The Hidden Smile

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Citation

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Abstract

Tooth eruption consists of active and passive phase. Active eruption consists of eruption of teeth to the occlusal plane, whereas passive eruption is related to the exposure of the teeth by apical migration of the gingiva. At times this passive eruption can be considered a pathological process. In this situation, it affects aesthetics, smile and self-confidence. This could be corrected by surgical dental procedures that uncover the anatomical crown to a more pleasing smile. In this case report, Gingivectomy combined with direct composite veneers gave esthetic appearance and self-confidence to our patients.

INTRODUCTION

Gottlieb et al. divided passive eruption into four stages based upon the relationship between the epithelial attachment and the cementoenamel junction (CEJ). In Stage 1, the teeth reach the line of occlusion and the junctional epithelium lies totally on the tooth enamel. In Stage 2, the epithelial attachment rests partially on the enamel and partially on the cementum apical to the CEJ. The base of the sulcus is still on the enamel. In Stage 3, the entire junctional epithelium lies totally on the cementum with the base of the sulcus at the CEJ. Finally, in Stage 4, the epithelial attachment lies totally on the cementum, the base of the sulcus is on the cementum, and a portion of the root may be clinically exposed (pathologic). Normally, the CEJ lies just apical to the gingival margin of the anatomic crown. Sulcus depth usually measures 1 to 3 mm. In cases of altered passive eruption, the CEJ might be up to 10 mm apical to the gingival margin.

This condition is difficult to diagnose due to lack of functional problems affecting the patient's daily life. Therefore, patients can live their entire life with such an easy to treat, yet undiagnosed dental problem. Only an experienced clinician can identify the alteration and offer a satisfying treatment. The outcomes of resolving this issue are astonishing. Especially that the patient can enjoy a beautiful new smile in one single visit. Gingivectomy is the simple surgical procedure that is done to fix those cases, where we surgically cut and raise up the gum line to the level of esthetic contour. Gingivectomy has always been the best straightforward solution to reach an esthetic smile, with few to no complications most of the time. Furthermore, with the addition of direct composite veneers, the outcome is an esthetic treatment that aid in the buildup of self-confidence and esthetics.

CASE REPORT

A 31-year-old female came to the Department of Dental Medicine at MetroHealth Medical Center in Cleveland, Ohio, USA for treatment. The patient did not feel confident with her smile. A through history and clinical examination was recorded. The patient was looking for a treatment that can give her something different, her smile was not pleasing to her. During clinical examination, there was significant short anterior clinical crowns, no signs of inflammation of the gingival tissue, nor overgrowth, nor bleeding on probing, no plaque accumulation. The dentist observed that the periodontal probing was giving a reading of over 4mm, before reaching the alveolar bone. There was also a lack of contour of the gingival tissue between canine to canine. Even though the patient had good oral hygiene, patient was willing to go under treatment to improve her smile. The diagnosis in this case was Stage 1 in passive alter eruption with fractured enamel in the anterior teeth due to a lifestyle choice such as labial piercing.

The treatment options offered for this case were: Gingivoplasty, gingivectomy, ceramic veneers or direct composite veneers. Patient decided to go for gingivectomy with direct composite veneers. This treatment consisted of

two stages. Study models were taken prior to the procedure. The cast was marked accordingly to the rise smile line to a symmetric position from canine to canine, exposing clinical crowns and showing uniformity throughout the smile. Patient was informed of possible complications right after the procedure. So, an appointment was scheduled for the first stage of the treatment. For the surgical gingivectomy, the instruments needed were: mirror, probe, syringe, Kirkland and Orban interdental knives, surgical blade (15 C), surgical curette, gracey curette. 2 carps of 2 % lido, 1:100 K epi was given. Probing was done and the sites for incisions were marked with the periodontal probe. Then, the surgical blade was used to remove the gingival tissue leaving 2.00 mm (respecting of biological width) and 1.00 mm of free gingival margin. A total of 2- 4 mm band of gingival tissue was excised. Post-operative instructions were given, chlorhexidine mouth rinse was prescribed.

In the restorative stage of the treatment, direct composite veneers were constructed. In this visit, 2 carp of 2%lido, 1:100k epi were given, tooth surface prepared, bonded with xeno four-bond, restore with composite using Myller strip, then checked for occlusion using articulating paper. Polish and finish.

DISCUSSION

There maybe not be a functional disturbance where there is altered passive eruption, however self-perception could be affected. In this case, after the surgery was done, the patient experienced a sense of confidence on herself that she did not have before, and after the direct composite veneers were contour to a fine shape we achieved the final smile. Our patient acquired a beautiful smile in two appointments. Our patient was overjoyed and impressed by the results.

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