

Receding Mandibular Labial Gingiva on Children

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Localized gingival recession of the mandibular anteriors on children has been estimated to be about seven percent of the population.¹ The condition may be defined as an abnormal apical lowering (about 2.5 mm) of the free gingival margins exposing more than the usual amount of tooth. The clinical picture and the treatment of this problem have many variations.

Typically, the receded gingiva is usually in the mandibular incisor area. It differs from the severe periodontal involvement of later years in degree in that only an excessive amount of tooth crown is exposed; there is no denuded bone or bare root surface. It is presumed, however, that if the recession of childhood goes unchecked, more severe manifestations will ultimately follow.

Because the problem is so readily visible, concerned parents want to know about the prognosis. There seems to be no clear-cut answer. Some guide lines do exist, however, to help in planning treatment and predicting the outcome. Fortunately, in children of the ages of orthodontic treatment, if the abnormal recession can be arrested, normal gingival recession with age will tend to equalize the adjacent gingiva with the affected one.

The problem is an especially vexing one for the orthodontist because of the many causative factors. Sometimes the way the teeth occlude is a cause; at other times there is no occlusal contact between opposing anterior teeth.

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Most often it is the central incisor that is affected. This may be because the mandibular anterior teeth "buckle" during crowding and the central incisor is usually squeezed labially. A very important structure of the area, often overlooked, is the inferior labial frenum. With its radiating fibrous insertion in the midline and somewhat to either side, it becomes a prime suspect in central incisor tissue involvement (Figure 1).

The causes of receding gingiva, particularly of the lower mandibular area, can be divided into two categories, *viz.*, those having occlusal discrepancies and those without.

Some causes of receding mandibular labial gingiva:

1. Occlusal

A. Routine occlusal trauma caused by crowding of lower anterior teeth.

B. Thrusting of mandible anteriorly on occluding because of pos-



Figure 1 Abnormally high frenum attachments can usually be demonstrated in cases of lowered labial gingiva on the mandibular anteriors.

terior interdigitation. Sometimes this is referred to as a prematurity.

2. Nonocclusal

A. Superior attachment of inferior labial frenum.

ROUTINE ANTERIOR OCCLUSAL TRAUMA

An occlusal disharmony that could predispose toward lowered labial gingiva might be an instance where upper anteriors do not adequately enclose lower crowded anteriors. This is likely to cause a lingual tipping of the lower anterior crown and a consequent labial root torquing into the thin labial plate of bone.⁴ Thus the gingiva will recede in an accelerated manner (Figure 2). If strictly a matter of traumatic interference on closure, relieving the affected tooth locally by grinding should suffice temporarily until orthodontic procedures can be instituted.

On the other hand, if the teeth interdigitate in such a way that the mandible is forced forward and the lower anteriors wedged against the lingual of the uppers, some occlusal adjustments posteriorly may be necessary to gain a correction.

This is sometimes called a "prematurity" and causes the same trauma to occur anteriorly as the previous type (1A) but the method of its determination and correction will differ.

LACK OF ANTERIOR CONTACT

Many times, though, there appears to be no occlusal interference anteriorly and yet the gingival recession symptoms are present. In these cases an abnormally high attachment of the inferior labial frenum (or its adjacent fibers) can be demonstrated by pulling the lower lip forward. It is easy to visualize how such a high frenum attachment, during muscular function, could exert a pull on the gingiva of the area. In serious cases which usually show an

