

## Effect of Orthodontic Treatment on Gingival Recessions

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### ABOUT THE STUDY

More than 90% of persons aged 50 and over are said to have gingival recession, which is said to worsen with age and become more common. The mandibular incisors and maxillary molars are most typically affected on the labial side. Uncertainty surrounds the aetiology, which is assumed to be complex in character and to involve both precipitating and predisposing variables. The former consists of anatomical and morphological traits, such as dehiscence of the alveolar bone, a thin buccal mucosa, crowding, the existence of an aberrant fraenula, and the eruption of teeth on the wrong side of the mouth. Such precipitating causes as painful teeth cleaning and piercing accelerate the malfunction. The relationship between orthodontic therapy and gingival recession is a topic of debate in the literature [1].

In the orthodontic population, Gingival Overgrowth (GO) is a relatively prevalent problem that can cause pseudo-pocketing with or without attachment loss as a result of enlarged gingiva. The quality of life associated to oral health may be impacted when it affects the anterior region [2]. GO was once thought of as an inflammatory response following bacterial plaque buildup. Other explanations for the aetiology of GO have been put out, including chemical irritation caused by banding materials, mechanical irritation by bands, and food impaction. Good dental hygiene and GO in orthodontic patients without any clinical indications of gingival irritation. Increased levels of Matrix Metalloproteinase-8 (MMP-8) and matrix metalloproteinase-9 (MMP-9) were seen in the Gingival Crevicular Fluid (GCF) of these patients. It was thought that one of the major variables affecting the rise in MMP-9 production and the beginning of GO after orthodontic treatment appeared to be mechanical stress [3]. Some authors have considered the potential impact of an allergy to nickel released from stainless steel orthodontic gear. Studies conducted *in vitro* and *in vivo* indicate that liberated nickel ions may result in an allergic reaction that depends on the amount of exposure time and is characterised by elevated keratinocyte proliferation and enhanced epithelial cell proliferation. Since metal allergies

have been connected to an increased frequency of GO, it may be crucial to treat patients with nickel-free appliances and adopt questionnaires to assess prior history of metal allergies [4].

In addition to correcting jaw alignment and dentition malformations, orthodontic therapy can also be used to enhance dental aesthetics by fostering better gingival health. Due to missed interdental papillae height, adult patients who have already experienced periodontal disease frequently appear with "black triangles." Orthodontics can be used to realign teeth and enhance the appearance of soft tissues. While black triangles may also occur as a result of teeth alignment when treating crowding, it was believed that orthodontic teeth approximation might alter the morphology of the interproximal alveolar crest level and improve the position of the interdental papilla [5].

By moving the contact point more apically during orthodontic teeth approximation, tooth reshaping may assist in achieving good aesthetic results in the interdental area. Since the filling of the interdental space with the papilla may be determined by the position of the contact point relative to the bone crest position.

### CONCLUSION

It is possible to draw the conclusion that orthodontic therapy affects gingival recessions. The gingival recession appeared to have improved in more than half of the teeth. Effective collaboration enables the observation of clinical issues from several angles and a better comprehension of the relationships between various specialties. Any type of dental therapy requires good periodontal health.

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