Supplement

Parameter on Periodontitis Associated With Systemic Conditions*

The American Academy of Periodontology has developed the following parameter on periodontitis associated with systemic conditions. Patients affected by periodontal disease with concomitant systemic factors should be informed about the significance of the systemic condition(s) to the periodontal disease process. Patients should also be informed of the periodontal disease process, therapeutic alternatives, potential complications, expected results, and their responsibilities in treatment. Consequences of no periodontal treatment should be explained. Failure to treat periodontitis appropriately can result in progressive loss of periodontal supporting tissues, an adverse change in prognosis, tooth loss, and compromise of the dentition. Given this information, patients should then be able to make informed decisions regarding their periodontal therapy. J Periodontol 2000;71:876-879.

KEY WORDS

Periodontitis/diagnosis; periodontitis/complications; periodontitis/therapy; risk factors; systemic diseases; disease progression.

CLINICAL DIAGNOSIS

Definition

A number of systemic factors have been documented as being capable of affecting the periodontium and/or treatment of periodontal disease. Systemic etiologic components may be suspected in patients who exhibit periodontal inflammation or destruction which appears disproportionate to the local irritants. The clinician should be aware of systemic conditions and/or drugs that may be contributing factors to periodontal diseases, and of steps necessary to evaluate them. Periodontal therapy may be modified based on the current medical status of the patients. Periodontal organisms may be the source of infections elsewhere in the body. Therefore, those infections may also affect systemic health.

Patient Evaluation

1. A comprehensive periodontal evaluation should be performed as described in the Parameter on Comprehensive Periodontal Examination (pages 847-848).
2. Conditions which are suggestive of systemic disorders should be identified:
   - A. Physical disabilities;
   - B. Signs or symptoms of xerostomia, mucocutaneous lesions, gingival overgrowth, excessive gingival hemorrhage, or other indicators of undetected or poorly-controlled systemic disease;
   - C. Therapeutic drug use;
   - D. Signs or symptoms of smoking, chemical dependency, and other addictive habits;
   - E. History of recent or chronic diseases;
   - F. Evidence of psychological/emotional factors;
   - G. History of familial systemic disease.
3. Request laboratory tests as appropriate.
4. Referral to or consultation with other health care providers should be made and documented when warranted.

THERAPEUTIC GOALS

The therapeutic goal is to achieve a degree of periodontal health consistent with the patient's overall health status. The treatment outcome of periodontal therapy in the patient with contributing systemic factors may be directly affected by the control of the systemic condition. The systemic and psychological status of the patient should be identified to reduce medical risks that may compromise or alter the periodontal treatment.

TREATMENT CONSIDERATIONS

Patients with systemic conditions that contribute to progression of periodontal diseases may be successfully treated using established periodontal treatment techniques (see Parameters on Chronic Periodontitis, pages 853-858). However, the systemic/psychological status

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of the periodontal patient may alter the nature of therapy rendered and may adversely affect treatment outcomes.

METABOLIC CONDITIONS

Diabetes Mellitus

Patients with undiagnosed or poorly-controlled Type 1 (insulin dependent) diabetes mellitus or Type 2 (non-insulin dependent) diabetes mellitus may be particularly susceptible to periodontal diseases. Conversely, most well-controlled diabetic patients can maintain periodontal health and will respond favorably to periodontal therapy. Treatment considerations for patients with periodontitis associated with diabetes should include:

1. Identification of signs and symptoms of undiagnosed or poorly controlled diabetes mellitus.
2. Consultation with the patient's physician as necessary.
3. Consideration of diagnosis and duration of diabetes; level of glycemic control; and medications and treatment history.
4. Recommendation that diabetic patients take medication as prescribed and maintain an appropriate diet on the day of periodontal therapy.
5. Consideration of adjunctive systemic antibiotics for periodontal procedures if the diabetes is poorly controlled.
6. Attempts to reduce stress/anxiety.
7. Preparation to diagnose and manage medical emergencies associated with diabetes.

