

INTRODUCTION

Gummy smile, also known as excessive gingival display, is characterized by the visibility of an excessive amount of gum tissue (over 4 millimeters) when smiling, causing aesthetic concerns and impacting self-confidence.

Viable treatment options include surgical techniques like crown lengthening and lip repositioning to reduce gum prominence. Non-surgical approaches involve botulinum toxin injections to weaken the muscles elevating the upper lip, as well as lip augmentation using hyaluronic acid dermal fillers for improved lip balance. Additionally, ceramic veneers offer a promising solution to enhance smile aesthetics.

This study explored multidisciplinary approaches for gummy smile treatment, encompassing surgical techniques, the application of botulinum toxin, hyaluronic acid fillers for lip augmentation, tooth whitening procedures, and ceramic veneers in achieving optimal outcomes. By combining these diverse modalities, we aimed to achieve optimal and aesthetically pleasing results for our patients with gummy smile.

CASE REPORT

Three patients with gummy smile condition were selected. Each of them with a different etiology. After the periodontal clinical exam, photos and tomography analysis, the clinical treatment was explained and executed by the investigators. All of them were 18 years old or more, agreed to participate of the study and were in perfectly healthy condition. This study agreed with Helsinki Declaration.

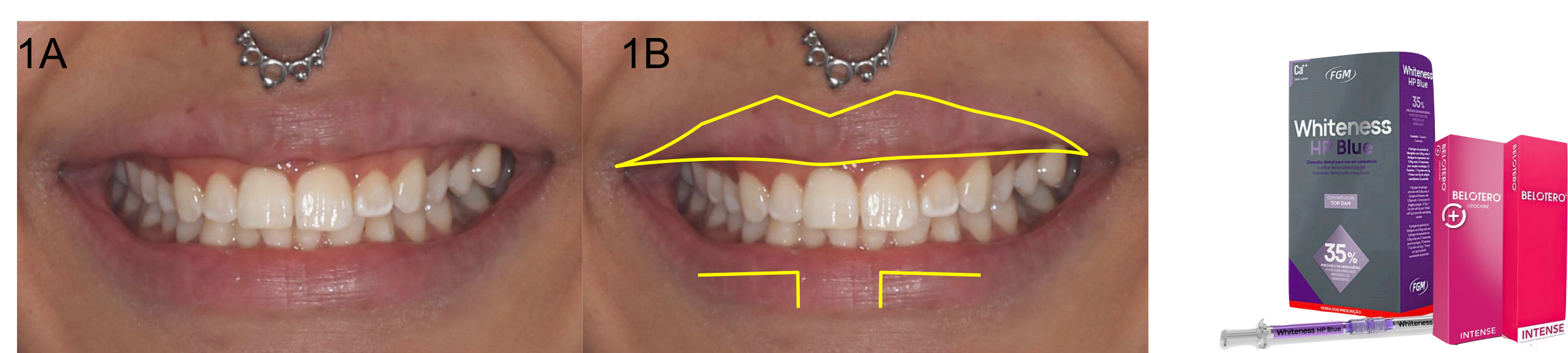


Fig. 1A: Pac 1, Female 19 y, the diagnosis was Upper lip thin.
Fig.1B: For this condition the treatment plan proposed was 0,6 ml of Belotero Intense® Merz aesthetic hyaluronic acid dermal filler, to increase the volume in upper lip, and 0,1 ml in the lower lip for aesthetic correction and the tissue quality. For the aesthetic finalization of the case we opted too use dental whitenss office with whitenss HP Blue FGM®



Fig 2A: Pac 2, Male 25 y; the diagnosis was Upper lip hyperactivity.
Fig 2B: Electrical scalpel for gingival correction, with the propose to increase the tooth crown (15 to 25) the osteotomy was needed and was executed with CVdentus® the clinical intramural approach with flapless technique.
Fig 2C: The intra oral proceed was not enough and an extra oral complementary treatment using botulinum toxin, Xeomin® Merz aesthetics, in Levator Labii Superioris Alaeque Nasi, Levator Labii Superioris and Depressor Angel Oris.



Fig 3A: Pac 3 Male 32 y; Diagnosis: Excess Vertical Growth;
Fig 3B and 3C: The plan treatment executed was first clinical crown lengthening with Electrical Scalpel for gingival correction and osteotomy realized with CVdentus®. The flapless was chosen, for increase the fast recovery of post op. 1 week after the surgery was executed the teeth preparation and used the digital flow. The intra-oral scanning (Medit 600i) of the prep after that thin ceramic veneers on anterior superior teeth (e-max®, 6 elements) was executed and veneer cementation was done with variolink® veneer (Ivoclar® Vivadent color +2). To complementary the intra oral treatment, was necessary extra oral approach with botulinum toxin, Xeomin® Merz aesthetics, in Levator Labii Superioris.

RESULTS



Fig. 4A: Pac 1, Female 19 y, the diagnosis was Upper lip thin. Before and after the clinical approach.



Fig 5A: Pac 2, Male 25 y; the diagnosis was Upper lip hyperactivity, Before and after the clinical approach.



Fig 6A: Pac 3 Male 32 y; Diagnosis: Excess Vertical Growth. Before and after the clinical approach.

DISCUSSION

The importance of diagnosis and the correct cause of the gummy smile etiology makes us reflect that this relationship is directly correlated to the clinical success of the treatment. In this way, a multidisciplinary approach brings a new stage in dentistry, since the mechanics of the smile does not only involve intra-oral correlation, but its dynamics with the face. Without knowledge of these relationships, it would not be possible to achieve the results obtained.

CONCLUSION

The treatment of gummy smile requires a multidisciplinary approach to achieve optimal results. By combining a crown lengthening, with botulinum toxin injections, we can effectively address excessive gingival display during smiling. Moreover, the inclusion of ceramic veneers as part of the treatment plan offers a minimally invasive and aesthetically pleasing solution. The use of these thin porcelain layers can provide patients with long-lasting improvements in smile aesthetics, creating a more balanced and confident appearance. Overall, the integration of these viable treatment options demonstrates the importance of a comprehensive and personalized approach to successfully manage gummy smile, enhancing patient satisfaction and well-being.

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