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Different operative procedures and their outcome in frenectomy- An institutional experience

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Abstract
Frenectomy is a common surgical procedure done by three different technique that is classical technique by scalpel, by electro cautery and by laser. In the last two year we have performed 30 frenectomy in our department with three different techniques after proper evaluation of cases. Patients with fibrotic and hypertrophic frenum treated by classical scalpel technique offers optimum outcome. Patients with thin frenum treated with electro cautery or laser provide identical outcome.

Keywords: Frenum, frenectomy, electrocautery, laser

Introduction

Frenum is formed by a fold of mucous membrane and connective tissue fibers that attach the lip and the cheeks to the alveolar mucosa and/or gingiva and the underlying periosteum. The main function of the frenum is to provide stability of the upper and lower lip and the tongue. Maxillary labial frenum is of four types - Mucosal attachment, Gingival attachment, Papillary attachment and Papilla penetrating attachment type [1]. It can also be thick and thin. An aberrant labial frenum being fibrotic and hypertrophic, is considered to be a potential cause of median diastema [2]. It can also impair maintaining oral hygiene [3]. Frenectomy can be done either by the routine scalpel technique (the classical technique), electrosurgery or via lasers [4]. Here we share our experiences with different techniques in our institution.

Materials and Method

In past two years (2023 March to 2025 Feb.) total 30 frenectomy procedure were done in our department. 12 of them were done by classical method using scalpel, 10 were done by electrosurgery and rest 8 were done by Laser. After relevant investigations all the patients operated under local anaesthesia.

Classical technique with scalpel was used (in 12 cases) to excise frenum where it was fibrotic and hypertrophic. There are problems of surgery such as bleeding, suturing, postoperative pain and swelling. Patients were treated with analgesic and antibiotics post operatively with mouthwash. All the patient had uneventful recovery within two weeks with satisfactory patient compliance. (Figure 1,2,3 & 4)

10 cases where frenum was thin, mostly gingival type were treated with electrocautery. Here bleeding was negligible with shorter operative time. Postoperative patient compliance was very satisfactory as there were much less pain and swelling. Patients' recovery was smooth and fast. (Figure 5,6 & 7)

Rest 8 cases, where again frenum is thin and membranous, frenectomy were done with diode laser. Here is also less bleeding and minimum operative time. Postoperative outcome was very good and recovery was smooth and fast like electrocautery. (Figure 8,9 & 10)

Fig 1: Preoperative

Fig 2: Postoperative picture

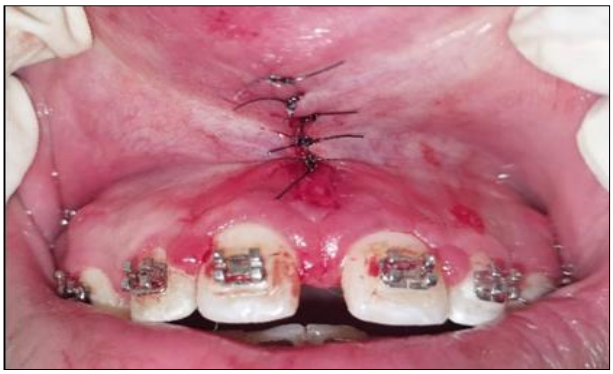

Fig 3: Postoperative suturing

Fig 4: 10 days follow up

Fig 5: Preoperative picture

Fig 6: Postoperative picture

Fig 7: 10 days follow up

Fig 8: Preoperative picture

Fig 9: Postoperative picture

Fig 10: 10days follow up

Discussion

In cases of fibrotic and hypertrophic frenum we selected Classical scalpel technique because the frenum to be excised completely and thoroughly to achieve optimum result and prevent recurrence. In spite of bleeding, prolong operative time and postoperative problems overall outcome was comparable with other two techniques. Complete excision of the frenum could not be achieved in these cases with laser and electrocautery.

In cases where the frenum was not thick and hypertrophic classical technique is equally good, but there are problems of bleeding and longer operative time. So, we selected electrocautery or laser for these cases which are less time consuming and without any significant bleeding.

So, selection of individual cases for particular type of surgical procedure is very important while performing frenectomy procedure.

Conclusion

Each surgical procedure has its own place in frenectomy. Judicial selection of surgical procedure for each individual case offers optimum satisfactory outcome.

References

1. Mirko P, Miroslav S, Lubor M. Significance of the labial frenum attachment in periodontal disease in man. Part 1. Classification and epidemiology of the labial frenum attachment. Journal of periodontology,1974:45(12):891-4.
2. Edwards JG. The diastema, the frenum, the frenectomy: a clinical study. American journal of orthodontics,1977:71(5):489-508.
3. Sarmadi R, Gabre P, Thor A. Evaluation of upper labial frenectomy: A randomized, controlled comparative study of conventional scalpel technique and Er: YAG laser technique. Clinical and experimental dental research,2021:7(4):522-30.
4. Kotha M, Rekha B, Ramachandra V. Evaluation of healing following labial frenectomy: a comparison of scalpel, electrosurgery and diode laser techniques. Int J Sci Res,2019:6:63-6.