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## **Bilateral maxillary gingival recession treated with semilunar coronally repositioned flap: A case report**

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### **Abstract**

Various recession coverage procedure have been tried and tested with varying success rate. Semilunar flap is a simple, fast and effective technique for management of Miller's class I recessions in maxillary arch. This article reports a cases of bilateral maxillary gingival recession treated with semilunar coronally repositioned flap and their long term follow up.

**Keywords:** Gingival recession, root coverage, semilunar flap

### **Introduction**

Gingival recession is defined as the migration of the marginal tissue apical to the cemento-enamel junction exposing the root [1]. It results secondary to periodontal disease, though factors factors (1) chronic trauma and irritation, (2) gingival anatomy. (3) Tooth alignment etc. contribute to this [2]. Periodontal plastic surgeries are done to correct the gingival recession and to cover the denuded root. Indications for root coverage include (1) demand esthetic improvement, (2) management of dental sensitivity, (3) prevention or management of root caries and cervical abrasion, (4) enhancement of restorative/prosthetic outcomes, and (5) prevention of progression of periodontal disease in areas where hygiene cannot be adequately maintained.

Many different modality of periodontal plastic surgery have been presented in past, each of the presents varying range of predictability and coverage amount [3]. The semilunar coronally Repositioned flap procedure was introduced by Tarnow in 1986 [3]. This technique offers benefits, like (1) no disturbance of the adjacent papillae, (2) no shortening of the vestibule depth, (3) no tension on the flap, (4) no need for sutures [4].

### **Brief case history**

A 34 years male reported to Department of Periodontics with chief complain of sensitivity in upper right and left front tooth region, and patient complaint of un-esthetic smile also (Teeth appearing longer than usual). Patient had no smoking habit, and no relevant medical and dental history. Intra-oral clinical examination revealed, Miller's class I defect in maxillary right and left canine [13, 23] (Fig. 1 and Fig. 2)). Recession depth was 3mm in both of the teeth. Mild plaque and calculus were present. Occlusion was found normal, i.e. non-traumatic. Intraoral peri-apical radiographs showed no interdental bone loss, or peri-apical changes.

The patient underwent basic non-surgical periodontal therapy including scaling and root planing, and standard oral hygiene instructions were given. After four weeks of phase 1 therapy, root coverage surgery, i.e. phase 2 therapy was planned. Signed informed consent was obtained from the patient after discussion of the procedure that would be performed, and all possible complications were thoroughly explained to patient.

A semilunar incision, which was 3mm greater than depth of recession extending from the mesial papilla to the distal papilla of the tooth with the recession and following the curvature of the receded gingival margin was made (Fig. 3 and Fig. 4)). The incision was curved apically far enough at the mid-facial area such that to the apical part of the flap rests on bone after it is

advanced to cover the exposed root. The incision ended into the papilla on either side of the tooth, but not all the way to the tip of the papilla, leaving at least 2 mm on either side of the flap to ensure adequate blood supply for the flap.

An intra-sulcular incision was given extending apically to the level of the first semilunar incision and a split thickness dissection was performed from the initial incision line coronally toward the intra-sulcular incision (Fig. 5 and Fig. 6).

Once complete flap freedom was achieved, the flap was easily advanced coronally as far as possible without creating tension, and finally it was positioned properly (Fig.7 and Fig. 8). A moist sterile gauze was lightly pressed perpendicular to the flap at its new level for 5 minutes ensuring the new attachment.

Periodontal pack was applied on the surgical sites (Fig. 9 and Fig. 10).

The pack was removed after 7 days. Healing was satisfactory with desired recession coverage (Fig. 11 and Fig. 12).

Patient was recalled for follow up after 1 month (Fig. 13 & Fig. 14 and Fig. 15 & Fig16). No change in position of marginal tissue was found.

The crest of the gingiva maintained its position even after 6 months. Fig. 15 and Fig. 16 present a comparative view between pre-operative and 3 month post-operative condition.

**Discussion**

Semilunar coronally repositioned flap provides a simple, fast and effective technique for management of small recessions, i.e. <4mm of recession in maxillary arch. This paper presents six month follow-up of a case of bi-lateral root coverage in maxillary canines with Miller’s class 1 defects, which were managed by this technique. Results show that complete root coverage was achieved in both teeth and was stable till six month post-operative. The success of this technique depends on proper case selection, case preparation, surgical precession, and patients’ compliance throughout the treatment, as well as patients’ maintenance after the procedure. In large recessions (> 4 mm), absence of adequate of attached gingiva and recession in mandibular arch, this technique is contraindicated. Procedures like connective tissue graft, free gingival grafts, sub-epithelial connective tissue graft or pouch and tunnel technique are indicated there. This flap technique shows no significant differences when compared to sub-epithelial connective tissue graft and has a fairly predictable success rate when performed in minimal gingival recessions [5]. Few drawbacks of this technique exist, like it can be used in only millers class 1 recession in maxillary arch, if not properly executed the blood supply to flap will be compromised from the papillae leading to necrosis of flap.



**Fig 1:** 3 mm recession in 13



**Fig 2:** 3 mm recession in 23



**Fig 3:** Semilunar incision given in 13



**Fig 4:** Semilunar incision given in 23



**Fig 5:** Intra-crevicular incision given in 13



**Fig 6:** Intra-crevicular incision given in 23





**Fig 7:** Flap reflected and advanced in 13



**Fig 8:** Flap reflected and advanced in 13



**Fig 9:** Pack applied in 13



**Fig 10:** Pack applied in 23



**Fig 11:** Pack removed after 1 week in 13



**Fig 12:** Pack removed after 1 week in 23



**Fig 13:** 4 week post-operative in 13



**Fig 14:** 4 week post-operative in 23



**Fig 15:** Pre-operative view



**Fig 16:** 3-month post-operative view

**Conclusion**

This article shows that semilunar coronally repositioned flap is a simple technique for root coverage in the treatment of Miller's class I recession defects, and effective if case selection and surgical protocol is carried out properly.

**Conflict of Interest**

Not available

**Financial Support**

Not available

**Reference**

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