

Case Report

A Management of Lip Adhesion with Vestibuloplasty: Case Report

Fadime Kaya and Abdullah Seckin Ertugrul*

Department of Periodontology, Izmir Katip Celebi University, Turkey

*Corresponding author

Abdullah Seckin Ertugrul, Department of Periodontology, Izmir Katip Celebi University, Izmir, Turkey, Tel: 90-232-352-4040; Email: ertugrulseckin@yahoo.com

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Abstract

Lip and cheek adhesion due to trauma, burns or tumors causes inadequate vestibular depth. Shallow vestibule appears clinically as mucogingival stress that may be a reason of esthetic and functional problems, such as recession. In this case, 70 years old female patient represent with complaint of restricted upper lip movement. Clinic examination and patient history revealed that, patient has scar tissue through the mucogingival line due to chemical burn. There was no keratinized tissue and 4mm recession around left canine teeth in the maxilla. Treatment plan was increasing keratinized tissue and eliminating lip adhesion. Although, vestibuloplasty plus free gingival graft was chosen to correct soft tissue defect, patient refused to have any donor area on her palate. Only vestibuloplasty was performed. After 4 weeks healing, mucogingival stress eliminated and 6mm keratinized tissue was seen on the area. 2 months follow-up showed 2 mm relapse on mucogingival line. But, patient satisfied with result.

INTRODUCTION

Trauma, burns, tumors and cysts of the oral cavity may lead to lip and cheek adhesion. Due to lip adhesion to the alveolar mucosa, loss of vestibular depth may see [1]. The consequence of such resultant complete or partial vestibular loss includes; continuous saliva drooling, impaired mastication, and compromised speech [2].

For years, the choice of treatment varied from aggressive surgical excision to reform a new vestibule. For preventing soft tissue relapse, graft materials were used to cover opposing connective tissue surface [3]. The main three techniques have been described in the literature. These are submucosal vestibuloplasty, secondary epithelialization vestibuloplasty (Kazanijan technique) and soft tissue grafting vestibuloplasty [4]. Over the past decades, using free gingival grafts (FGG) with vestibuloplasty has become more popular. Main advantage of FGG is that provides abundant tissue to entirely resurface the opposing connective tissue walls and adequate keratinized tissue to stabilize lips muscle. Despite the advantages of FGG, there are many disadvantages such as, donor site morbidity, color and texture difference and difficulty in achieving immobilize graft position during healing course [5].

In this case the treatment plan was to perform FGG and vestibuloplasty. But patient didn't accept to have any donor site in her mouth. This case report is to describe only vestibuloplasty to maintain adequate keratinized tissue around the left maxillary canine teeth. We had patient satisfaction and adequate keratinized tissue just with vestibuloplasty.

CASE PRESENTATION

Seventy years old female patient was referred to Izmir Katip Celebi University Dentistry Faculty with suffering from restricted

lip movement and mastication. As a result of patient's dental history, we learned that, she has been exposed to chemical (The adhesion was due to exposure to chemical agent as vitriol) agent in her mouth so there was a scar formation along the anterior mucogingival line, especially left maxillary anterior. There was decreased vestibular depth and inadequate keratinized tissue.

There was no keratinized tissue and attached gingiva. Probing depth was 2 mm. There was 4 mm recession due to mucogingival stress caused by scar formation and decreased vestibular depth but, there was any pathologic pocket formation (Figure 1).

After administration of local anesthesia, a straight-line incision was made from right first premolar teeth to left lateral teeth. A partial thickness dissection was done extending 6mm beyond the marginal gingiva of left canine. The incision was from distal of right central incisor to the distal of left first premolar. It was a split-thickness flap periosteum was left on the bone. There was no keratinized tissue in the coronal border of the flap.



Figure 1 Clinical appearance before lip adhesion with vestibuloplasty treatment.

