Retreatment in Periodontal Practice

by

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The diagnosis and treatment of periodontal disease has been well described in the dental literature of the last 25 years. Although techniques vary to some extent, most authors agree as to the objectives and the desired results of therapy. All texts imply that, provided the etiological factors are controlled and periodontal pockets eliminated, the treated dentition can be maintained by regular prophylaxis, if the patient practices adequate plaque control.

Although this premise may be true in general, it is also true that not every patient can be ideally treated. It is also obvious that patients differ greatly in their susceptibility to periodontitis. Some do well in spite of indifferent treatment and oral hygiene whereas others tend to have recurrences of disease despite exemplary care. The practicing periodontist who maintains his own patients and who remains in the same location for a long period, sees many of his treated cases regress, either generally or in certain areas. If he practices in a retirement area he is likely to see patients referred for maintenance who were treated by eminent practitioners and who are again having periodontal problems.

The periodontal literature is strangely silent on this frequent recurrence of periodontal pockets and a philosophy for handling these previously treated cases. The purposes of this paper are to call attention to the fact that the need for retreatment is often encountered and to present some thoughts as to how to meet the problem.

The percentage of treated periodontal patients that regress is difficult to determine. Ramfjord's long-term study indicates that a high percentage develop new pockets in treated areas, regardless of the techniques used in pocket elimination. As a result of this study and wide clinical experience, we must assume that periodontal disease has a tendency to recur and that the periodontist must be alert in detecting the first sign of deterioration among his treated patients.

If the recurrence of periodontitis is common, it is interesting to speculate as to why it has been so neglected in the literature. The reasons must surely include the human tendency to be ashamed of failures and therefore not to report them. The academic periodontist, who contributes most to the literature, has another reason. His time is so taken up in teaching, writing, and research that he has limited opportunity for private practice, and the time spent in practice is usually spent in treating new patients rather than the supervision of his healed patients. The young academic periodontist has still another reason for not reporting failures in treatment. He is often quite mobile, moving from one school to another and may never see his patients following active therapy.

The rapid turnover of patients in our mobile society is an additional complicating factor in determining the degree of success and failure. We may optimistically presume that all of the patients in our closed files represent success, but in reality they also conceal failures.

Finally, it is lamentable that some periodontists do not carefully check their own maintenance patients, but rely too much on their hygienist. Adequate probing and charting is not done and the recurrence of pathosis is overlooked. If the general dentist who referred the patient does the maintenance, supervision of the patient may be no better.

All patients treated for periodontal disease require professional maintenance. The degree of professional care depends on the severity of the original involvement, the skill and motivation of the patient in oral hygiene procedures, and above all, the susceptibility of the patient to periodontal disease. A typical preventive treatment consists of checking plaque control, careful subgingival curettage, and charting of the mouth by the hygienist. The role of the dentist includes examining the occlusion and the curettage of any deepened crevice. It is a rare patient, indeed, that does not have some area that needs special attention. Often one or more deep crevices exist immediately after the original treatment, usually because of the impracticability of achieving complete pocket elimination. Sometimes the price of obtaining a shallow sulcus is too great to pay.

The decision as to whether or not retreatment is necessary should not be made at the preventive maintenance appointment, but should be postponed for 1 to 2 weeks. Often the mouth will look a great deal better at that time and crevicular depth will be less. The improvement is due to the resolution of any edema present and to the increased tone of the gingival unit. It is possible that a patient who is doing poorly only requires more frequent preventive treatments. In some patients an extra session of curettage with the periodontist himself is also desirable every year or two.

The posttreatment sulcus depth of 2 mm or less is an ideal to be pursued, but is not always necessary for maintenance of periodontal health. If the soft tissue is tightly adapted to the tooth, and if the sulcus does not bleed when gently probed, there is no reason why a crevice of several millimeters depth cannot be maintained in health; it does, however, require some curettage during the maintenance treatments. Hirschfeld has reported on many cases treated by his father where the crevice depth is far deeper than ideal but which have remained stable for 40 years or more.

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Criteria for Failure

A treated case that is failing, either generally or in certain areas, is characterized by one or all of the following symptoms:

1. Sulci that bleed when probed. This probing should be done 1 to 2 weeks after a preventive treatment.
2. Sulci that get progressively deeper. This can be determined by comparing sulci depth with previous problings.
3. Bone loss. This can be determined by comparing old and new radiographs that have been properly taken with the paralleling technique. Prichard and Friedman have pointed out the perils of diagnosis by roentgenograms alone, but with these limitations in mind, comparative sets of radiographs provide valuable information.
4. Increased tooth mobility. Gradual increases in tooth mobility values should alert the therapist that the periodontium is undergoing destructive changes.

Frequently maintenance records will show a gradual increase in crevice depth over the entire mouth. This increase may be due to hyperplasia rather than a loss of attachment. Periodontal patients that have had extensive restorative dentistry seem particularly susceptible to an overgrowth of gingival tissue. The usual solution is a gingivoplasty to restore proper architecture and a gingival sulcus that can be cleaned. Hyperplasia is much less frequent when gingival margins of restorations are placed supragingivally. Full crowns with subgingival margins must be skillfully made and properly contoured if they are not to be a menace to periodontal health.

