilizing OraVital's medications.

BACTERIAL TESTING

As a part of assessment, DNA testing can be added as a diagnostic tool and provides information on a client's pathogen profile and load.⁶ These valuable data can guide the development of a personalized halitosis or periodontal therapy treatment plan. OraVital's BiofilmDNATM testing method collects samples from the saliva, supragingival and subgingival biofilm, and the tongue. The analysis reveals the levels of specific pathogens and the overall biofilm burden.

BiofilmDNA[™] tests for the following oral pathogens and yeast:

- Red Complex: Porphyromonas gingivalis, Treponema denticola, and Tannerella forsythia
- Aggregatibacter actinomycetemcomitans
- Orange Complex: Peptostreptococcus micros and Fusobacterium nucleatum
- ► Streptococcus mutans
- Candida albicans

In addition to biofilm testing, to formulate the best treatment plan, a proper assessment should also include medical and family history, radiographs, periodontal charting, bleeding on probing, papillary bleeding score, full-mouth disclosing, and evaluation of all risk factors.

REDUCING THE BIOFILM BURDEN WITH THE ORAVITAL® SYSTEM

The OraVital System offers a unique, predictable treatment modality to add to your non-surgical periodontal therapy options. Bacterial DNA testing used in conjunction with a clinical risk assessment will help to determine an appropriate course of action that may include a regimen of particulate prescription antibiotic/antifungal and antimicrobial rinses to attack identified contributing factors. This treatment may be used with clients who have gingivitis, periodontitis, peri-implantitis, and halitosis.

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CONCLUSION

According to the American Academy of Periodontology, "Treating inflammation may not only help manage periodontal diseases but may also help with the management of other chronic inflammatory conditions."⁷ Incorporating the OraVital system into your practice provides you with another tool in your toolbox to help shift the biofilm burden, improve periodontal health and halitosis concerns while reducing bleeding, inflammation, and systemic risk.

Disclosure: The authors are both clinical coaches/ trainers for OraVital Inc.

BiofilmDNA™ Sample Report







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