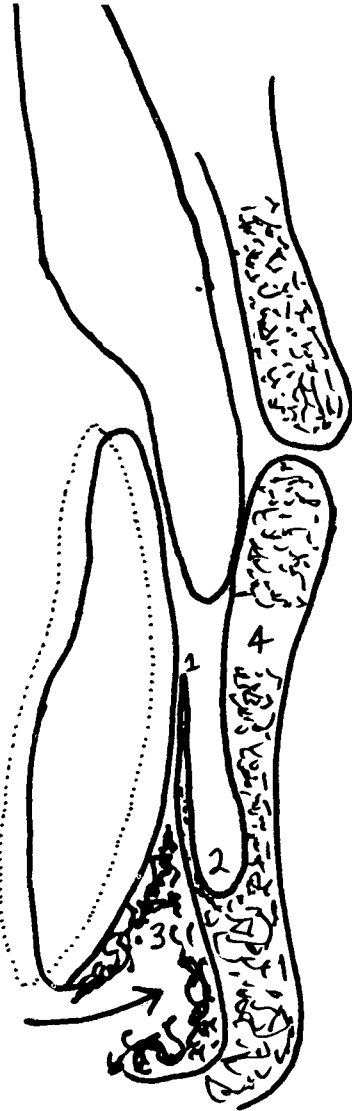


Figure 2 A simple crowding of the lower anteriors with little clearance provided in an anterior-posterior direction with the upper teeth can cause bone and tissue loss at the labial gingiva. (1) The arrow shows how the root tends to be forced labially. Vestibule, mandibular bone and lip are designated (2), (3), and (4) respectively. The dotted line represents where a tooth might initially be when the posterior teeth strike a "prematurity" and the distance the mandible might carry it (to solid line) when forced forward by the occlusion. The end result is the same as that caused by the simple crowding above which is referred to as 1A in the text.

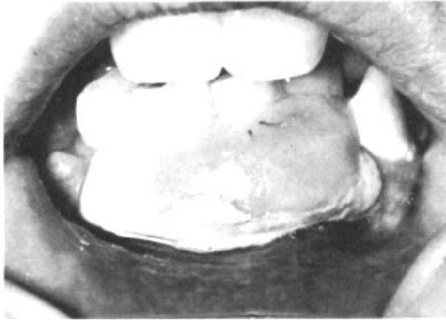


Figure 3 The plastic stent in place as described in the text.



Figure 4 Affected gingiva before correction.



Figure 5 After surgery, note the increased depth of the vestibule and the absence of the strong frenum attachment. There did not seem to be any anterior occlusal interference in this case.

inflamed margin around the recession and do not exhibit occlusal interference, the only treatment is one of lowering the frenum attachment surgically.

Most surgical procedures by the periodontist for correcting receding gingiva generally presume denuded bone or root surface to be present. Many flap operations have been worked out with this in mind.³ With children, however, there is no denuded bone or root surface and handling the problem is thus simplified.

In the younger years, although the situation may be acute, the emphasis is on halting a potentially destructive process rather than trying to get an area recovered with tissue. The minor surgery, usually by the periodontist, consists of an incision of about one-quarter inch in depth near the bottom of the vestibule for a distance that corresponds roughly from one lateral incisor to the other. An acrylic covering that serves to hold the tissues and a surgical pack in place is ligated to the incisors. This acrylic device is called a stent and is relieved underneath to provide an insertion for the surgical pack (Figure 3). It remains in place about ten days.² This tissue correction will result in a substantial reduction of frenum attachment height without the usual pull on the gingiva (Figures 4, 5).

A highly attached frenum without any recession is not a cause for alarm (Figure 6). The reason why one high frenum causes problems and others do not may be due to the accessory fibers it carries.

DISCUSSION

Thus far no mention has been made of orthodontic movement but obviously routine occlusal corrections have to be accomplished either before or after a necessary surgical correction. Although the incidence of these recessions is fairly common, most of them are not acute



Figure 6 A high frenum attachment need not always affect the gingiva. This tissue appeared quite healthy.

and can be adequately cared for by the usual orthodontic procedures. The minor surgery sometimes employed is the exception rather than the rule and is reserved for the unusual case.

SUMMARY

The whole problem of mandibular

incisor gingival recession is complex and no rules or definitive categories can be outlined. Since this tissue deficiency is likely to develop into a periodontal problem later on, it behooves the orthodontist to especially rule out the sliding forward of the jaw on occluding and the highly attached inferior labial frenum in treatment planning.

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