

Gummy Smile: A Narrative Review

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Abstract:- Imaginary line that follows the lower superior lip is known as the grin level, and it appears to be convex. Gummy smile is caused by gingival band exposures that are 3 mm or greater throughout normal speech or smiles. Multifactorial etiology can be demonstrated by extrusion of the anterior teeth, excessive labial contraction, shorter upper lip, gingival excess, and excessive vertical maxillary growth up. In addition to being useful for orthognathic, plastic, and periodontal surgery, orthodontic therapy is also frequently interdisciplinary. Many techniques can be used to treat the issue of excessive gingival show. These operations involve both non-surgical and surgical techniques. The technique to be chosen may vary depending on the underlying reason of the gummy smile.

Keywords:- Gummy Smile, Lip Repositioning, Botox.

I. INTRODUCTION



Fig 1:Gummy Smile

When you smile sincere and your eyes sparkle and curl up, it's a lovely sight. It conveys happiness and a sense of human connection.

A condition known as a gummy smile may impact that joy for certain individuals. When you smile more than you would like to, that's what it is. We refer to it as excessive gingival display in clinical terms. It's mostly a question of personal taste whether you think your smile is "too gummy."

Around 10% of adults between the ages of 20 and 30 believe their smiles are gummy, according to some specialists. Furthermore, a greater proportion of females than males think that their grins reveal too much gum line.

The term "gummy smile" refers to a nonpathological condition that causes aesthetic discord when more than 3 to 4 mm of gingival tissue is visible when smiling.

A. What is Considered a Gummy Smile?

There's no precise term for a gummy smile. It really depends a lot on who is looking at it. What you think about your gum line may depend on:

- The form and height of your teeth
- The motion of your lips when you grin
- The difference between your jaw's angle and the rest of your face

B. Causes of Gummy Smile?

Potential causes of excessive gingival display

- Short Lip Length
- Hypermobility/Hyperactive Lip Activity
- Short Clinical Crown
- Dentoalveolar Extrusion
- Altered Passive Eruption
- Vertical Maxillary Excess
- Gingival Hyperplasia

C. Diagnostic Assessment of the Gummy Smile

- Patient Medical History
- Facial Analysis
- Lip Analysis: Static Versus Dynamic
- Rest Position Analysis
- Dental Analysis: Crown Length and Incisal Margin
- Periodontal Examination

II. TREATMENT MODALITIES FOR GUMMY SMILE

A. Oral Surgical Procedures

In the event that an excessive amount of gum tissue obscures your teeth, your dentist may suggest a gingivectomy.

This is the process of removing excess gum tissue and is also referred to as gum contouring.

➤ Procedure of Gingivectomy

Your periodontist or oral surgeon will administer a local anesthetic to you before, during, and after a gingivectomy to prevent pain.

After that, the periodontist or surgeon will use a laser or scalpel to reshape or trim your gums so that more of the surface of your teeth is visible.

You should expect your gums to bleed and hurt for around a week following the procedure.

It may be necessary for you to make multiple sessions. Fortunately, it appears that the outcomes are probably long lasting

B. Lip Repositioning

A "perfect smile" is defined as having all of the maxillary teeth exposed, with between one and three millimeters of gingival exposure. When a hypermobile lip or mild VME is the cause of the increased gingival show, lip repositioning surgery may be utilized to treat it. The vestibule limiting muscular pull is narrowed by lip displacement, which limits gingival show while smiling. Moreover, the process can be combined with a gingivectomy or crown lengthening. There are several known procedures for performing lip repositioning. The idea is to shorten the vestibule and remove a strip of mucosa in order to limit the pull of the elevator muscles when smiling. Traditionally, a scalpel, electrocautery, or even a laser surgical instrument might be used for this.

➤ Procedure

Rinse with 0.12% chlorhexidine for one minute prior to surgery. Local anesthetic (2% lidocaine w/1:100k epinephrine) should be applied to the vestibular mucosa and the lip between the left and right upper first molars. Utilize a clean medical marking pen to outline the wound. A portion of the thickness A horizontal incision was made from the first molar to the mucogingival junction, 1 mm coronally. The labial mucosa was incised twice horizontally, 10 to 12 mm apart from the initial incision. In an oval pattern, join the two incisions at the mesial line angles of the left and right maxillary first molars. By doing a superficial split thickness dissection, remove the highlighted mucosa strip. When necessary, use electrocoagulation to stop bleeding. Be cautious not to harm the little salivary glands in the submucosa. To seal the incision lines, use 4.0 silk sutures.

Instructions for lip repositioning following surgery For several hours, cover the top lip with ice packs. First week of a gentle diet. Reduce the amount of time your lips move when you speak or smile during the first two weeks after surgery. No sweeping the surgery site for fourteen days. Use analgesics to treat pain following surgery. Removal of sutures after two weeks

C. Orthognathic Surgical Procedure

Your dentist or oral surgeon may suggest orthognathic surgery if your jaw is contributing to your excessive gingival show. You will have a balanced jawline length after this operation. This therapy strategy involves a great deal of planning. You might have to see a maxillofacial surgeon in addition to an orthodontist. To find out where your jaw has grown too much, one or more oral scans will likely be performed on you. In order to ensure that your teeth and the arches in your mouth are properly aligned, you may occasionally need to wear braces or other orthodontic devices before having jaw surgery.

➤ Procedure:

You will not be conscious during this surgery because you will be under general anesthesia. To equalize the length of your upper and lower jaws, the surgeon will remove a portion of bone from your top jaw. Tiny plates and screws will be used to connect the mandible. Your lower jaw might also need to be corrected if it sits too far back. You will probably stay in the hospital for two to four days following the procedure so your oral surgeon can keep an eye on the healing process. To keep your jaw in place while it heals, you might need to wear elastics. Usually, healing takes six to twelve weeks.