Direct pressure was applied on the periosteal bed for achieving hemostasis. The sheet periphery was sutured with 4-0 silk suture as determined previously (Figure 2). Operation area was covered with surgical pact for preventing from deadhesion. Lip mobility was checked and the patient was warned for eating soft diet and rigorous oral hygiene. A non-steroidal analgesic was prescribed and patient was instructed to rinse twice daily with 0.12% chlorhexidine. Ten day later, surgical pact and sutures were removed.

Successful healing process was occurred. Although there has been two mm relapse after two month, 4mm adequate keratinized tissue was provided (Figure 3). Patient satisfaction was achieved and she has had more comfortable mastication.

DISCUSSION

Reconstruction of the lip and cheek following their adhesion to the opposing gingiva continues to be a challenging situation in reconstructive maxillofacial surgery [6]. The oral mucosa has a very powerful healing potential owing to the highly vascular connective tissue supply which leads to rapid adhesion [6]. And the attached gingiva provides increased resistance of the periodontium to external injury, contributes to the stabilization of the gingival margin position, and aids in the dissipation of physiological forces that are exerted by the muscular fibers of the alveolar mucosa onto the gingival tissues [7]. One aim of periodontal plastic surgery is the creation of adequate vestibular

depth when there is a shallow vestibular depth. Over the past 2 decades, vestibuloplasty using free gingival grafts has become a routine procedure for either increased keratinized tissue or deepened vestibular depth [8]. However, there is a lot of used material for increasing the zone of keratinized tissue; the results obtained with these techniques are not as predictable as those obtained with the free gingival graft [9]. But, disadvantages include the inability to harvest larger grafts, high morbidity rate after surgery, and poor esthetics attributable to differences in texture and color from adjacent areas [9]. In this case, because of the adhesion there was a tensile strength of the lip mucosa, the recession was present and it has not been any attached gingiva. It can be continue in the future. In the present study, primarily only vestibuloplasty was performed because of this disadvantage of the free gingival grafting and also patient's request. Two month later, owing to adequate keratinized tissue formed; it did not need any other treatment procedure.

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REFERENCES

1. Barakat K, Ali A. Thermoplastic vestibuloplasty: a novel technique for treatment of lip and cheek adhesion. *Craniofacial trauma & reconstruction*. *Craniofacial Trauma Reconstr*. 2014; 7: 258-262.
2. Melo LG, Almeida AL, Lopes JF, Rezende ML, Neto JS, Ciporkin F, et al. A modified approach for vestibuloplasty in severely resorbed mandible using an implant-retained postoperative stent: a case report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2008; 106: 7-14.
3. Samandari MH, Yaghmaei M, Ejlali M, Moshref M, Saffar AS. Use of amnion as a graft material in vestibuloplasty: a preliminary report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2004; 97: 574-578.
4. Bhola M, Newell DH, Hancock EB. Acellular dermal allograft for vestibuloplasty-An alternative to autogenous soft tissue grafts in preprosthetic surgical procedures: A clinical report. *J Prosthodont*. 2003; 12: 133-137.
5. Cillo JE, Finn R. Reconstruction of the shallow vestibule edentulous mandible with simultaneous split thickness skin graft vestibuloplasty and mandibular endosseous implants for implant-supported overdentures. *J Oral Maxillofac Surg*. 2009; 67: 381-386.
6. Dado DV, Polley W, Kernahan DA. Splinting of oral commissure electrical burns in children. *J Pediatr*. 1985; 107: 92-95.
7. Hassell TM. Tissues and cells of the periodontium. *Periodontol* 2000. 1993; 3: 9-38.
8. Hall HD, O'Steen AN. Free grafts of palatal mucosa in mandibular vestibuloplasty. *J Oral Surg*. 1970; 28: 565-574.
9. Wei PC, Laurell L, Geivelis M, Lingen MW, Maddalozzo D. Acellular dermal matrix allografts to achieve increased attached gingiva. Part 1. A clinical study. *J Periodontol*. 2000; 71: 1297-1305.



Figure 2 Clinic appearance after suturing.



Figure 3 Clinical appearance after lip adhesion (2 months) with vestibuloplasty treatment.

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