Pregnancy

Hormonal fluctuations in the female patient may alter the status of periodontal health. Such changes may occur during puberty, the menstrual cycle, pregnancy, or menopause. Changes may also be associated with the use of oral contraceptives. The most pronounced periodontal changes occur during pregnancy. Treatment considerations for pregnant patients with periodontal disease include:

1. Consultation with the patient's physician as necessary.
2. Consideration of postponement of periodontal treatment during the first trimester.
3. Performance of emergency periodontal treatment at any time during pregnancy.
4. Consideration of deferral of periodontal surgery until after parturition.
5. Performance of periodontal maintenance as needed.
6. Administration of antibiotics and other drugs with caution.
7. Use of local anesthesia in preference to general anesthesia or conscious sedation.

DRUG-INDUCED DISORDERS

Drugs can be a contributing etiologic factor in periodontal diseases. Drugs such as anticonvulsants, calcium channel blocking agents, and cyclosporin may be associated with gingival enlargement. Oral contraceptives may be a contributing factor in alterations of gingival tissues. In addition, drugs can cause xerostomia, osteoporosis, lichenoid reactions, and other hypersensitivity reactions. Treatment considerations for patients affected by drug-induced periodontal disease may include:

1. Consultation with patient's physician as necessary.
2. When possible, baseline periodontal evaluation prior to initiation or modification of drug therapy.
3. Modification of the drug regimen prescribed in consultation with the physician if gingival enlargement or other adverse drug reactions or side effects occur.
4. Surgery as necessary to eliminate gingival enlargement. Patients should be informed that gingival enlargement may recur if drug therapy can not be modified or if adequate plaque control is not achieved and maintained.

HEMATOLOGIC DISORDERS/LEUKEMIA

Hemorrhagic gingival enlargement with or without necrosis is a common early manifestation of acute leukemia. Patients with chronic leukemia may experience similar but less severe periodontal changes. Chemotherapy or therapy associated with bone marrow transplantation may also adversely affect the gingiva. Considerations for patients with hematologic disorders and periodontal disease should include:

1. Coordination of treatment with the patient's physician.
2. Minimization of sites of periodontal infection by means of appropriate periodontal therapy prior to the treatment of leukemia and/or transplantation.
3. Avoidance of elective periodontal therapy during periods of exacerbation of the malignancy or during active phases of chemotherapy.
4. Consideration of antimicrobial therapy for emergency periodontal treatment when granulocyte counts are low.
5. Monitoring for evidence of host-versus-graft disease and of drug-induced gingival overgrowth following bone marrow transplantation.
6. Periodontal therapy, including surgery, for patients with stable, chronic leukemia.

IMMUNE SYSTEM DISORDERS

Some forms of periodontal disease may be more severe in individuals affected with immune system disorders. Patients infected with human immunodeficiency virus (HIV), may have especially severe forms of periodontal disease. The incidence of necrotizing periodontal diseases may increase in the patient with acquired immunodeficiency syndrome (AIDS). Patients who have received organ transplants, are undergoing cancer treatment, or have certain autoimmune diseases may be taking immunosuppressing medications. Special considerations for immune system disorder patients with periodontal disease include:

1. Consultation and coordination of treatment with patient's physician as necessary.
2. Controlling associated mucosal diseases and acute periodontal infections.
3. Administration of systemic or local medications (for example, antibiotics) only if indicated and administered in a manner that avoids opportunistic infections and adverse drug interactions.

OUTCOMES ASSESSMENT

The predictability of the outcome may be enhanced through close medical/dental coordination.

A satisfactory outcome of therapy in patients with systemic disorders may include:

1. Significant reduction of clinical signs of gingival inflammation;
2. Reduction of probing depths;
3. Stabilization or gain of clinical attachment;
4. Reduction of clinically detectable plaque to a level compatible with gingival health;
5. Control of acute symptoms.

Due to the complexity of systemic factors, control of periodontal diseases may not be possible. In such instances, a reasonable treatment objective is to slow the progression of the periodontal disease. Progression of the disease may be characterized by the presence of:

1. Persistent inflammation/infection of the gingival tissues;
2. Persistent or increasing probing depths;
3. Lack of stability of clinical attachment;
4. Persistent clinically detectable plaque levels not compatible with gingival health;
5. Radiographic evidence of progressive bone loss.

In patients where the periodontal condition does not resolve, additional therapy may be required as well as further evaluation of the patient's systemic condition.

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