

CONVENTIONAL AND LASER VESTIBULOPLASTY COMPARISON

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Introduction - In order to avoid the post- surgical complications and discomfort in patients treated with vestibuloplasty, new approaches have been implemented in solving the problems that occur in patients with massive atrophy of the mandible. Vestibuloplasty provides the necessary vestibular depth and can be performed with scalpel, electrocautery or laser. Many patients often end up with feeling pain and discomfort, despite the successful outcome of the intervention. Because of that, the laser performed vestibuloplasty has been considered to be far better option due to the minimal invasion in the tissue, less bleeding during the treatment and the reduced swelling. **Aim:** To evaluate pain and swelling post vestibuloplasty and also assess the healing outcomes related to the treatment either with the laser or the scalpel.

Material and Method
In this study were treated 24 patients with inadequate vestibular depth that required vestibuloplasty, divided in two groups each of 12 participants. First group was treated with the scalpel method, which involves incisions made in the musoca to separate the connective tissue from the muscle attachments. Scalpel surgery was performed as Kanazjian's vestibuloplasty. The second group was treated with the laser method. We used Er:YAG Laser Fotona Lightwalker to remove the muscle fibers and to expand the vestibule. Local anesthesia was administrated in the same way as the first group. After the interventions, medication was not administrated. The postoperative parameters such as pain and swelling were evaluated after 24, 48 hours and after 7 days. The success from the therapy and the absence of relapses were evaluated after 2 and 6 months.

Results
From the gathered results, it has been shown that patients treated with laser approach have had less post - surgical complications, such as less swelling only in 1 patient (8,3%), pain in two patients (16,6%); compared to the patients from the second group treated with classic scalpel technique symptoms have been more frequent, swelling (41,6%) and pain (83,3%) in the first 24 hours. After 24 hours in the laser group there were no pain and swelling registered in the patients (0%), compared to the scalpel group where pain and swell were found in 2 patients (16,6%). Also a better healing of the operated tissue and faster recovery have been registered in the group of patients treated with laser, with only one relapse (8,3%) after 6 months, compared to the group treated with scalpel where the relapses were found in 5 patients (41,6%) from the total number of 12 participants in the group.

Table 1. Display of the results from postoperative pain both groups compared

Pain	After 24h	After 48h	After 7 days
Scalpel method (n=12)	10 (83,3%)	4 (33,3%)	0 (0%)
Laser method (n=12)	2 (16,6%)	0 (0%)	0 (0%)

Table 2. Display of the results from postoperative swell

Swelling	Scalpel method (n=12)	Laser method (n=12)
After 24 hours	5 (41,6%)	1 (8,3%)
After 48 hours	2 (16,6%)	0 (0%)
After 7 days	0 (0%)	0 (0%)

Table 3. Display of the results from the therapy outcome

Therapy success (occurrence of recurrence)	Scalpel method (n=12)	Laser method (n=12)
After 2 months	3 (25%)	0 (0%)
After 6 months	5 (41,6%)	1 (8,3%)

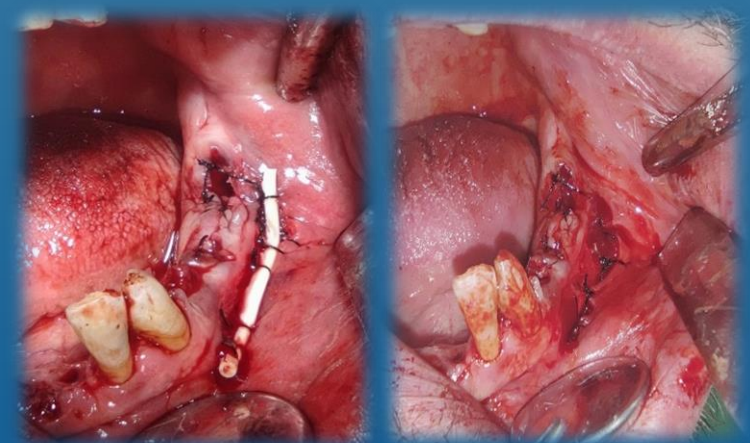


Figure 1. Scalpel surgery performed as Kanazjian's vestibuloplasty and Worm technique



Figure 2. Er:YAG Laser Fotona Lightwalker



Figure 3. Use of laser application



Figure 4. Recovery of depth

Conclusion

From this study we can conclude that when it comes to vestibuloplasty, laser treatment has been proved to be a better option and ensure better treatment success compared to the conventional approach, leaving better healing outcomes and less complications such as pain and swelling after the treatment. Therefore the laser treatment has shown that leaves less relapses compared to the conventional method.

Conflict of Interest: None declared.