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REVIEWER'S REPORT

Manuscript No.: IJAR-52796 Date: 14/07/2025

Title: Management of Single Gingival Recession Using Coronally Advanced Flap with a connective tissue graft- a case report.

Recommendation:

Accept as it is .....Yes.....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality	•			
Techn. Quality	•			
Clarity	•			
Significance	•			

Reviewer Name: Dr. Sireesha Kuruganti **Date:** 14/07/2025

Reviewer's Comment for Publication.

(*To be published with the manuscript in the journal*)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

The manuscript provides a clear and concise report of two successful cases of gingival recession treatment using the coronally advanced flap with a connective tissue graft. The detailed descriptions of the surgical procedures and post-operative care, along with the follow-up results, make this a valuable case report. The discussion effectively contextualizes the findings within the broader literature, highlighting the benefits and rationale behind using this "gold standard" technique. The images are a significant asset, enhancing the clarity of the reported procedures and outcomes

Detailed Reviewer's Report

Here's an in-depth review of the manuscript, with line numbers for reference:

General Observations:

The manuscript, titled "Management of Single Gingival Recession Using Coronally Advanced Flap with a connective tissue graft- a case report," describes two cases successfully treated with a coronally advanced flap (CAF) and subepithelial connective tissue graft (CTG). The paper is well-structured, following a standard case report format with an abstract, introduction, case presentations, and a discussion. The images provided are helpful for understanding the procedures and outcomes.

Detailed Review:

Title and Abstract (Lines 1-8):

* The title clearly states the focus of the paper.

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* The abstract effectively summarizes the key aspects of the paper, including the definition of gingival recession, associated problems, the treatment approach used (CAF with CTG), and the positive outcomes observed at six months (root coverage, aesthetics, clinical attachment gain).
* Keywords are provided and are relevant to the content.

Introduction (Lines 9-19):

* The introduction provides a clear definition of gingival recession.
* It highlights the high incidence of this defect in young and middle-aged adults.
* Various causes and contributing factors are listed, including occlusal trauma, periodontal disease, forceful brushing, muscle traction, frenulum insertion, bone dehiscence, and orthodontic treatment.
* The introduction effectively explains the negative consequences of gingival recession, such as dentin hypersensitivity, susceptibility to cervical lesions, and aesthetic concerns.
* The criteria for treating gingival recessions are well-articulated.

Treatment Goal and Approach (Lines 20-26):

* The manuscript clearly states that the ultimate goal of periodontal recession treatment is to cover the defect and that efforts are focused on techniques providing root coverage.
* It emphasizes that CAF combined with an autogenous connective tissue graft (CTG) from the palate is the most preferred and well-documented method for gingival recession closure.
* The authors explain the role of CTG as a "biological filler" that improves flap adaptation and stability, leading to a high probability of complete root coverage and increased soft tissue thickness.
* The aim of the case report, presenting therapeutic results of CAF with palatal CTG for root coverage, is clearly stated.

Case 1 (Lines 27-59):

* Patient Presentation: A 38-year-old non-smoking female presented with bleeding gums and sensitivity in the upper right tooth region for six months. Plaque and bleeding on probing were noted.
* Diagnosis: A 2mm gingival recession was found at tooth #14, diagnosed as Miller class I recession.
* Treatment Plan: Phase I therapy (dental health education, scaling root planing) followed by re-evaluation, maintenance, and then surgical treatment (CAF + CTG).
* Surgical Procedure:
  * Local anesthesia was administered.
  * Detailed description of incision design (two horizontal and two apically divergent vertical releasing incisions).
  * Explanation of flap elevation (split-thickness mesially and distally, full-thickness apically) and the purpose of the horizontal incision through the periosteum (facilitate displacement, reduce muscle tension).
  * Root planing of the exposed root surface is described, with a caution about avoiding the zone near bone dehiscence.
  * CTG Harvest: A 10mm x 4mm graft was harvested from the right upper palate (regions 14, 15, 16) with a 90-degree incision 2mm below the gingival margin.
  * CTG Placement: The graft was de-epithelialized, placed in the recipient site, and sutured with 5-0 polyglycolic acid (vicryl). The flap was coronally advanced 2mm coronal to the CEJ of tooth #14 and secured with a sling suture technique.
* Post-operative Care and Follow-up: Instructions included 0.2% chlorhexidine rinse, no brushing of the surgical area, and prescribed antibiotics and analgesics. Sutures were removed after two weeks. At 6 months, maximum root coverage was achieved, with a CAL gain of 2mm, probing pocket depth of 1mm, and keratinized tissue width increased from 1mm to 4mm. Figure 2 clearly illustrates the post-operative follow-ups.

Case 2 (Lines 60-88):

* Patient Presentation: A 40-year-old male, former smoker, reported with receding gums and sensitivity in the lower left tooth region. Plaque and bleeding on probing were observed.

