TREATMENT OF EXCESSIVE GINGIVAL DISPLAY USING LIP REPOSITIONING TECHNIQUE: A CASE REPORT

ABSTRACT

The gummy smile is becoming one of the most frequent complaints reported by patients unhappy with your smile. According to the etiology, will be proposed various treatments. The purpose of this case report is to describe the lip repositioning technique, softening the gummy smile of the patient. It concludes that the lip repositioning technique is suitable for the correction of the gummy smile.

KEYWORDS

Gummy smile. Aesthetics. Lip repositioning.

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INTRODUCTION

The gum overexposure, also known as "gummy smile", can be rectify in several ways because it's an important factor to patient aesthetics[1]. One of the several ways of correction is through the lip repositioning technique whose purpose is inhibit such esthetics alteration by limiting the retraction smile levator muscle[2]. Gingivectomy or gingivoplasty are also periodontal cirurgical procedures that can be used for the purpose of correction of the overexposure gum while smiling[3].

The gummy smile has four different etiologies: altered tooth eruption, dentoalveolar extrusion, vertical maxillary, excess or hyperactive upper lip[4].

In case the lip repositioning is the procedure of choice, one must inform the patient that such procedure is an invasive surgery. In some cases, this procedure has to be done inside of a hospital environment for the best post-operation recovery of the patient[5].

The correct diagnosis of the gummy smile covers an extra and intraoral analysis[6]. Among the extra oral aspects are: facial analysis, length of the upper lip at rest, exposure of maxillary central incisor while at rest, speaking, smiling and laughing; smile line and outline of the gengival margin[7]. Among the intraoral aspects that will be evaluated are the periodontal condition, periodontal biotype, outline and gengival zenith, interdental papilla, recession and gum color.

One of the option for this type of treatment would be the orthognatic surgery, myectomy, botulinum toxin injection, elongation and repositioning of the lips with variable results[4]. The lips repositioning was a technique created on the plastic surgery and, subsequently, explored by periodontology. The objective of lips repositioning is inhibit the gengival overexposure by limiting the retraction smile elevator muscle (zygomatic and raiser, upper lips raiser and orbicular)[8].

This research paper has the purpose to report a clinical case where it was decided to use the lips repositioning technique in order to rectify the exaggerated gummy smile of the patient and thus make it possible for her to feel satisfaction while smiling.

CASE REPORT

Patient BFKSN, adult, female, 21 years old, went to the Oralis Dental Clinic, located in the city of Belém, city in the north of Brazil, reporting her "dissatisfaction with her smile" due to the exaggerated appearance of the gums. During the anamnese, the were evidences of periodontal overexposure as well as lips height difference when compared the right side with the left side. It was observed that when the patient smiled, the right side of her side of her lips was evidently higher than

the left side. Besides of the patient's gummy smile, her smile was not harmonious, which threatened her aesthetics (Figure 1).

Figure 1. Patient evidences of gummy smile.

It was evident, after observing an exaggerated smile of the patient, that she presented a dental exhibition of the upper maxillary molar with a gingival average exposure of 8mm, however that patient presented the absence of periodontal pockets, healthy periodontal tissue and no bleeding. The first chosen technique was lips repositioning, which began 30 minutes before, when the patient ingested 100mg of Ibuprofen.

After the de facto beginning of the surgery (Figure 2), it was made an anesthesia on the infraorbital nerve on the right side of the jaw and anterior superior alveolar (Figure 3). It was used a sterile pencil for the demarcation of the incision and, with a 15c blade, a horizontal incision was made deep in the vestibule on one side of the jaw (Figure 4, 5 and 6).

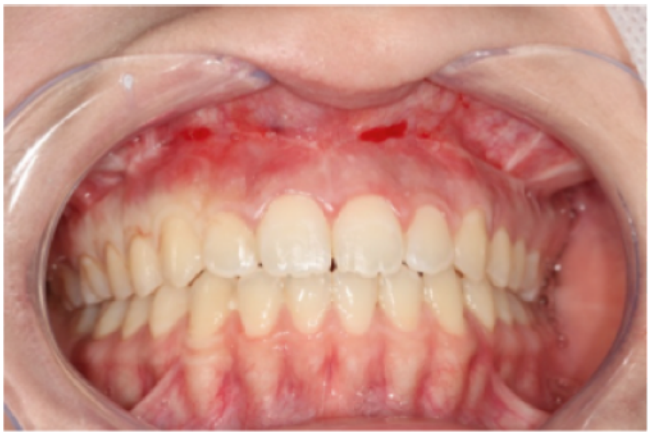

Figure 2. Vestibule bottom region after anesthesia.

