

Gingival Smile Correction with Periodontal Plastic Surgery

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Introduction

The gingival smile, characterised by the exposure of more than 2 mm of gingival tissue during smiling, is a prevalent aesthetic concern in dentistry with the potential to adversely impact patients' self-esteem and psychological well-being (Mostafa, 2018).

The aetiology of the condition is multifactorial in nature, involving a range of contributing factors (Dym & Pierre, 2020; Malkoc et al., 2004).

These include alterations in passive eruption, dentoalveolar extrusion, vertical excess of the jaw, and hyperactivity of the upper lip muscles. In specific cases of altered passive eruption, gingivectomy is an effective surgical intervention for correcting excess gingival exposure (Dym & Pierre, 2020; Mele et al., 2018).

Aims

The procedure aimed to remove excess gingival tissue, restore dentogingival harmony without compromising the integrity of the papillary architecture and promote the patient's self-esteem.

Methodology

A 21-year-old male patient with no significant medical history or known allergies was referred to the periodontology clinic, citing dissatisfaction with the aesthetic appearance of his smile. A clinical examination was conducted, which revealed a gummy smile extending from teeth 14 to 24. This phenomenon was attributed to altered passive eruption, a hypothesis that was subsequently confirmed by measuring the bone probing depths, which exceeded 6 mm (Image 1).

Following the administration of local anesthesia (2% lidocaine with 1:100,000 epinephrine) in the buccal mucosa from the upper right to left first premolars, haemorrhagic reference points were established using a periodontal probe and connected to delineate the excision line.

A gingivectomy was performed using a monopolar electric scalpel, selected for its precision, effective haemostasias, accelerated healing, and favorable aesthetic outcomes.

The procedure aimed to excise excess gingival tissue, re-establishing dentogingival harmony without compromising the integrity of the papillary architecture.

Postoperative care instructions included the following: avoidance of brushing the treated area for a period of 15 days, consumption of soft and cool foods, refraining from physical exercise during the healing period, and adherence to the prescribed medication regimen. This regimen consisted of ibuprofen 600 mg (one pill every 12 hours for 5 days) and paracetamol 1000 mg (as needed) to prevent infection and manage pain and inflammation.

Results and Discussion

In the immediate post-operative period, the patient exhibited a marked increase in confidence when displaying their smile.

This finding suggests that this intervention, despite its apparent simplicity, can effect a significant transformation in quality of life, particularly in terms of psychological well-being and self-esteem.

Following a period of two months (**Image 2**), no complications were observed and the aesthetic parameters remained stable, with symmetrical gingival contours, firm gums and no inflammation.

Gingival exposure was reduced by approximately 3 mm in the central incisors and 5 mm in the remaining teeth, thus demonstrating the effectiveness and durability of the procedure.

Electrosurgery has been shown to have several advantages over the traditional scalpel technique, including enhanced precision in cutting, faster haemostasias, and a reduced healing time (Malkoc et al., 2004).

The findings of this study corroborate the notion that electrosurgery is a minimally invasive and efficacious technique for enhancing the aesthetic appearance of the gingiva, thereby conferring prolonged functional and psychological benefits (Garber & Salama, 1996).



Image 1: Pre-operative showing a gummy smile due to altered passive eruption.

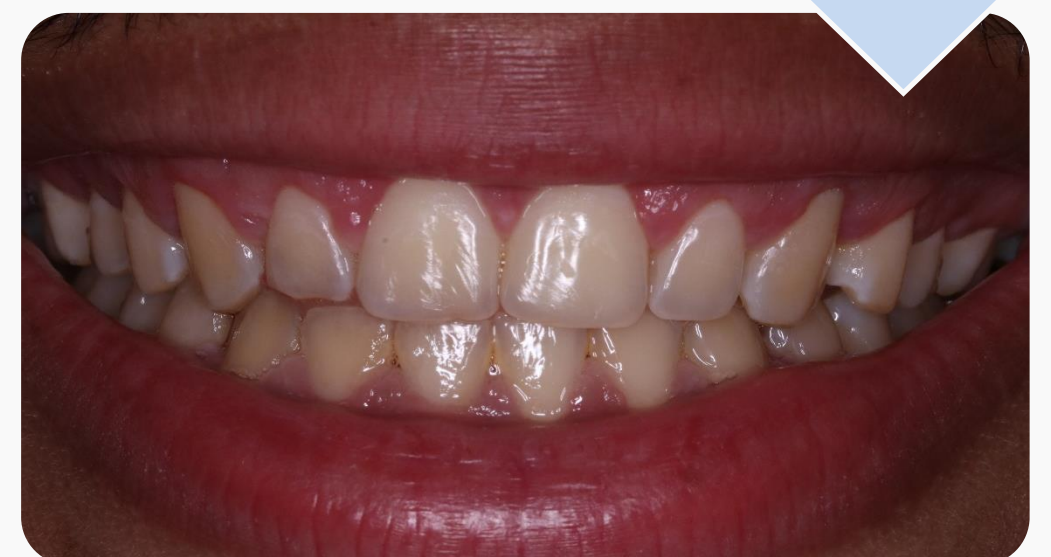


Image 2 : Post-operative view at two months after correction of the gummy smile

Conclusion

Gingivectomy is an effective procedure for correcting excessive gingival display, especially in cases of altered passive eruption. The utilization of a monopolar electric scalpel facilitates precise incisions, enhanced haemostasias, and expedited healing. This technique has been demonstrated to engender enduring aesthetic improvements and to enhance patient confidence, thus establishing electrosurgery as a reliable and minimally invasive option for the treatment of gummy smile.

References

