

## C-4. Comparison of laterally positioned flap and subepithelial connective tissue graft

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Most forms of orthodontic therapy are relatively harmless to the periodontium. However, in some cases, clinicians may find that some patients respond to facial movements of incisors and lateral movements of posterior teeth by gingival recession and loss of attachment. For the development of gingival recession, the presence of alveolar bone dehiscence is necessary. Concerning orthodontic therapy, this would imply that as long as the teeth are moved within the alveolar bone, soft tissue recession would not occur. Alterations occurring in the periodontium concerning the gingival dimensions and marginal tissue position in conjunction with orthodontic therapy are related to the direction of tooth movement. It is hypothesized that gingival tissue loss during labial tooth movement may be influenced by the tension in the marginal tissue created by the forces applied to the teeth. When orthodontic tooth movement is planned and the final position of the tooth can be expected to result in an alveolar bone dehiscence, an increased dimension of the covering soft tissue may reduce the risk for development of soft tissue recession.

The patient K(male, age 24) was referred from the dept of orthodontics. The patient presented with gingival recessions on teeth #13,23,33,34,43,44. He showed severe mandibular prognathism and right side deviation of the lower jaw with missing two lower central incisors. Pre-surgical orthodontic treatment and orthognathic surgery had been planned. Labial movement of the lower teeth had been planned.

Tooth no		44	43	33	34
Gingival recession	L	000	000	000	000
	B	030	070	040	030

Probing depth	L	212	212	212	212
	B	112	111	212	212
Millers		I	II	I	I

Gingival form was scalloped with moderately thick periodontium.

The amount of keratinized gingiva between teeth #42 and #43, and between #43 and #44 was judged adequate for laterally positioned flap. Subepithelial connective tissue graft with coronally positioned

flap was decided on for teeth #34 and #33.

Complete coverage of the denuded root was possible with the subepithelial connective tissue graft. Complete coverage was possible on #44 with the laterally positioned flap.

Further recession occurred on #43 and complete coverage was not possible. This might have been due to the fact that tissue thickness of the donor site was less with the pedicled flap and that in the case of treating gingival recessions prior to orthodontic treatment, subepithelial connective tissue graft might offer more predictable results.