

5th American Dental Congress

October 05-07, 2015 Philadelphia, USA

Combined orthodontic and periodontal treatment of a severe unexpected complication associated with a lower bonded retainer

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Unexpected complications (X-effect, Twist-effect) associated with the use of fixed orthodontic retainers are a relatively rare finding. However, they may cause unwanted tooth movement which can have detrimental effects on periodontal tissues. As much as half of these patients may require retreatment, depending on the severity of the complication and the amount of unexpected tooth movement. In the presented case, a 28-year-old female with a Miller class III gingival recession defect that occurred 6 years of orthodontic retention phase was retreated with a fixed appliance followed by reconstructive periodontal treatment. Orthodontic retreatment improved the root positions of the affected teeth in the alveolar bone and reduced the degree of gingival recession. A modified tunneling technique with a sub-epithelial connective tissue graft (CTG) was then applied to cover the exposed root surface and restore the gingival tissues. At the 3-year follow-up examination, no visible difference in clinical crown length or gingival tissue appearance was observed. An interdisciplinary approach combining orthodontic and a periodontal reconstructive treatment of a severe unexpected complication of a lower fixed retainer was successfully used to correct the mal-position of teeth and cover the denuded root surface. In cases where long-term retention with fixed retainers is indicated, precautionary measures should be taken and patient should be encouraged to come for regular recalls. Patients, as well as dentists and hygienists should be informed about the risks of these complications and should take an active part in monitoring of lower fixed retainers to prevent the development of severe complications.

ACKNOWLEDGMENTS :

This study was supported by a research grant from the Ministry of Health in the Czech Republic (IGA MZCR NT/14189 – 3/2013). The authors have no conflict of interest to report for this study.

Biography

Josef Kucera is an Assistant Professor at the Department of Orthodontics at the Charles University in Prague, Czech Republic. He completed his degree in Orthodontics in 2009 and is a PhD student at the Palacky University in Olomouc, Czech Republic.

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