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> > > Laser Assisted Lip Repositioning for Rebalancing of Asymmetrical Gummy Smile

### Laser Assisted Lip Repositioning for Rebalancing of Asymmetrical Gummy Smile

**Objectives:** Aesthetic concerns such as excessive gingival display, commonly referred to as a "gummy smile," can significantly impact patients' confidence and social interactions. While traditional corrective surgeries are effective, they often involve increased morbidity. Laser-assisted lip repositioning (LALR) offers a minimally invasive alternative with promising esthetic outcomes and improved patient comfort. This clinical case demonstrates the application and effectiveness of LALR in managing excessive gingival display, emphasizing procedural details, outcomes, and advantages, particularly in cases of asymmetrical gingival display due to a multifactorial etiology.

**Methods:** A healthy 24-years-old female patient presented with a chief complaint of excessive gingival visibility during smiling, with no significant skeletal anomalies, but asymmetrical lip elevation and pulling the alar facial crease of the left side. After evaluation, LALR procedure was performed. An Er:YAG laser with a chisel tip was used to excise a horizontal strip of mucosa from the maxillary vestibule. The settings were: ablation at 2,5W in a Medium Pulse Mode with 220mj and frequency of 15Hz. This approach facilitated controlled lowering of the upper lip and reducing gingival exposure, further enhanced by intraoperative muscle suturing to depress the left levator labii superioris and levator labii superioris alaeque nasi.

**Results:** Key procedural advantages included intraoperative precision, minimal bleeding, and enhanced patient comfort. Postoperative healing was uncomplicated, and a significant reduction in gingival display was observed at the 4-week follow-up (8mm initially vs. 3mm at the end), as shown in the postoperative smile image. No recurrence was found one year postoperatively. The patient expressed high satisfaction with the esthetic outcome.

**Conclusions:** LALR proved to be a predictable, well-tolerated, and minimally invasive technique for managing excessive gingival display in this case. Laser technology enhanced surgical precision, minimized trauma, avoiding bruising or salivary glands damage, as well as improved recovery — making it a viable alternative to more invasive procedures.

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