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* Diagnosis: A 4mm gingival recession was found at tooth #33, diagnosed as Miller class II recession.
* Treatment Plan: Similar to Case 1, starting with Phase I therapy, re-evaluation, maintenance, and then surgical treatment (CAF + CTG).
* Surgical Procedure:
  * Local anesthesia was administered.
  * Incision design involved two horizontal and two oblique incisions for a trapezoidal flap.
  * Flap elevation described as a "split-full-split" approach in the coronal-apical direction, detailing the elevation of surgical papillae, soft tissue apical to root exposure, and lateral vertical incisions.
  * Emphasis on detaching lip muscle from periosteum and a superficial incision to allow passive coronal displacement of the flap with minimal lip tension.
  * De-epithelialization of anatomic papillae to receive surgical papillae of the CAF.
  * CTG Harvest: A 10mm x 6mm graft was harvested from the right upper palate, and the donor region was sutured with 4-0 silk.
  * CTG Placement: The graft was immersed in saline, de-epithelialized, placed in the recipient site, and sutured with 5-0 polyglycolic acid (vicryl). The flap was placed 2mm coronal to the CEJ of tooth #33 and secured with a sling suture technique.
* Post-operative Care and Follow-up: Similar to Case 1. At 6 months, maximum root coverage was achieved, with a CAL gain of 4mm, probing pocket depth of 1mm, and keratinized tissue width increased from 1mm to 3mm. Figure 4 illustrates the outcomes.

Discussion (Lines 89-114):

* Importance of GR Treatment: Discusses why GRs are problematic (plaque retention, dentin hypersensitivity, aesthetics). The goal of mucogingival surgery is full root coverage with soft tissues matching surrounding tissues in color, thickness, and texture.
* Comparison of Techniques: Mentions various surgical techniques for root coverage, including CAF alone or combined with CTG, GTR, or other biomaterials.
* CAF+CTG as Gold Standard: Reaffirms CAF with CTG as the "gold standard" for covering roots in single or multiple gingival recessions, especially effective for Miller class I and II defects with exposed root surfaces and sufficient apical keratinized tissue.
* Mechanism of CTG+CAF: Explains how CTG acts to improve gingival and supraperiosteal blood supply, with nutrition and revascularization provided by the recipient area, interdental papilla, and covering flap.
* Shift to Periodontal Plastic Surgery: Notes the transition from traditional mucogingival surgery (focused on KTW) to periodontal plastic surgery, with the ultimate aesthetic outcome as the main objective.
* Benefits of CTG: Highlights that CTG is the preferred method for restoring gingival/mucosal recession, thickening soft tissues, masking root discoloration, and re-establishing interdental papillae.
* Enhanced Vascularization: Explains that the combination of CTG + CAF increases graft vascularization and creates a double blood supply through supraperiosteal vessels and the flap.
* Aesthetic Outcomes: States that CTG+CAF shows superior aesthetic outcomes and higher success rates in full root coverage compared to free gingival graft (FGG) due to color matching.
* Agreement with Literature: The authors' results align with meta-analyses showing CAF+CTG is more effective for complete root coverage, recession reduction, and keratinized tissue gain in RT1 and RT2 recession types compared to CAF alone.
* Keratinized Tissue Regeneration: CAF+CTG helps gain more keratinized tissue width (KTW). In patients with thin gingival biotype, it thickens the gingival biotype and increases the apico-coronal dimension of KT. The graft induces keratinized gingiva formation.
* Cost-Benefit and Clinical Outcomes: In single Miller class I/II gingival recession with at least 6 months follow-up, CAF + CTG is considered the most appropriate strategy in terms of clinical outcomes and cost-benefit ratio. It produces more benefits in clinical attachment levels compared to PRF+CAF.

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* Discomfort and Creeping Attachment: Acknowledges discomfort, mainly related to CTG donor sites, in the first week post-surgery, with minimal impact on recession coverage. Mentions that creeping attachment (post-healing root coverage) was observed with CAF + CTG.

Conclusion (Lines 114-117):

* The findings of the clinical cases align with existing literature, confirming that combining CAF with CTG is the best way to achieve harmonized root coverage for Miller class I and II gingival recession.
* Patient long-term results are stable and satisfying.
* The main limitation is technique morbidity, which can be overcome with medication.

References (Lines 118-146):

* A comprehensive list of 17 references is provided, supporting the claims made throughout the manuscript.
* The references appear to be from reputable journals and publications within the field of periodontology.

Overall Impression:

The manuscript provides a clear and concise report of two successful cases of gingival recession treatment using the coronally advanced flap with a connective tissue graft. The detailed descriptions of the surgical procedures and post-operative care, along with the follow-up results, make this a valuable case report. The discussion effectively contextualizes the findings within the broader literature, highlighting the benefits and rationale behind using this "gold standard" technique. The images are a significant asset, enhancing the clarity of the reported procedures and outcomes. The only limitation mentioned, morbidity related to the donor site, is also appropriately addressed.