

No Single “Definitive” Periodontal Therapy

Michael Sonick, DMD; Debby Hwang, DMD; Ray C. Williams, DMD; and Barry P. Levin, DMD

Q: How would you define “definitive” periodontal treatment?



Dr. Sonick and Dr. Hwang

A: No one definitive periodontal therapy exists. Periodontitis, like its insidiously debilitating counterparts—diabetes and cardiovascular disease—often progresses unnoticed and has no cure. There is, however,

well-tested treatment that arrests active infection and steadies the patient’s subsequent immune response. Such management maintains teeth with a high degree of predictability, as long-term studies attest.¹⁻³

Such a regimen begins with nonsurgical therapy encompassing amendment of risky habits (eg, tobacco use), stabilization of contributing metabolic ailments (eg, diabetes), oral hygiene instruction, and scaling and root planing. Any residual probing depths greater than or equal to 5 mm—particularly concurrent with radiographic infrabony defects—may justify surgical intervention in the form of the modified Widman flap, osseous recontouring, or guided tissue regeneration with membrane and graft material. Many adjuncts to the above procedures purport to dampen down the bacterial load (local or systemic antibiotics), inhibit self-destruction by collagenases (subantimicrobial dose doxycycline), or stimulate host tissue renewal (a myriad of growth factors and

bone anabolic agents). These modifiers show promise in immunocompromised patients and those with certain strains of bacteria, but only when combined with conventional mechanical remedies.

It is important to note that any improvement garnered from treatment mandates frequent maintenance and a lifelong commitment by the patient to continue care. Without vigilant monitoring and removal of offending microbes, the disease reasserts itself.⁴ Proper diagnosis—whether performed at the initial examination or at a recall visit—is imperative. According to a recent survey, one out of three dentists never probed, and two out of five dentists never examined the radiographic periodontal architecture.⁵ There are very good, lasting managements for periodontitis—even severe cases—but first the disease must be identified. The periodontal probe must be as indispensable as the explorer. Otherwise, the infection advances and triggers acute pain or swelling, deterioration of systemic conditions, and

tooth loss—all of which take psychological, physical, and monetary tolls.



Dr. Williams

A: This is a timely question, given that dentistry—and more specifically, periodontol-

ogy—is currently conducting “therapy” or “intervention” trials to evaluate the effect of periodontal treatment not only on the periodontal condition but also on overall health. Since 1989, dentistry has examined the role of oral health in contributing to overall health. Because clinicians and investigators have discovered significant relationships between the presence of periodontal disease and increased risk for certain systemic conditions—such as cardiovascular disease, adverse pregnancy outcomes, and diabetes—a logical question has been, “If you treat periodontal disease, is the risk for certain systemic conditions reduced?” Does periodontal therapy, for example, have an effect on the diabetic state of a patient or on the incidence of adverse pregnancy outcomes?

We are learning that this is not an easy question to answer. It seems increasingly clear that there are many differences among individuals with regard to their susceptibility to periodontal disease and their response to therapy. There are also differences between groups of patients. For example, therapy for periodontal disease in pregnant women may be quite different than therapy for periodontal disease in an age-matched group of non-pregnant women. Non-pregnant women may respond well to scaling, root planing, and good home care, whereas pregnant women may barely respond to that approach.



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With this in mind, what constitutes “definitive” or “appropriate” therapy in one group versus another? I think an understanding of “definitive” or “appropriate” therapy will emerge as the dental profession focuses on specific outcome measures to be evaluated, such as inflammation, bleeding, probing depths, and rate of alveolar bone resorption. These outcome measures, coupled with specific patient groups, should provide clues and guidelines for how to achieve “definitive” periodontal therapy in individual patients.



Dr. Levin

A: Accurate diagnosis of periodontitis—according to the American Academy of

Periodontology (AAP) classification by Armitage in 1999⁶—must precede the course of “definitive” periodontal treat-

ment. All contributing factors must be identified and accounted for, in terms of formulating a definitive treatment plan. The periodontist must identify the local, systemic, and external factors pertinent to the patient’s disease. Failure to do so will likely result in suboptimal therapy results.

Local factors such as plaque, calculus, traumatic occlusion, faulty restorations, improper contacts, etc, must be addressed and treated in the initial, nonsurgical phase of therapy. This stage of treatment normally includes oral hygiene instructions, scaling and root planing, simple restorative therapy, and removal of hopeless teeth. It also affords the periodontist the opportunity to assess the patient’s level of motivation and compliance with treatment.

Systemic factors, such as any disease known to compromise immune response to periodontal pathogens and normal tissue physiology, must be diagnosed and

treated by the appropriate physician. Such conditions would include diabetes and autoimmune diseases such as systemic lupus, lichen planus, pemphigoid, and pemphigus vulgaris. Other medical conditions requiring patients to take such medications as anti-coagulants, anti-hypertensives—some of which are known to cause gingival hyperplasia—and medications known to cause xerostomia, must be identified, and the periodontist should consult with the patient’s physician. Failure to perform this step will often result in frustration when local periodontal therapy fails to achieve satisfactory resolution of inflammation. Identifying these co-morbidities will also help in establishing a periodontal treatment plan and maintenance program.

External factors, such as smoking and emotional stress, must also be identified and should be eliminated or minimized in the early, nonsurgical phase of therapy. A

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smoker who is unwilling to stop smoking may find a different surgical treatment plan presented after initial therapy. Whereas a non-smoker may respond favorably to regenerative therapy such as bone grafting, membrane therapy (GTR), and/or application of growth factors, smokers may be better served by resective therapy aimed at pocket reduction, elimination of osseous defects, and extraction of questionable teeth. Impaired vascularity, cellular chemotaxis, and wound healing may lead to poor outcomes using regenerative surgery and non-definitive treatment.

With the understanding that periodontal disease is a chronic, multifactorial disease with no known "cure" at this time, periodontists must target their therapeutic goals toward arresting active inflammatory processes, thus providing patients with a functional, esthetic, and healthy dentition. This should include educating patients that their disease may "flare up" at times

in the future, and instructing them to take steps to minimize contributing factors that can raise their susceptibility level. Such steps include routine maintenance appointments, optimal home care regimens, regular restorative care and medical evaluations, and reducing stress.

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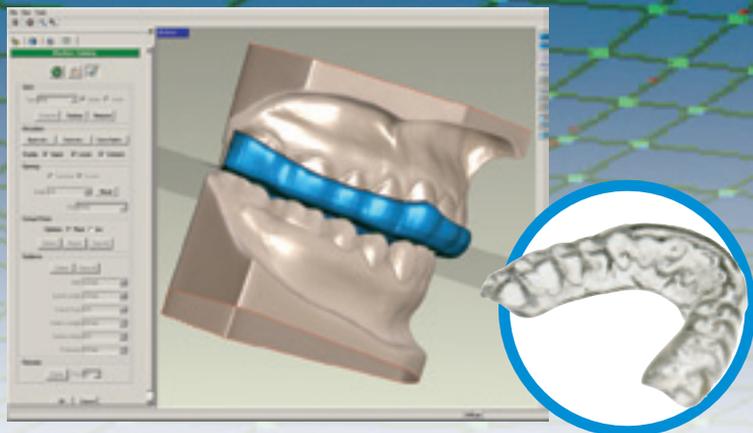
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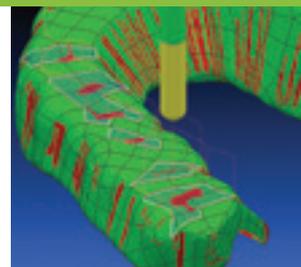
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