It is challenging to discuss contraindications for root coverage procedures, since the line between indications and contraindications is not clearly delineated. Periodontal plastic surgery is an art as much as a science, and a skilled practitioner can obtain more satisfactory results than those with less skill and experience. The reality is that there are more relative contraindications than absolute contraindications for root coverage procedures. The purpose of this paper is to review the risk factors and other considerations that may influence a clinician’s decision not to perform a root coverage procedure. For the sake of brevity, this discussion is limited to patients who are in good health. The management of medically compromised patients is not germane to this discussion.

Before treating any periodontal condition, including recession, one must first identify the risk factors responsible for that condition. Risk factors can be subdivided into those that can be modified or corrected, and those that cannot. Risk factors that cannot be modified or corrected may be considered to be contraindications for root coverage procedures.

One risk factor that usually cannot be modified is the loss of interproximal bone. Miller published a classification of gingival recession that took this factor into account. Class III defects are those with generalized interproximal and radicular bone loss, or a supra-erupted tooth in which the relationship of the cemento-enamel junction to the alveolar crest mimics interproximal bone loss. Class IV defects have severe destruction of the interproximal bone between 2 teeth, such as that seen in cases of necrotizing ulcerative periodontitis. Miller stated that root coverage in Class III and IV defects could not be accomplished. Although there have been case reports in which sites with interproximal bone loss have been treated with some success, there are no randomized controlled studies of these procedures. In the event that this proves to be a predictable procedure, the prognosis for Class III and IV recession may also improve. Other authors have published cases where soft tissue coverage of Class IV defects and regeneration of interdental papillae have been possible.

Nevertheless, at this time, Class III and Class IV defects are poor candidates for treatment.

**TOBACCO USE**

Smoking is a major risk factor that may contribute to the failure of all mucogingival surgical procedures. The precise mechanisms by which tobacco smoke interferes with healing are not completely understood, due to the fact that there are thousands of toxins in tobacco smoke, many of which have not been identified, much less evaluated for their effect on periodontal healing. Regardless of the specific molecular and cellular actions of smoking, there is no question that smoking contributes to periodontal destruction and impedes healing after surgery. There may even be a relationship between smoking and gingival recession. The unanswered question remains whether a smoker is a suitable candidate for surgery. There is no evidence to support the empiric cessation of smoking for several weeks after surgery, although the author’s personal experience has demonstrated that discontinuing smoking immediately before and after surgery appears to improve the outcome in many patients. Certainly, a patient who smokes and has had an undesirable outcome is a poor candidate for further procedures. Until more scientific evidence is available, each clinician must decide whether or how to treat patients who smoke.

Smokeless tobacco is also a risk factor for recession. Patients who refuse to discontinue the use of this substance are at greater risk of surgical failure than those patients who comply, since the etiologic agent has not been removed.

**ORAL HYGIENE**

Oral hygiene measures are another risk factor that can be modified. O’Leary et al. showed that patients with the lowest plaque scores had the greatest amount of recession. Improper oral hygiene techniques cause much of the recession that requires surgical correction. Unless patients can be successfully re-educated, attempts at root coverage may prove futile. Factitious habits such as the improper use of a toothpick or injuring the gingiva with a fingernail must also be stopped, or the prognosis for corrective surgery is questionable.
Patients with poor oral hygiene who are prone to periodontal destruction are also at greater risk for surgical failure unless the local factors can be controlled. However, it should be noted that some areas of recession are very difficult to clean, and root coverage is sometimes a valid indication for root coverage procedures.

**ANATOMIC FEATURES**

Anatomic features may contribute to recession, especially if the gingiva and underlying alveolar bone are thin. This often occurs in prominent or malpositioned teeth. However, these problems are not considered as significant as they once were because modern surgical techniques have provided the clinician with a variety of procedures to treat most of these sites predictably. However, if the buccal shelf or the zygomatic arch attaches to the alveolar process in such a way that the vestibule is shallow, graft stabilization can be difficult or impossible, resulting in a poorer prognosis. Another challenging group of patients is those with severe malocclusion who require orthodontics, orthognathic surgery, or both prior to periodontal plastic surgery. Although authorities disagree on the cause and effect of orthodontic movement of teeth and gingival recession, the outcome of the orthodontic therapy may dictate the prognosis of root coverage procedures.

**INDICATIONS VERSUS CONTRAINDICATIONS**

Three classic indications for root coverage procedures are inadequate gingival width, esthetic concerns, and root hypersensitivity. Patients who present with recession that is not progressing despite the gingival width, who are unconcerned with the appearance, and who do not have root hypersensitivity may be best served by informing the patient of the condition, documenting it in the patient’s chart, and observing the sites rather than treating them. Treating patients who are satisfied with the status quo, and are otherwise healthy despite the presence of recession, may result in a patient who is ultimately disappointed with the outcome.

Some periodontal plastic surgical procedures have limitations due to esthetics or anatomy. For example, patients with gingiva that is visible when smiling or talking may be very dissatisfied with the results of a gingival graft due to the differences in color. This is even more troublesome in patients with gingival pigmentation. Multiple surgical procedures may be required to correct the displeasing esthetics of the original procedures. To perform a laterally positioned flap or a coronally positioned flap, there must be adequate gingival width at the donor sites to achieve a successful result. Coronally positioned flaps are also restricted to Class I defects, unless performed in conjunction with a connective tissue graft. The thickness and shape of the palate can complicate removal of tissue for connective tissue grafts, although they rarely preclude the procedure altogether. If the palatal tissue is thin, it may be necessary to remove a full-thickness graft. It is also technically more demanding to obtain donor tissue from a patient with a flat palatal vault. In either situation, the less experienced practitioner is more likely to encounter difficulty dealing with these situations.

Teeth with cervical restorations pose a unique challenge. A prerequisite for any root coverage procedure is a biologically acceptable root surface. It may not be possible to detoxify the surfaces of teeth that have been treated with modern polymers, although successful treatment of these areas has been reported.

Patients must be advised of the limitations of periodontal plastic surgery. The clinician must assess the patient’s expectations and motivation for seeking treatment. Some patients have unrealistic expectations of this type of surgery, particularly when esthetics are concerned.

Periodontists practicing root coverage procedures have greatly enhanced the predictability of this aspect of periodontal plastic surgery over the past few decades, while simultaneously increasing the range of defects that can be treated. Despite these advances, all sites and all patients are not suitable candidates for surgery. It is a wise clinician who carefully interviews and thoroughly examines each patient and elects not to treat those who are unsuitable.

**REFERENCES**

Commentary


Send reprint requests to: Dr. Jonathan L. Gray, Department of Periodontology, College of Dentistry, University of Florida, P.O. Box 100434, Gainesville, FL 32610-0434.

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