

Extended Abstract

Gum Hypertrophy in Patients in Fixed Orthodontic Therapy Treated with Topical Probiotic *Lactobacillus Reuteri*: A Pilot Study [†]

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1. Introduction

Patients undergoing in fixed orthodontic treatment could have higher risk in periodontal/gum disease development, such as gingival hypertrophies. Different types of therapies have been proposed for the treatment of this condition, such as traditional surgery, laser therapy and the use of chlorhexidine mouthwashes [1–3]. The aim of this pilot study is to evaluate the use of a topical probiotic with *Lactobacillus Reuteri* in the treatment of patients with gingival hypertrophy in orthodontic therapy.

2. Materials and Methods

For this study, 14 patients (10 females and 4 males) with gingival hypertrophy of the incisal group in fixed orthodontic therapy, were considered (Figure 1). Topical probiotics with *Lactobacillus reuteri* DSM 17,938 and ATCC PTA 5289 were used to treat gingival hyperplasia. At the first session periodontal clinical parameters were recorded (T0) and after debridement, topical application were made. The probiotic gel is made by powdered tablets in a 1% Gel Carbopol; The gel was injected into the pockets until the spill, for 3–5 min the patient did not rinse the mouth and was advised not to eat and drink for about an hour. Systemic probiotics of *Lactobacillus Reuteri* taken at home 2 times a day were prescribed. After 1-month periodontal clinical parameters were re-evaluated (T1).

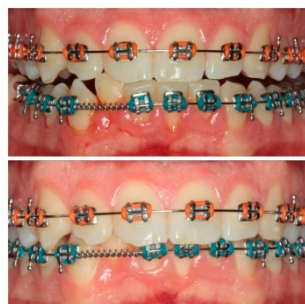


Figure 1. 19 years old male patient before and after treatment.

3. Results

The mean age of the patient was 14.8 years old. All patients showed a complete regression of gingival hypertrophies (Figure 2) at one month of follow up (100%). The mean value of plaque index (PI) before therapy was 69.71%, while at one month it was 18.57%.

The average value of the bleeding index (BoP) was 37.85% while at one month after treatment it was 2.35%.



Figure 2. 14 years old female patient before and after the treatment.

4. Discussion and Conclusions

All gingival lesions regressed after treatment, while PI was reduced by more than 3.5 times. The average BoP values are reduced so as to be negligible. A previous study has tested the use of two mouthwashes for the treatment of this condition, but the authors concluded that “none of these principals, although the gingival condition improved, could reduce gingival enlargement to the clinically acceptable level of health [1]”. Other works suggest a surgical removal, with or without laser of the excess gum tissue [2,3]. No other works in the literature has used topical probiotics for the treatment of gingival hypertrophies in orthodontic patients, which from our observation proved to be effective and safe because they had no side effects. Studies with a larger sample and with greater follow-up are necessary to confirm these preliminary results.

Reference

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