

## Surgical Lip Repositioning: Case Report

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### Abstract

Excessive gingival display which is commonly known as Gummy smile is a common condition which affects a person's smile resulting in a pronounced deformity which can be corrected by surgery. Orthognathic surgery can be performed with patients with abnormal jaw defects but it is a much difficult and inconvenient procedure for majority of the patients both emotionally and financially. Whereas Lip Repositioning Surgery is a simple, inexpensive and much more convenient for the patients. The procedure reduces the elevator muscles pull there by reducing the gingival display during smile. It is a safe and predictable with minimum risk or side effects. This case report shows a successful treatment for excessive gingival display being treated using Surgical Lip Repositioning procedure.

**Keywords:** Excessive Gingival Display; Gummy Smile; Lip Repositioning

### Introduction

The smile of a person is deformed by the harmony of teeth and the gingival display during smiling. Excessive gingival display (EGD), also known as Gummy smile, badly affects the smile and is unacceptable.

Excessive gingival display is caused by:

- Vertical maxillary excess
- Anterior dentoalveolar extrusion
- Altered passive eruption
- Short or hyperactive upper lip.

Treatment of excessive gingival display can be done by

1. Esthetic crown lengthening.
2. Orthodontic correction for dentoalveolar extrusion.

- 3. Orthognathic surgery.
- 4. Lip repositioning surgery.

The main aim for the lip repositioning surgery to restrict the retraction of elevator lip muscles reducing the gingival display while smiling.

**Case Report**

Patient age: 24 yrs c/o bad smile with bad appearing old crowns and too much of gums visible.



*Figure 1*



*Figure 2*



*Figure 3*



*Figure 4*

On initial examination, defective crowns with teeth #11# 10# 9# 8# 7. Seen along with excessive gingival display, lip being pulled more on left side. Resulting in a defective and gummy smile.

Initial treatment was done, with complete detailed cleaning by gingival curettage along with selective gingivoplasty to create defined length of the crowns in order to place new crowns with good margins.



*Figure 5*

Post gingival treatment and placement of new crowns.



*Figure 6*

2 weeks post crown placement improved gingival condition. Excessive gingival display prominent with an increased lip elevation more on left side.

Procedure: Surgical lip repositioning.



*Figure 7*



*Figure 8*

Incision line marked at the muco-gingival junction and second line 10 mm above the muco-gingival junction, both lines were connected on either side vertically along with mid-line to create symmetrical closure.



**Figure 9**

Local anesthesia placed (Articane 4% with epinephrine 1:100,000) in vestibular mucosa and lip from #6 to #11 i.e. right maxillary canine to left maxillary canine.

Partial thickness flap was elevated from both ends and a strip epithelial tissue removed exposing underlying connective tissue.



**Figure 10**

Complete epithelial band of tissue removed, muscles released and connective tissue exposed.

Initial stabilisation sutures for mid-line and approximation of flap.



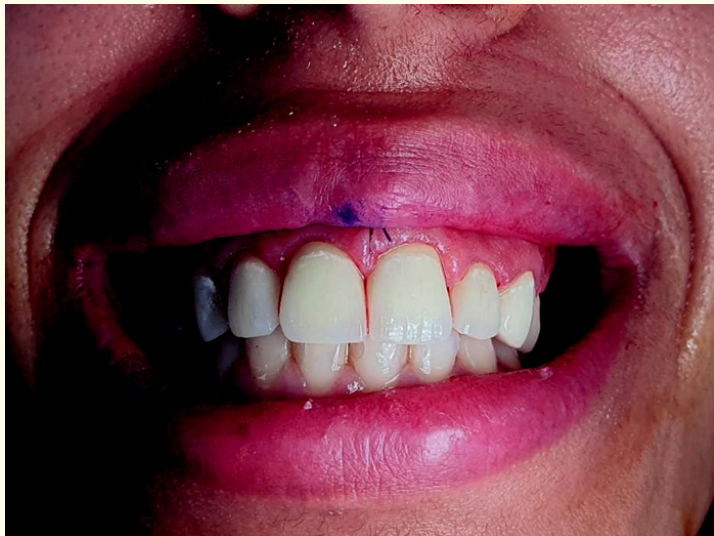
**Figure 11**

Final sutures - Continues interlocking.



**Figure 12**

Immediate post operative result.



**Figure 13**

2 weeks post operative.



**Figure 14**

Final result.



Figure 15

Final result.



Figure 16

3 months post operative.



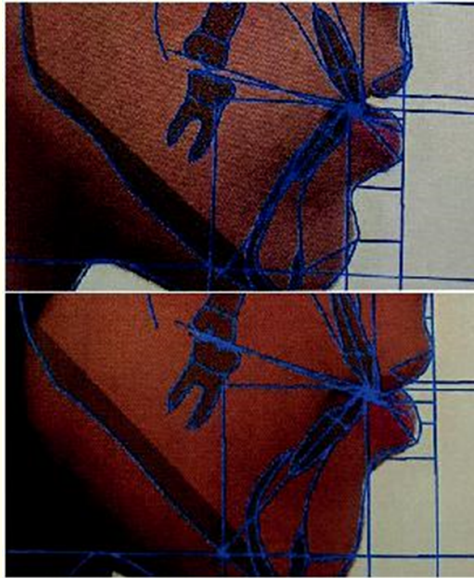
**Figure 17**



**Figure 18**



## Result



*Figure 19*

In summary of soft tissue changes:

1. Upper lip thinned by 1 S.D (decrease 1.3 mm).
2. Upper lip has lengthened to within normative value by increase in 1 mm.
3. Upper and lower lip Harmony improved.
4. Interlabial gap obliterated - 1.4 mm.

## Discussion

Patients with high lip line does exposes a larger zone of gingival tissue. In this type of simple, a dentist can smile design by contouring the gingiva crown lengthening or by surgical lip repositioning as described in the case presentation.

With the help of this surgical lip repositioning procedure the excessive gingival display can be reduced there by improving the act of smile [1-4].

## Conclusion

Surgical lip repositioning procedure has proved to improve in effective way to reduced excessive gingival display hence the improving the smile of a patient.

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