MANAGEMENT OF MULTIPLE GINGIVAL RECESSIONS USING VISTA WITH A-PRF

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Abstract:

Marginal tissue recession is a common aesthetic and functional concern that often requires surgical correction. The Vestibular Incision Subperiosteal Tunnel Access (VISTA) technique is a minimally invasive approach that enables multiple root coverage with minimal trauma. Advanced Platelet-Rich Fibrin (A-PRF) serves as a biologically active scaffold that enhances wound healing and tissue regeneration. This case study presents the management of multiple gingival recessions in the maxillary region using the VISTA technique combined with A-PRF. This combined approach highlights the synergistic benefits of minimally invasive tunnelling techniques and autologous biologic materials in achieving predictable and esthetical pleasing root coverage outcomes with improved gingival thickness and enhanced patient comfort.

Keywords: A-PRF, gingival recession, periodontal regeneration, root coverage, VISTA technique

Introduction

Marginal tissue recession is defined as the apical displacement of the soft tissue margin beyond the cemento-enamel junction (CEJ), leading to root surface exposure[1]. According to the American Academy of Periodontology (1996), gingival recession is characterized by the displacement of soft tissue apical to the CEJ[2]. It is a frequent finding in clinical practice and may result from improper brushing, periodontal disease, or a thin gingival biotype[3]. Gingival recession compromises esthetics, causes hypersensitivity, and predisposes the root surface to caries and abrasion[4]. The different modes of treating gingival recession

involved techniques such as coronally advanced flap with or without connective tissue graft, free gingival grafting procedures, lateral pedicle flap, and use of gingival veneers[5]. The VISTA (Vestibular Incision Subperiosteal Tunnel Access) technique, introduced by Zadeh in 2011, provides access to multiple adjacent recession defects through a single vestibular incision, minimizing tissue trauma and improving esthetics[6]. Platelet concentrates, such as A-PRF (Advanced-Platelet Rich Fibrin), have gained attention due to their autologous growth factors that accelerate soft and hard tissue healing[7,8]. This case study illustrates the successful management of multiple gingival recessions using the VISTA technique in combination with A-PRF.

Case Presentation

A 47years old female patient reports to the Department of Periodontology with a chief complaint of receding gum along with sensitivity in her upper left back tooth region since 3months.The patient has no relevant medical history, was a non-smoker. On enquiry of her oral hygiene practices, it was observed that the patient uses a hard bristle tooth brush and uses horizontal/scrub technique for brushing. On examination, millers class 1 gingival recession is seen in teeth #9-12, cervical abrasion in tooth #12, spacing between tooth #9 and #10 was also observed [Fig 1]. On gingival examination, the gingiva was pale pink in colour with diffuse melanin pigmentation, stippling was present and no enlargements were observed. Bleeding on probing score 1 was noted. The treatment plan included, root coverage in teeth #9-13 followed by restoration of cervical abrasion in #12. The patient was also instructed about using a soft bristle tooth brush and advised for modified Stillman's brushing technique.

Figure 1: Pre-Operative, Recession seen in teeth #9-12, cervical abrasion in tooth #12

Procedure: After obtaining informed consent, under local anesthesia, a vertical incision is placed on the vestibular region distal to tooth #13[fig 2],and a tunnel was created from tooth region #13 to #9, crevicular incisions were placed from #9 to #13 without involving the interdental papilla and later on these two incisions were connected with the help of tunnelling instrument[9][fig 3].10ml of blood was drawn from the patient and centrifugated to obtain a A-PRF[fig 4a], this was then inserted inside the tunnel[fig 4b-4c] and suturing was done connecting the A-PRF with the gingival tissue and suspension sutures were given with the help of composite button placed at the middle third of crown portion of teeth #9-13[fig 5a-5b]. A coe-pack was given and post operative instructions were given to the patient. The patient was recalled after 2 weeks for a follow up visit.

Figure 2: Vestibular incision placed distal to #13 using a 15c blade.

Figure 3: Connecting the sulcular incisions with the prepared tunnel using a tunneling instrument.

Figure 4a: A-PRF Prepared.

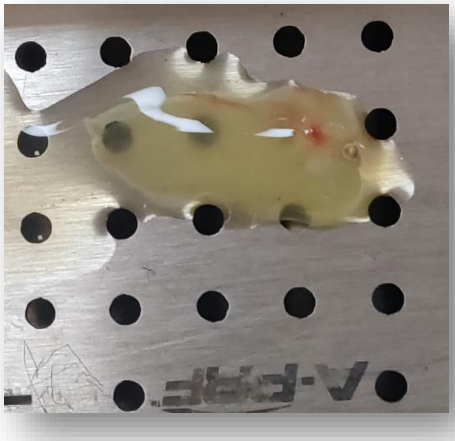

Figure 4b: Insertion of A-PRF into the prepared tunnel.

Figure 4c: A-PRF inserted into tunnel prepare.

Figure 5a: Etchant placement on the middle third region of crowns #9-12 for purpose of composite button placemnt for anchor suturing.

Figure 5b: Flap advanced coronally, anchor suturing done and interrupted sutures placed.

Results

At the 2 weeks [fig 6] follow up period, the coe pack and the sutures were removed followed by saline irrigation at the treated site. Satisfactory healing was seen, the patient was asked to do gingival massage and recalled after 1 month. At the 1month follow up visit, complete root coverage was noted at the treated site and this result was maintained at 3,6 month recall visits. [fig 7]

Figure 6: Post op after 2 weeks.

Figure 7: Post operative. Complete root coverage seen #9-12.

Discussion

The VISTA technique represents a minimally invasive approach for the treatment of multiple gingival recessions[6,10,11]. It allows coronal advancement of the mucogingival complex without vertical releasing incisions, preserving the blood supply and promoting faster healing[11,12]. The technique ensures optimal flap adaptation and minimal patient morbidity compared to conventional methods[10,11].

A-PRF, a second-generation platelet concentrate, enhances angiogenesis and

fibroblast proliferation through the sustained release of growth factors such as PDGF, TGF-β, and VEGF[7,8,13,14]. It's slow polymerization and high leukocyte content contribute to improved tissue maturation and stability of the gingival margin[14,15]. Compared to connective tissue grafts, A-PRF eliminates donor-site morbidity and reduces postoperative discomfort[8,14]. Clinical studies have demonstrated that when used with VISTA, A-PRF achieves comparable root coverage to connective tissue grafts, with improved patient satisfaction[6,10,14,15].

Conclusion

The VISTA technique in conjunction with A-PRF provides a predictable, minimally invasive, and biologically enhanced approach for the management of multiple gingival recessions. This combination ensures excellent esthetic outcomes, faster healing, and improved patient comfort. Further randomized controlled clinical studies are warranted to establish its long-term predictability and advantages over conventional techniques[10,11,14].

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