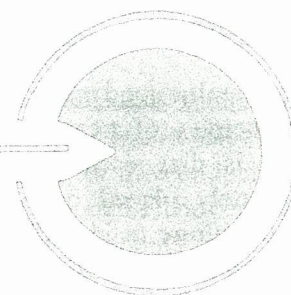


# BIO-PROBE

# NEWSLETTER



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## PERIODONTAL THERAPY GOOD MEDICAL PRACTICE?

The *American Academy of Periodontology* states: "Periodontal (gum) diseases, including gingivitis and Periodontitis, are serious infections that, left untreated, can lead to tooth loss. The word 'periodontal' literally means 'around the tooth'. Periodontal disease is a chronic bacterial infection that affects the gums and bone supporting the teeth." [<http://www.perio.org/consumer/2a.html>]

The periodontal academy web site goes on to say: "Periodontists do know that periodontal disease is a bacterial infection, and all infections are cause for concern. Periodontal bacteria can enter the blood stream and travel to major organs and begin new infections." [[/consumer/mbc.top2.htm](http://www.perio.org/consumer/mbc.top2.htm)]

The same site further states: "Your periodontist may recommend periodontal surgery. Periodontal surgery is necessary when your periodontist determines that the tissue around your teeth is unhealthy and cannot be repaired with non-surgical treatment. Following are the four types of surgical treatments most commonly prescribed: Pocket Reduction Procedures, Regenerative Procedures, Crown Lengthening, Soft Tissue Grafts."

Here, then, are the facts on Periodontal Disease, according to the *American Academy of Periodontology*:

1. It is an infection caused by bacteria (actually, use of the term micro-organisms would be more accurate, as amoebae, yeasts and even viruses are frequently involved).
2. The infection site is in the tissues around teeth.
3. It is mostly chronic in nature.

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Let us examine good medical practice, as applies to the principles of treating infectious pathology. Patient is diagnosed with pneumonia, and is immediately placed on anti-microbial therapy. Sputum culture to identify the organism and the specific anti-microbial is utilized. There is no consideration of surgical removal of infected lung tissue!

Perhaps this is not a fair analogy. Consider an infection anywhere in the body; kidneys, throat, sinuses, toenails, etc. These infections are all addressed according to the principles of good medical practice!

1. Identify the pathogenic micro-organism causing the infection. This entails culturing, when possible.
2. Attempt to destroy, or at least control, the identified micro-organism with the most appropriate anti-microbial agent available.
3. Track the progress of the infection, and the therapy utilized. (In dental therapy, this procedure would entail the use of a microscope. How else could the progress of the infection be tracked?)

Surgical removal of infected tissue is utilized only as a last, and usually life saving, resort and only when accompanied with the highest degree of anti-microbial therapy and under the most sterile operating conditions possible. In fact, with rare exceptions, surgical removal of infected tissue is considered only in conditions of appendicitis, gangrene, or perhaps chronic tonsillitis. The first two of these are critical life saving conditions, and the last is a decision of last resort. Anti-microbial therapy is always used in conjunction.

In traditional periodontal surgery, are good medical practice requirements followed? Are the micro-organisms brought under control before the surgery is conducted? Although there is some movement to utilize antibiotic impregnated cords and chips in the gingival crevice, no attempts are made to determine the status of the infection before the tissues are surgically removed. If antibiotic therapy is utilized, it starts one hour before the appointment with a bolus dose, and continues for 7-10 days thereafter. This is obviously intended to prevent adverse systemic events (the "focal infection" phenomenon that the dental profession maintains does not exist)

from a bacteremia, rather than a purposeful regimen to control the infection at the surgical site.

Periodontitis, by definition, entails the presence of micro-organisms in the infected alveolar bone. Surgical removal of some of the infected gingiva and alveolar bone in no way ensures that the micro-organisms are eliminated from the infected area, or at least reduced to a level the body's defenses can manage. Can this be considered good medical practice?

Perhaps this is the reason that so many periodontal patients require frequent re-treatment. Every general dentist has seen many patients who have experienced periodontal surgery at least once, more often two to four times, and who have vowed never to do so again.

Let us next examine the traditional "conservative" approach to periodontal therapy. The periodontal academy web site noted above states that plaque is the main cause of periodontal disease, which is a contradiction in itself. If the disease is truly an infection, as they state, then the cause has to be micro-organisms. These micro-organisms can be found in the plaque, but not exclusively there. Micro-organisms must be in the tissues to cause the infection.

However, removal of the plaque source of the infectious agents cannot be criticized. Neither can the removal of tartar (dental calculus), provided that tooth structure is not damaged in the process. The traditional procedure of "root planing" must be considered to be highly questionable. Research previously noted in this newsletter [BPNL, 15(5):3, Aug 1999] clearly demonstrates that the root planing process opens the dentin tubules to invasion of organisms from the oral cavity and that this invasion progresses to the pulp canals of the teeth. How can this be considered good medical practice? In the existing conservative standard of care for periodontal therapy, no attempt is made to eliminate or control the pathogenic organisms before the therapy is initiated. Invasive procedures are initiated on infected, sometimes highly infected, tissues. Can this be considered good medical practice?

In the therapy for periodontal infections, good