

## Parameter on “Refractory” Periodontitis\*

*The American Academy of Periodontology has developed the following parameter on the treatment of “refractory” periodontitis. Patients should be informed of the disease process, therapeutic alternatives, potential complications, expected results, and their responsibility in treatment. Consequences of no treatment should be explained. No treatment is very likely to result in further progression of the disease and eventual tooth loss. Given this information, patients should then be able to make informed decisions regarding their periodontal therapy. J Periodontol 2000;71:859-860.*

### KEY WORDS

Disease progression; periodontitis/complications; patient care planning; periodontitis/therapy.

### CLINICAL DIAGNOSIS

#### Definition

“Refractory periodontitis” is not a single disease entity. The term refers to destructive periodontal diseases in patients who, when longitudinally monitored, demonstrate additional attachment loss at one or more sites, despite well-executed therapeutic and patient efforts to stop the progression of disease. These diseases may occur in situations where conventional therapy has failed to eliminate microbial reservoirs of infection, or has resulted in the emergence or superinfection of opportunistic pathogens. They may also occur as the result of a complexity of unknown factors which may compromise the host’s response to conventional periodontal therapy. Such conventional therapy frequently includes most, but not necessarily all, of the following:

1. Patient education and training in personal oral hygiene; behavior modification.
2. Thorough scaling and root planing to remove microbial deposits and eliminate anatomical root features that might act as reservoirs for microbial infection.
3. Use of local and/or systemic antimicrobial agents.
4. Elimination or correction of defective restorations and other local factors that might interfere with oral hygiene efforts or act as retention sites for periodontal pathogens.
5. Surgical therapy.
6. Extraction of severely involved teeth.
7. Occlusal therapy.
8. Periodontal maintenance and re-evaluation.

The “refractory” designation can be applied to all forms of destructive periodontal disease that appear to

be non-responsive to treatment; e.g., refractory chronic periodontitis and refractory aggressive periodontitis.

#### Clinical Features

The primary feature of “refractory” periodontitis is the occurrence of additional clinical attachment loss after repeated attempts to control the infection with conventional periodontal therapy. The diagnosis of “refractory” periodontitis should only be made in patients who satisfactorily comply with recommended oral hygiene procedures and follow a rigorous program of periodontal maintenance. “Refractory” periodontitis is usually diagnosed after the conclusion of conventional active therapy.

This diagnosis is not appropriate for patients who:

1. Have received incomplete or inadequate conventional therapy.
2. Have identifiable systemic conditions that may increase their susceptibility to periodontal infections such as diabetes mellitus, immunosuppressive disorders, certain blood dyscrasias, and pregnancy.
3. Have localized areas of rapid attachment loss which are related to factors such as: root fracture, retrograde pulpal diseases, foreign body impaction, or various root anomalies.
4. Have recurrence of progressive periodontitis after many years of successful periodontal maintenance.

### THERAPEUTIC GOALS

The goal of therapy for “refractory” periodontitis is to arrest or slow the progression of the disease. Due to the complexity and many unknown factors, control may not be possible in all instances. In such cases a reasonable treatment objective is to slow the progression of the disease.

\* Approved by the Board of Trustees, American Academy of Periodontology, May 1998.

## TREATMENT CONSIDERATIONS

Once the diagnosis of “refractory” periodontitis has been made, the following steps may be taken:

1. Collection of subgingival microbial samples from selected sites for analyses, possibly including antibiotic-sensitivity testing.
2. Selection and administration of an appropriate antibiotic regimen.
3. In conjunction with the administration of an antimicrobial regimen, conventional periodontal therapies may be used.
4. Reevaluation with microbiological testing as indicated.
5. Identification and attempt to control risk factors (e.g., smoking).
6. Intensified periodontal maintenance program which may include shorter intervals between appointments with microbiologic testing if indicated (Parameter on Periodontal Maintenance, pages 849-850).

## OUTCOMES ASSESSMENT

1. The desired outcome for patients with “refractory” periodontitis includes arresting or controlling the disease.
2. Due to the complexity and many unknown factors of “refractory” periodontitis, control may not be possible in all instances. In such cases, a reasonable treatment objective is to slow the progression of the disease.