D. Temporary Anchoring Mechanisms

Consult your dentist to see if a temporary anchoring device (TAD) is a good option for you if you're not interested in having surgery. With the use of this tool, you may move your teeth into a position that could lessen gummy smiles.

➤ Information Regarding Tads

TADs are small screws that are inserted into your mouth's bone.

Typically, they are installed in an oral or maxillofacial surgeon's practice.

To make the area where the screws are inserted numb, local anesthetic is utilized.

E. Botox

If your gummy grin is caused by sliding your lips over your gum line when you smile, botulinum toxin, or Botox, injections may be an effective treatment for you. Compared to surgery, Botox is less expensive and invasive. The shots must be given again every three to four months.

Additionally, there's a chance that your doctor will administer too much Botox, distorting the appearance of your grin.

F. Hyaluronic Acid

Hyaluronic acid filler injections are another temporary solution for a gummy grin brought on by hypermobile lips. For up to eight months, the fillers limit the lip's muscle fibers' range of motion.

It is significant to remember that injecting fillers carries some risk. Notwithstanding the rarity of consequences, the following outcomes are possible:

- Damage to your blood supply may result in tissue loss, blindness, or stroke.
- A hyaluronic acid reaction could cause your body's immune system to produce a granuloma or nodule.

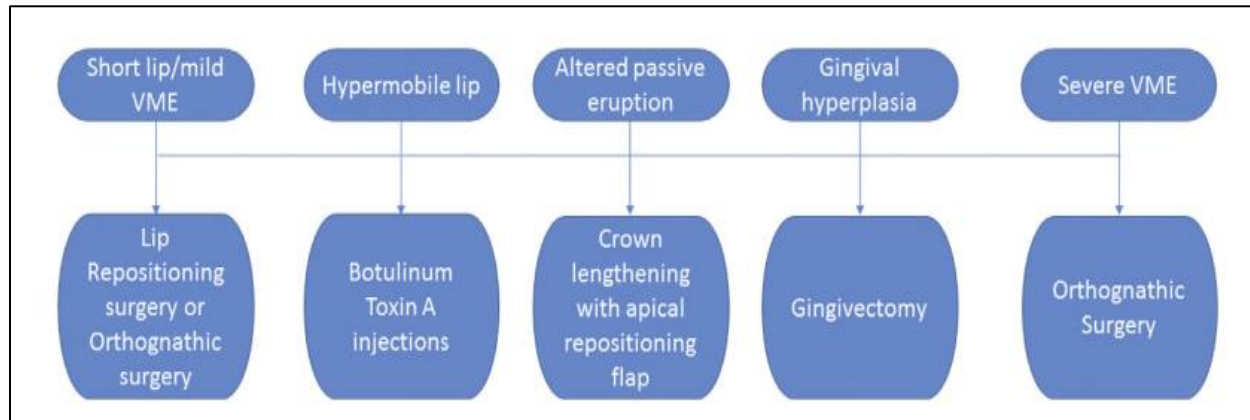


Fig 2: Diagnosis of Excessive Gingival Display with Associated Treatment Plan.

Figure 2 shows a tabular representation of various etiology of gummy smile along with various treatment modalities

III. SUMMARY

For many patients, excessive gingival show is a real aesthetic concern. There are several possible causes of the gummy smile. Ultimately, the doctor must make an accurate diagnosis. Following a definitive diagnosis, the patient can be given with a customized treatment plan especially to the requirements and worries of the patients.

REFERENCES

- [1]. Pavone AF, Ghassemian M, Verardi S. Gummy smile and short tooth syndrome— Part 1: etiopathogenesis, classification, and diagnostic guidelines. *Compend Contin Educ Dent* 2016;37(2):102–7.
- [2]. Chan DK. Predictable treatment for “Gummy Smiles” due to altered passive eruption. *Inside Dent* 2015;11(7).
- [3]. Bynum J. Treatment of a “Gummy Smile”: understanding etiology is key to success. *Compend Contin Educ Dent* 2016;37(2):114–22.
- [4]. Mahn D. Lip repositioning to eliminate the gummy smile. *Inside Dent*. 2017.13 (3).
- [5]. Farista S, Yeltiwar R, Kalakonda B, et al. Laser-assisted lip repositioning surgery: novel approach to treat gummy smile. *J Indian Soc Periodontol* 2017;21(2):165–8.
- [6]. Alammar A, Heshmeh O, Mounajjed R, et al. A comparison between modified and conventional surgical techniques for surgical lip repositioning in the management of the gummy smile. *J Esthet Restor Dent* 2018;30:523–31.
- [7]. Foudah M. Lip repositioning: an alternative to invasive surgery a 4 year follow up case report. *Saudi Dent J* 2019;31:S78–84.
- [8]. Deepthi K, Yadalam U, Ranjan R, et al. Lip repositioning, an alternative treatment of gummy smile—a case report. *J Oral Biol Craniofac Res* 2018;8:231–3.
- [9]. Panduric DG, Blaskovic M, Brozovic J, et al. Surgical treatment of excessive gingival display using lip repositioning technique and laser gingivectomy as an alternative to orthognathic surgery. *J Oral Maxillofac Surg* 2014;72:404.e1-11.
- [10]. Suber J, Dinh T, Prince M, et al. Onabotulinumtoxin A for the treatment of a “Gummy Smile”. *Aesthet Surg J* 2014;34(3):432–7