

INTRODUCTION

In the United States, up to four million people are wearing braces “at any given time” (1). Whether or not orthodontic treatment can attribute to gingival recession has been a topic of debate. Multiple factors can contribute to gingival recession including gingival biotype or buccal bone thickness (2).

Gingival Recession

Gingival recession is “characterized by apical displacement of the gingival margin from the CEJ” (4). Recession can result in the exposure of a root surface, which has implications for aesthetics, caries, and “dentin hypersensitivity”(4).

“Thin gingival biotype, visual plaque, and inflammation are considered predictors of gingival recession” (4). In addition to these predisposing factors, orthodontic movement past the “labial or lingual alveolar plate” can lead to recession (4).

Causes of Gingival Recession

The following are primary causes of gingival recession (2):

1. Chronic Trauma, events like “inappropriate daily brushing” (2)
2. Chronic Inflammatory Periodontal Disease, during which “the cervical root third becomes exposed” (2)
3. Periodontal treatment, “tissue loss” can occur during the procedure (2)
4. Occlusal trauma, which, often exhibits a “V-shaped” gingival recession pattern (2)

Conclusion

Orthodontic treatment is not considered to be “a major risk factor in developing gingival recession” (5). However, “post orthodontic fixed retainer placement” can negatively impact “periodontal health” (4). Many factors can impact a patient’s risk of developing recession (2). A patient’s oral hygiene and maintenance of fixed retainers following orthodontic treatment contribute to gingival health (4).

Orthodontic Treatment

Orthodontic movement can “position the teeth towards the center of bone” (2). On its own, orthodontic treatment does not greatly contribute to recession but can exacerbate “predisposing factors” (4). Fixed retainers have been “associated with an increased incidence of gingival recession, increased plaque retention, and increased bleeding on probing” (4).

Predisposing Factors to Gingival Recession

Numerous factors can contribute to gingival recession (2):

1. Decreased alveolar bone crest thickness
- seen in areas like the “maxillary canines and mandibular incisors,” which are often sites of “early recession” (2)
2. Dehiscence
- “when a depression is located apically to the alveolar bone cervical contour” (2)
3. Frenulum insertion
- when the frenum is “located near the cervical region of gingiva” (2)

Recession Treatment

The best treatment for recession depends on whether there are “single or multiple recessions” (3). For single recessions, the following are options:

- Treatment with enamel matrix derivatives in addition to flap surgery (3)
- “Envelope flap technique with connective tissue graft” (3)

In the case of multiple recessions:

- In the maxilla, “modified coronal advancement flap, with or without graft” is indicated (3)
- In the mandible, the same, “in conjunction to a connective tissue graft” is indicated (3)
- “free gingival graft” (3)

Works Cited

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