## SELECTED RESOURCES

1. The American Academy of Periodontology. Periodontal diagnosis and diagnostic aids: Consensus report. In: *Proceedings of the World Workshop in Clinical Periodontics*. Chicago: American Academy of Periodontology; 1989;1/23-1/31.
2. Drisko, C. Non-surgical pocket therapy: Pharmacotherapeutics. *Ann Periodontol* 1996;1:491-566.
3. Consensus report on non-surgical pocket therapy: Mechanical, pharmacotherapeutics, and dental occlusion. *Ann Periodontol* 1996;1:581-588.
4. Oshrain HI, Telsey B, Mandel ID. Neutrophil chemotaxis in refractory cases of periodontitis. *J Clin Periodontol* 1987;14:52-55.
5. Magnusson I, Marks RG, Clark WB, Walker CB, Low SB, McArthur WP. Clinical, microbiological and immunological characteristics of subjects with refractory periodontal disease. *J Clin Periodontol* 1991;18: 291-299.
6. Walker C, Gordon J. The effect of clindamycin on the microbiota associated with refractory periodontitis. *J Periodontol* 1990;61:692-698.
7. Gordon J, Walker C, Hovliaras C, Socransky S. Efficacy of clindamycin hydrochloride in refractory periodontitis: 24-month results. *J Periodontol* 1990;61:686-691.
8. Kornman KS, Karl EH. The effect of long-term low-dose tetracycline therapy on the subgingival microflora in refractory adult periodontitis. *J Periodontol* 1982;53: 604-610.
9. Loesche WJ, Syed SA, Morrison EC, Kerry GA, Higgs T, Stoll J. Metronidazole in periodontitis. I. Clinical and bacteriological results after 15 to 30 weeks. *J Periodontol* 1984;55:325-335.

10. Magnusson I, Clark WB, Low SB, Maruniak J, Marks RG, Walker CB. Effect of non-surgical periodontal therapy combined with adjunctive antibiotics in subjects with refractory periodontal disease. I. Clinical results. *J Clin Periodontol* 1989;16:647-653.
11. Lundström Å, Johansson L-Å, Hamp S-E. Effect of combined systemic antimicrobial therapy and mechanical plaque control in patients with recurrent periodontal disease. *J Clin Periodontol* 1984;11:321-330.
12. Hirschfeld L, Wasserman B. A long-term survey of tooth loss in 600 treated periodontal patients. *J Periodontol* 1978;49:225-237.
13. McFall WT Jr. Tooth loss in 100 treated patients with periodontal disease. A long-term study. *J Periodontol* 1982;53:539-549.
14. Slots J, Rams RE. New views on periodontal microbiota in special patient categories. *J Clin Periodontol* 1991; 18:411-420.
15. Pertuiset JH, Saglie FR, Lofthus J, Rezende M, Sanz M. Recurrent periodontal disease and bacterial presence in the gingiva. *J Periodontol* 1987;58:553-558.
16. Adriaens PA, De Boever JA, Loesche WJ. Bacterial invasion in root cementum and radicular dentin of periodontally diseased teeth in humans: A reservoir of periodontopathic bacteria. *J Periodontol* 1988;59:222-230.
17. Telsey B, Oshrain HI, Ellison SA. A simplified laboratory procedure to select an appropriate antibiotic for treatment of refractory periodontitis. *J Periodontol* 1986; 57:325-327.
18. Fine DH. Microbial identification and antibiotic sensitivity testing, an aid for patients refractory to periodontal therapy. *J Clin Periodontol* 1994;21:98-106.
19. Hernichel-Gorbach E, Kornman KS, Holt SC, et al. Host responses in patients with generalized refractory periodontitis. *J Periodontol* 1994;65:8-16.
20. Collins JG, Offenbacher S, Arnold RR. Effects of a combination therapy to eliminate *Porphyromonas gingivalis* in refractory periodontitis. *J Periodontol* 1993;64:998-1007.
21. Nyman S, Lindhe J, Rosling B. Periodontal surgery in plaque-infected dentitions. *J Clin Periodontol* 1977; 4:240-249.
22. Wilson TG, Glover ME, Malik AK, Schoen JA, Dorsett D. Tooth loss in maintenance patients in a private periodontal practice. *J Periodontol* 1987;58:231-235.
23. Haffajee AD, Socransky SS, Dzink JL, Taubman MA, Ebersole JL. Clinical, microbiological and immunological features of subjects with refractory periodontal diseases. *J Clin Periodontol* 1988;15:390-398.
24. Listgarten MA, Lai CH, Young V. Microbial composition and pattern of antibiotic resistance in subgingival microbial samples from patients with refractory periodontitis. *J Periodontol* 1993;64:155-161.
25. Slots J, Emrich LJ, Genco RJ, Rosling BG. Relationship between some subgingival bacteria and periodontal pocket depth and gain or loss of periodontal attachment after treatment of adult periodontitis. *J Clin Periodontol* 1985;12:540-552.
26. Armitage GC. Development of a classification system for periodontal diseases and conditions. *Ann Periodontol* 1999;4:1-6.