If good records are kept, it is not too difficult to determine whether or not your patients are doing well. A much more difficult situation arises when a fellow periodontist’s patient comes in for maintenance, for records are not easily transferred. Even if they were, it is often difficult for one periodontist to understand the charting and record keeping of another. It is all too easy to call for surgical retreatment of a transferred patient. The patient should usually be treated conservatively for some time until your own criteria of need can be satisfied. Surgery is rarely an emergency. If it is really necessary it should be done after there has been the proper transference of confidence from the original therapist to yourself.

Reasons for Regression After Treatment

The treated patient that has a recurrence of periodontal pathology should ring a warning bell to the alert therapist. Before retreating, every effort must be made to discover what has gone wrong in the general handling of the patient.

Surely the most common cause of failure is the inability of the patient to keep the bacterial population of the crevicular areas at a permissible level. The first step to take in retreatment is to review the patient’s oral hygiene regimen. Additional surgery will accomplish little if this important factor is neglected. Failure to smooth the involved roots during the original treatment is often a cause of pocket recurrence. Even a good brushing and flossing technique will not keep incompletely treated roots free of significant amounts of bacterial irritants. Additional root planing will often result in enough improvement to make surgery unnecessary.

The choice of an improper surgical technique will usually result in a relative failure. The inadequacies of the gingivectomy have been well documented. The failure to properly contour bone in osseous surgery can also result in rapid pocket recurrence. When failure is due to poor surgical techniques, it is obvious that a properly executed surgical procedure is indicated. Ochsenbein and Ross and Prichard have documented many instances of retreatment of this nature that have successfully reversed the course of a failing case. The therapist, however, must always ask himself if he can improve the prognosis by retreating surgically or whether the patient would be better served by maintaining the area by curettage. One should not reoperate an area just because it does not conform to an ideal. Occasionally a poorly executed technique will produce a good result. Even reverse architecture can be compatible with periodontal health in some patients. The therapist must be sure that periodontal health is really failing.

Certain types of periodontal disease appear to have an occlusal factor which must be controlled. Equilibration, the control of bruxism, and possibly splinting must be accomplished in such cases before considering additional surgery. Further surgery performed before the occlusal factor is controlled and before the supporting tissue has had time to respond to occlusal therapy will accelerate the disease process. Nyman and Lindhe have recently suggested that mobility of teeth or groups of teeth will not lead to further bone destruction if pockets have been eliminated. Increased mobility, however, is a danger sign.

Occasionally a case will fail for reasons that at this time can only be ascribed to systemic factors. There seem to be two types of patients that fall in this category. In the first type there is a rapid, general vertical deterioration or loss of bone. The second type of patient is characterized by a slow horizontal loss of bone and simultaneous recession of the gingiva with little pocket formation. In neither type is retreatment generally successful. Long-term tetracycline therapy gives some promise of helping the first variety, but generally the periodontist must decide on either extractions or “giving ground as slowly as possible.”

On occasion, teeth that have an extremely poor long range prognosis are treated in the original surgical procedure. There are many advantages to this approach; one is that the periodontist has the opportunity to evaluate the response of the mouth as a whole before
committing the patient to a restorative program. Such questionable teeth may stay in reasonable health for many years and postpone the need for fixed or removable prosthesis. The young periodontist should be careful to get the history of such teeth if he encounters them in a previously treated patient who has been referred to his office. He may be tempted either to extract or retreat teeth that are really periodontal successes rather than periodontal failures. Sternlicht⁸ has recently described such an incident. He has been one of the few to realistically evaluate the problems of long-term maintenance. Occasionally a successfully treated case will show pocket formation in an area that was not previously involved. This type of situation should be handled as if the patient was initially reporting for treatment.

The psychological preparation of the patient who needs surgical retreatment is very important. No matter how smoothly the original procedure went, the patient will dread, and to a degree, resent additional surgical therapy. During the original treatment program, the prudent therapist should prepare each patient for the possibility of additional treatment in the future. The patient should be informed that not only do we not know all of the etiological factors that produce periodontal disease, but that we cannot always eliminate the known factors.

When recurrence of disease is detected at a maintenance treatment, the patient is so informed. He is told that nonsurgical procedures will be first tried to improve the threatened areas, but that future surgical intervention will possibly be necessary. A patient will appreciate the efforts of the therapist to avoid additional surgery and, if the initial methods fail, he will be better prepared to accept the procedure.

**Summary**

Periodontal disease has a greater or lesser tendency to recur. The therapist controls rather than cures the condition. Careful maintenance is as important as skillful original treatment if periodontal health is to be maintained. At the time of the original treatment, every patient should be informed that retreatment of some type is occasionally necessary.

Patients with recurrence of disease should be treated as conservatively as possible and every effort should be made to find the cause of failure. Surgical retreatment should be done only after a reasonable effort has been made to improve the situation by other means. The deepened crevice that does not bleed when probed and is not accompanied by bone loss does not provide justification for surgical retreatment. This report has reviewed some of the reasons for treatment failures and has presented a philosophy for their management.

**References**


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**In Memoriam**

**Leo J. Schoeny**

**October 15, 1896—August 10, 1976**

Dr. Leo J. Schoeny, a member of the Academy since 1938, died August 10, 1976. He received his D.D.S. from Loyola University School of Dentistry (New Orleans) in 1920 and practiced in New Orleans until he retired in 1973. He was the author of several professional publications and served on many boards and committees of civic, sports, and professional organizations in New Orleans.