

CASE REPORT



Bridging the recession with bridge flap

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Abstract

Recession is the displacement of soft-tissue margin apical to the cemento-enamel junction. It becomes a matter of concern when it occurs in anterior esthetic area. Various treatment modalities have been carried out for the treatment of recession. The present case report describes the diagnosis and treatment of a female patient reporting to the department with the chief complaint of receded gums. The patient presented with multiple recessions in mandibular anterior region. After radiographic and hematological investigation, it was decided to treat the case with bridge flap technique. The technique provided with good post-operative results and patient's acceptance of the technique.

Keywords: Attached gingival, bridge flap, recession.**Introduction**

Recession is the displacement of soft-tissue margin apical to cemento-enamel junction. It is a relatively common clinical feature in general population. The two most common reasons for recession are toothbrush trauma and tooth malposition. Other reasons can be high frenal full, accumulation of plaque and calculus, and iatrogenic factors related to restorative procedures.

The indications for recession coverage procedures are as follows:

1. Esthetic consideration
2. Dental hypersensitivity
3. To increase keratinization
4. Changing the topography of the marginal soft tissue to facilitate plaque control.

Different treatment modalities can be carried out for treating recession. They are broadly classified as pedicle graft procedures which include rotational and advanced flaps and free soft-tissue graft procedures, which comprise free gingival autograft and subepithelial connective tissue graft.

Bridge flap is a technique originally suggested by Marggraf in 1985 for treating multiple gingival recessions.^[1] The technique was later modified by Romanos *et al.* in 1993.^[2] In this technique, both root coverage and increase in width of attached gingiva are achieved. The present case report highlights a case treated by bridge flap for multiple recessions in anterior area.

Case Report

A 32-year-old female patient reported to the Department of Periodontics and Oral Implantology, D Y Patil University School of Dentistry, with a chief complaint of receding gums in the lower front region of jaw. The patient was apparently alright 1–2 months ago, when she noticed decrease in the height of the gums. As the appearance was not esthetically pleasing, the patient reported to the department for the treatment of the same. The patient did not present with any relevant family and medical history.

On intraoral examination, it was found that the patient had generalized healthy gingiva which was firm and resilient with good contour except in the mandibular anterior region. In the mandibular anterior region, there was Miller's Class I recession with adequate width of attached gingiva.^[3] Intraoral periapical radiograph shows adequate amount of remaining bone with the anterior region. The probing pocket depth measurements were within normal range. The recession was measured using a Hu-Friedy UNC-15 Probe. Blood investigations revealed blood parameters within normal range. Following radiographic and hematologic examination, full mouth scaling was carried out. The patient was recalled for follow-up and not much change was observed in the gingival recession. Hence, the patient was scheduled for root coverage procedure. Based on the clinical and radiographic picture of the patient, it was decided to perform bridge flap procedure.

Surgical technique

Figure 1 shows pre-operative photograph showing the gingival recession. About 2% lignocaine with 1:80,000 adrenaline was injected to achieve local anesthesia. After adequate anesthesia was achieved, a vestibular incision was marked extending from mandibular left canine to mandibular right canine at a distance of ($\times 2$ gingival recession) +2 mm from the gingival margin. This ensures sufficient amount of blood supply to the area. A vestibular incision was placed and it formed an arch shape [Figure 2]. Following the vestibular incision, a sulcular incision was placed. The sulcular incision was later joined to the vestibular incision in an apicocoronal direction [Figure 3]. As a result, the whole bridge flap that is formed can be elevated and repositioned in a more coronal position. The flap was held and gently pressed in position for 2–3 min. The flap was stabilized in the coronal position by placing interrupted sutures [Figure 4]. 4–0 silk sutures were used. In the vestibular area, the periosteum was sutured to the labial mucosa. Periodontal pack was placed, thus covering the area of surgery and also the bone.

Post-operative instructions were given. The patient was prescribed both analgesics and anti-inflammatory medications. The patient was instructed to use 0.2% chlorhexidine mouthwash. Sutures were removed after 10 days. No post-operative complications were observed. The patient reported good healing.



Figure 1: Pre-operative photograph showing gingiva recession



Figure 2: Vestibular incision placed



Figure 3: Vestibular incision connected to the vestibular incision



Figure 4: Sutures placed

Postoperatively, the patient presented with good root coverage with increase in attached gingiva [Figure 5]. The patient was advised to use soft bristled toothbrush and maintain good oral hygiene.

Discussion

Proper diagnosis and treatment planning is important while treating gingival recession. In the present case, the patient presented with multiple recessions. Hence, choosing the right technique for treating multiple recessions simultaneously becomes prime objective. The bridge flap technique can be used for treating multiple recessions simultaneously. The bridge flap technique employs two treatment procedures at the same time. In this technique, vestibular deepening is carried out in addition to recession coverage technique. Thus, there is increase in width of attached gingiva in addition to root coverage. As a soft-tissue graft is not obtained, a second surgical site is avoided. Time is not invested in harvesting the graft from secondary surgical site, thereby decreasing the overall time of the surgery. In addition to this, intra-operative and post-operative complications like bleeding and pain at the donor surgical site is prevented. The flap that is repositioned coronally receives plasmatic blood circulation from the adjacent



Figure 5: Post-operative photograph showing root coverage and increase in width of attached gingiva

gingival tissues which help in its survival.^[4] Furthermore, the cemento-enamel junction needs to be detected accurately so that incisions can be placed precisely and good results can be achieved. Furthermore, for the technique of bridge flap, incision is placed at a distance of ($\times 2$ gingival recession) +2 mm, hence locating cemento-enamel junction correctly is important.

Conclusion

Bridge flap technique offers good and predictable results. It is a relatively less time-consuming technique since secondary

surgical site is not needed. A single technique offers not only recession coverage of multiple teeth but also helps in increase of attached gingiva. Thus, bridge flap can be successfully employed for treating gingival recession.

Clinical significance

Bridge flap technique can be used a single technique for multiple recessions coverage and increasing width of attached gingiva.

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