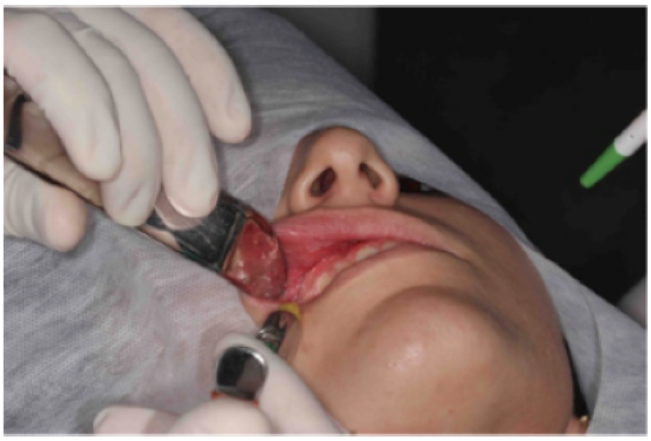

Figure 3. Patient being anesthetized in the vestibule bottom region.

It was necessary to remove a strip of keratinized mucosa of proximity 5mm from the vestibule (Figure 7) and suture the mucosa to the mucogingival junction using a 4,0 nylon

suture thread (Figure 8). On the left side the same procedures were done with a tissue removal of about 3mm height.

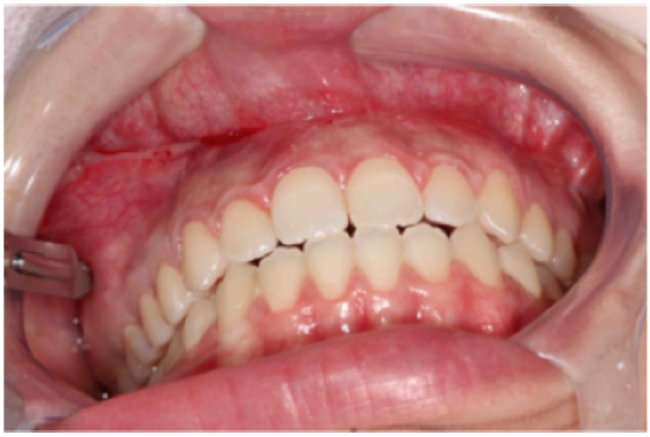

Figure 4. A horizontal incision in the vestibule bottom of one side of the jaw measured from the labial frenum and was extended to the first molar.

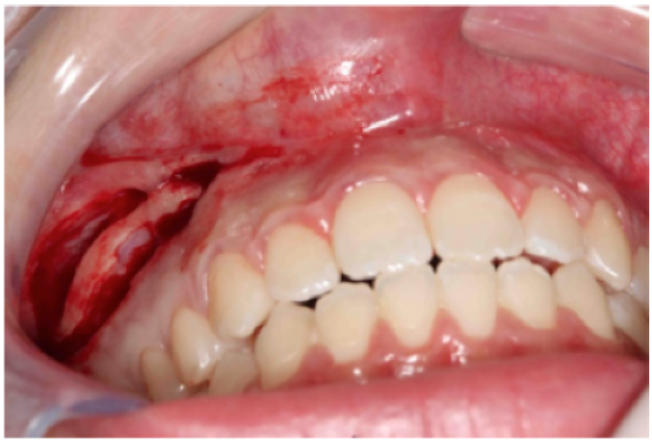

Figure 5. A horizontal incision in the vestibule bottom of one side of the jaw measured from the labial frenum and was extended to the first molar.

For this procedure it was prescribed antibiotics, anti-inflammatory and painkillers. The patient was instructed about the about the post-operations safety measures and after 14 days the sutures were removed. During the post-operation period we observed the dissipation of the gummy smile, the patient's smile became more harmonic getting a a better lip support and the repositioning of the right side of the jaw. After one year of the surgery a clinical exam was made and it was observed a healthy periodontal tissue and the desired aesthetic result (Figure 9).

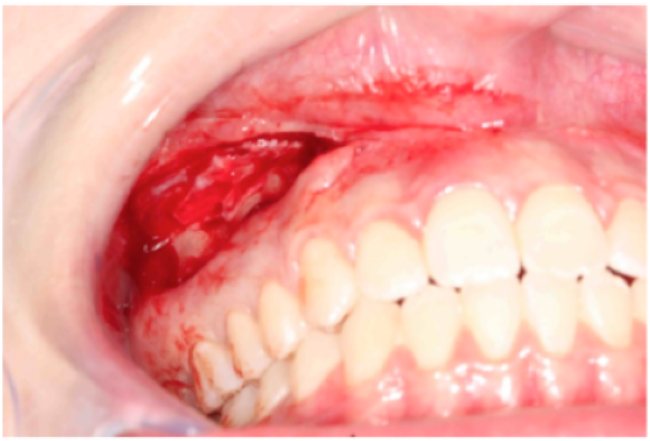

Figure 6. A horizontal incision in the vestibule bottom of one side of the jaw measured from the labial frenum and to the first molar.

