

# Lip Repositioning for The Treatment of Mild Gummy Smile -A Case Report



## Medical Science

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### ABSTRACT

*Lip repositioning is a versatile procedure which can be used for the treatment of mild gummy smile of about 2-3 mm. Technique provide the advantage of limiting the surgical treatment for the treatment of gummy smile only by lip repositioning.*

*a soft tissue procedure rather than conventional orthognathic surgery procedure .Here we present a case of slight gummy smile treated by lip repositioning.*

#### Introduction

*Smile is a harmonious proportion of the teeth and gums Gingival exposure at smile in normal conditions is about 2-3 mm.Any gingival exposure more than 3 mm is considered as EGD or Excessive Gingival Display The etiological factors for EGD can be due to soft tissue deformities or hard tissue deformities. Soft tissue deformities include hyperactive lip elevator muscles ,short lip and hard tissue deformities include short tooth syndrome ,delayed eruption, vertical maxillary excess. There are many methods for treatment of gummy smile but the lip repositioning procedure is a very versatile procedure which can be employed with limited complications and limited clinical set up.*

### Case report

A 26 Year old patient reported to our department with the chief complaint of gummy smile .



FIG 1

FIG 2

On evaluation the patient was found to have slight gummy smile of about 3 mm excess(FIG 1,FIG 2) .

Patient was explained about various treatment modalities for the correction of gummy smile .She decided to go for lip repositioning as she was not willing for orthognathic procedure.

### Technique

After giving a chlorhexidine rinse, operative site is wiped with gauze and local anaesthesia with adrenalin 1:200000 is given in vestibular mucosa maxillary molar to molar region .The surgical site is marked with an indelible pencil. First incision is given at the mucogingival junction and a partial thickness flap is elevated .Second incision is given 10-12 mm above the first incision in the labial mucosa(FIG 3).A strip of partial thickness flap was removed exposing the connective tissue FIG 4)



FIG 3



FIG 4

The first and second incision lines are approximated with simple interrupted sutures after placing the midline suture first ,which will maintain the midline as well as the gull-wing design of the smile.(FIG 5)



FIG 5

Patient was prescribed antibiotics and analgesics (Amoxicillin 500mg TID x5 Days and Diclofenac 50 mg TID x 5 days). Patient presented with slight pain and increased tension on the lips while smiling one week post operatively. Suture removal was done after 2 weeks and the healing was uneventful. The combined reduction in the soft tissue and the contraction of the healed suture line adequately reduced the gummy smile.



FIG 6

The initial gingival exposure of the patient was 6 mm (3 mm excess) it got reduced to 3 mm gingival exposure (FIG 6).

#### Discussion

The report is aimed to document a less advocated procedure for treating gummy smile -the lip repositioning. This simple soft tissue procedure can match up with various expensive and complicated procedures. The procedure first started off as a plastic surgery procedure<sup>1,2</sup>. The original procedure included severing of muscle attachment after flap elevation. Other alternative procedures employed were myectomy to detach smile muscle attachment, use of spacer between elevator muscles of the lip and anterior nasal spine<sup>3,4,5,6</sup>. With improved dental education program led the procedure in the hands of maxillofacial surgery and periodontics

Excessive gingival display can be multifactorial. It can be either a

1. Soft tissue defect- Hyperactivity of the elevator muscles of the lip Shortened lip.
2. Hard tissue defect – Vertical maxillary excess Short tooth syndrome
3. Psychological

All of the above can be treated with the help of lip repositioning provided the case selection is proper. For example, it cannot be employed in situations of extreme maxillary excess as it is never an alternative for Orthognathic surgery. But it can mask the defect obviously to an extent. It can be safely employed in situations where the patient is not willing for major procedure like Lefort 1 osteotomy. The removal of some amount of soft tissue along with scar contracture limits the pull of the elevator muscles and limits the upward displacement of the lip while smiling.

#### The advantages of the procedure include

1. Avoiding the complexity of orthognathic surgery and other expensive techniques like botox injections, expensive prosthetic crowns etc.
2. Limited clinical set up
3. Less post operative complications

#### Contraindications' include

1. Inadequate width of attached gingiva in maxillary anterior segment.
2. Insufficient amount of tissue poses difficulty in flap reflection, stabilization and suturing.
3. Patients with severe vertical maxillary excess cases are also not the ideal candidates for lip repositioning and should be treated with orthognathic surgery.

#### Conclusion

Lip repositioning is a safe and less complicated procedure for the treatment of gummy smile. but patient selection is important. Contraindication for the same should be taken into account and more over the relapse for the procedure need to be studied in detail.

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