



## ALTERNATIVE APPROACH IN THE TREATMENT OF A GINGIVAL CLEFT ASSOCIATED WITH LABIAL FRENULUM. A 3-YEAR FOLLOW-UP. (Case Report)

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### ABSTRACT:

**INTRODUCTION:** The term Gingival cleft refers to a fissure in the gingival tissues and is usually caused by traumatic oral hygiene, abnormal frenula, trauma from occlusion, orthodontic, or pierce related trauma. Gingival clefts are classified depending on the extent of the inclusion of the gingival thickness into red and white.

The recommended treatment approach for the incomplete white clefts is the gingivectomy of the affected keratinized tissue followed by a coronally advanced flap for the root coverage, while the complete white clefts are treated with a laterally moved, coronally advanced flap, or a free gingival graft procedure.

**OBJECTIVE:** This report presents a case with a spontaneous healing of an incomplete gingival cleft associated with a maxillary labial frenulum after an alternative frenuloectomy approach.

**METHODS:** M.G. (45) with a localized chronic periodontitis, an abnormal papillary maxillary frenulum and an incomplete white cleft on the marginal gingiva of the left central incisor. An alternative frenuloectomy approach combined with a free gingival graft was selected for the correction of the abnormal frenulum.

**RESULTS:** On the sixth month after the surgical procedure an almost complete recovery of the gingival margin was observed. The result at the third year demonstrates a stable gingival margin with a complete tissue recovery.

**CONCLUSION:** The applied combined surgical approach led to a complete gingival recovery of the incomplete white gingival cleft without the commonly used gingivectomy and CAF. Further research is recommended to clarify the adjunctive benefits of the FGG in patients with gingival clefts associated with abnormal frenula.

**Keywords:** labial frenulum, gingival cleft, gingival recovery

### INTRODUCTION:

The term *Gingival cleft* refers to a fissure in the gingival tissues (AAP Glossary of Periodontal Terms) and is usually caused by traumatic oral hygiene [1, 2]. Abnormal frenula [3], trauma from occlusion [4], orthodontic [5], or pierce related trauma [6] may also lead to gingival cleft formation. Gingival clefts are classified depending on the extent of the inclusion of the gingival thickness into red and white. The “red” clefts are characterized with a partial gingival fissure and they may heal spontaneously after the change of the oral hygiene habits. Whereas the “white” clefts affect the whole gingival thickness with a complete epithelization of the edges of the lesion and are considered irreversible. The white lesions are divided into *complete* when entire keratinized mucosa is engaged and *incomplete* when an unaffected gingival is observed apical to the cleft [7].

The recommended treatment approach for the incomplete with clefts is the gingivectomy of the affected keratinized tissue followed by a coronally advanced flap (CAF) for the root coverage [7], while the complete white clefts are treated with a laterally moved, coronally advanced flap, or a free gingival graft procedure [8].

### AIM:

This report presents a case with a spontaneous healing of an incomplete gingival cleft associated with a maxillary labial frenulum after an alternative frenuloectomy approach.

### MATERIALS AND METHODS:

M.G. 45 years old, female with major complains from the gingival recession of the left central incisor. The clinical examination reveals a localized chronic periodontitis (HI-16,38%;PBI-1,2/38%;PD mean-2,19mm.;CAL - 1,34mm/18,02%) and a presence of an abnormal papillary maxillary frenulum and an incomplete white cleft on the marginal gingiva of the left central incisor (Fig. 1).



**Fig. 1.** Initial status.

The anti-infectious periodontal therapy achieved a good patient compliance and a proper control of the periodontal disease (HI-70%; PBI -0.02/2%; PD mean - 2,03mm; CAL-1,14mm/2,98%). The standard approach for resolving the gingival cleft with gingivectomy followed by CAF isn't applicable in the presented case because of the presence of the abnormal frenulum which hinders the coronal advancement of the flap. An alternative approach with frenulectomy combined with an augmentation procedure with a free gingival graft (FGG) was selected for

the correction of the abnormal frenulum (Fig. 2). The procedure included an initial horizontal incision, followed by a complete excision of the muscular and connective tissue fibers. A continuous suture (6/0 polydioxanone) was used to close the mucosal part of the preparation thus leaving a triangular shaped recipient zone in the keratinized gingiva. The gingival graft with a prismatic shape was harvested from the retromolar area and fixed on the recipient zone with a tissue glue.



**Fig. 2.** Frenulectomy combined with FGG.

**RESULT:**

On the sixth month after the surgical procedure an almost complete recovery of the gingival margin was observed (Fig. 3).



**Fig. 3.** Result on the sixth month.

The patient is on the regular maintenance program afterwards. The result at the third year demonstrates a stable gingival margin with a complete tissue recovery (Fig. 4).



**Fig.4.** Result at the third month.

#### CONCLUSION:

The combined surgical approach with a frenuloectomy and a free gingival graft led to a complete gingival recovery in the presented case of a incomplete white gingival cleft without the broadly used approach with a gingivectomy and CAF. Further research is recommended to clarify the adjunctive benefits of the FGG in patients with gingival clefts associated with abnormal frenula.

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