



MINIMALLY INVASIVE SURGERY – VISTA TECHNIQUE : A BOON FOR PERIODONTAL SURGERY

Periodontics

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ABSTRACT

Gingival recession is clinically manifested by an apical displacement of the gingival tissues, leading to root surface exposure which causes dentinal hypersensitivity, root caries, and poor esthetics. There are a number of minimally invasive techniques for the surgical treatment of recession type defects. One of the technique is vestibular incision subperiosteal tunnel access technique (VISTA). A patient came to the Department with a chief complaint of hypersensitive tooth where surgical management was done using VISTA technique. Post operative results depicted favourable results in recession coverage along with reduction in patient discomfort.

KEYWORDS

VISTA, dentinal hypersensitivity

INTRODUCTION

Marginal tissue recession is defined as displacement of soft tissue margin apical to cemento enamel junction with the exposure of root surface.¹ Tissue trauma is most commonly caused by vigorous toothbrushing, and iatrogenic factors related to restorative and periodontal treatment procedures.¹ Other etiology includes tooth malposition, thin alveolar bone, high muscle attachment, frenal pull, plaque and calculus.

This will result in dentinal hypersensitivity, root caries and poor esthetics. Over the last few decades, multiple surgical approaches have been described for the treatment of recession defect. Minimally invasive procedures have become popular as it has favourable results and less patient discomfort.² One such technique is vestibular incision subperiosteal tunnel access technique (VISTA). VISTA provides access and allows coronal repositioning of gingival margins.³

In 2011 Zadeh H H et al., in 2011³ modified the tunnel technique, offering the so called VISTA (Vestibular incision subperiosteal tunnel access) technique for the treatment of multiple adjacent gingival recessions in the front part of maxilla. VISTA involves making an access incision in the maxillary anterior frenum, followed by elevation of subperiosteal tunnel. It also involves stabilization of the gingival margins, referred to as coronally anchored suturing, so as to promote healing by preventing micromotion.

CASE REPORT

A 45 year of female patient came to the Department of Periodontology in Kothiwal Dental College & Research Centre with a chief complaint of sensitivity in the upper left back tooth region since last 3 months. The sensitivity was progressive in nature. It gets activated upon taking cold beverages and relieved on its own.



Figure 1: Pre-operative clinical view of #24, 25 and 26 region

Intra oral examination reveals recession of 2 mm mid-buccally irt #24, 25 and 26 (Figure 1). Patient was sensitive to cold air test. Hence, based upon all the examination and findings, a final diagnosis of chronic generalised gingivitis with localized periodontitis irt #24, 25 and 26 was made.

Treatment Procedure

Initially thorough scaling and root planing was performed irt #24, 25 and 26. The root surfaces were then conditioned for 2-3 minutes with 10% citric acid to eliminate the smear layer. Complete aseptic precautions were taken while performing the surgical techniques. The area was anaesthetized with 2% lignocaine of 1:200,000 adrenaline. After the affected area was anaesthetized, a vertical access incision was made using No.15 blade, in the mesial line angle of #25 (Figure 2). The incision was made through the periosteum and subperiosteal tunnel was elevated with exposure of the facial osseous plate.



Figure 2: Vertical Incision

A microsurgical periosteal elevator was used to create the subperiosteal tunnel. The tunnel was extended to one or two teeth to mobilize gingival margins and coronal repositioning. The subperiosteal tunnel was extended beyond the mucogingival margin, through the gingival sulci of the teeth to allow low tension coronal repositioning of the gingiva. Also, the tunnel elevation was extended interproximally under each papilla without making any surface incisions through the papilla (Figure 3).



Figure 3: Subperiosteal Tunnel

The gingival margin was then advanced coronally to the most coronal level of the interproximal papillae. 4-0 silk sutures were used to fix onto the facial surface of the affected teeth using light cured flowable composite resin. Vertical incision was then approximated and sutured with multiple sutures (Figure 4).



Figure 4: Suture Placement

Postoperative maintenance with 0.12% solution of chlorhexidine rinsing was advised for 14 days. Patient was maintained on regular follow up. Healing was uneventful with no postoperative complications (Figure 5).



Figure 5: Post Operative Picture

DISCUSSION

Treatment of gingival recessions has become an important therapeutic issue due to the increasing number of cosmetic requests from patients. Patient's esthetic demands, due to exposure during smiling or function, of portions of the root surface are the main indication for root coverage procedures. Thus, complete root coverage up to the cemento enamel junction is the goal to be achieved when the patient complains about esthetic appearance of teeth. The remote incision used in VISTA technique reduces the possibility of traumatizing the gingiva of the teeth being treated. Critical to the success of VISTA is a careful subperiosteal dissection that reduces the tension of the gingival margin during coronal advancement while at the same time maintaining the anatomical integrity of the interdental papillae by avoiding papillary reflection.³ Similar results were obtained in another case report by Chatterjee et al., in 2015⁴ where this technique was used successfully in the treatment of multiple gingival recessions.

CONCLUSION

In conclusion, the results of the present study demonstrated that the VISTA technique was effective in treating multiple gingival recessions in the upper jaw. However, regular follow up and long term behaviour must be evaluated to study success rate.

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