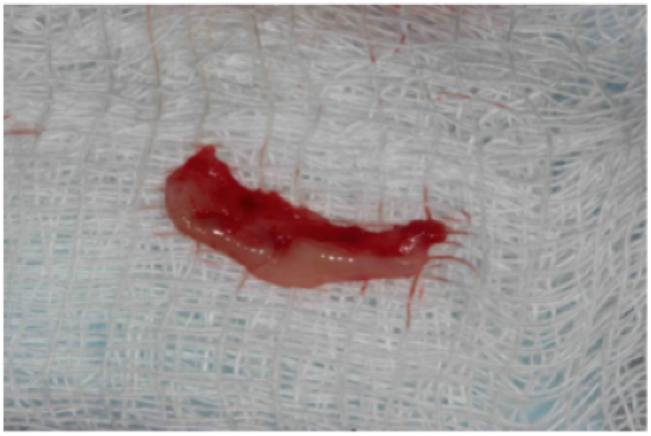

Figure 7. The keranitized mucosa strip that was removed from the vestibule.

DISCUSSION

This case report describes the correction of a gummy smile through the lip

repositioning technique witch had as purpose make a harmonic smile and decrease the quantity of ostensible gingival tissue of the patient.

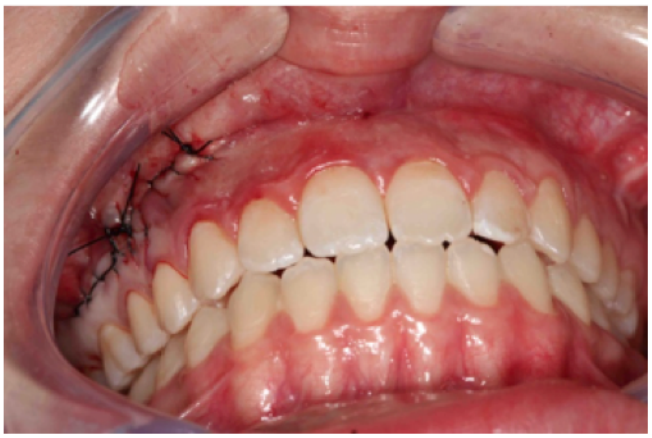

Figure 8. Sutured region after the surgical procedure.

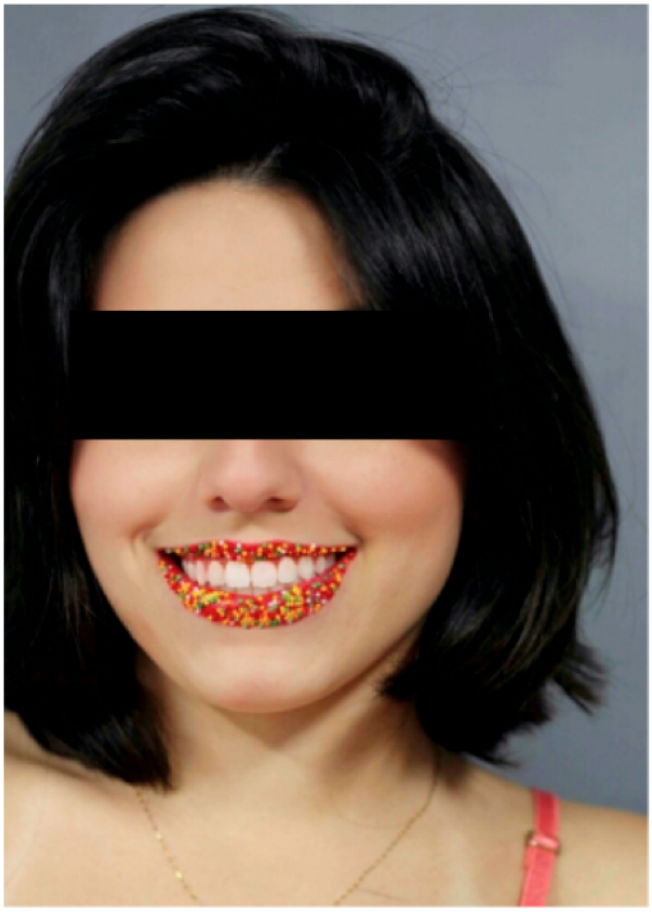

Figure 9. Harmonious smile with better repositioning of the right side of the jaw.

There are some alternatives available for the correction of the so called "gummy smile", according to it's specific etiology. In case of passive eruption, the procedures of gingivectomy and gingivoplasty, with or without bone resection, depending on the type, are indicated[9]. When the disturbance occurs as a result of the excessive vertical growth of the jaw, many techniques can be used, from orthodontic intrusion to orthognathic surgery[10]. When the etiology is hyperactive upper lip, myectomy can be used, such technique is the resection of muscles responsible by the lip mobility, or the application of the botulinum toxin[11]. However, in all the referred techniques, the postoperative problems a frequent, besides, these techniques can cause the loss of the natural smile[12] and mask the gummy smile, because they change the positions of the peru-labial muscles[13].

CONCLUSION

Based on this case report it is possible to deduce that, with the correct planning and the use of the adequate technique, the dissatisfaction of the patient related with the harmonic smile and the ostensible gingival tissue will be minimize, achieving the patient's expectation.

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