

**Clinical Case***Copyright © All rights are reserved by Mohamed A Maksoud*

# Clinical Efficacy of Double Gingival Grafting Technique for the Treatment of Gingival Recession

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Autogenous gingival grafts are considered the "gold standard" for the treatment of inadequate keratinized gingiva and recession. Recently with the introduction of Amniotic Membranes for the same procedure it has shown promising results due to the abundance of growth factors. The amnion Chorion membrane with the trophoblast layer was also used intra-orally in guided bone regeneration and demonstrated expedited healing when used on top of augmented extraction sockets. In this report adult patient was selected with moderate recession and inadequate keratinized gingiva and the treatment consist of the use of Amnion Chorion plus Trophoblast in addition to acellular dermal matrix in a stackable manner within a coronally advanced flap. The clinical results was adequate gain of keratinized gingiva and root coverage in addition to bulkiness.

**Keywords:** Gingiva; Recession; Allograft**Materials and Methods**

An adult patient was selected with moderate to severe recession of the mandibular anterior teeth ( Miller Class III) [1]. The patient had a past history of orthodontic treatment. Scaling and root planning rendered on a previous visit and on the day of the surgery an intrasulcular full thickness mucoperiosteal flap was carried out. This was followed by conditioning of the root surface utilizing EDTA ( 17% ethylenediaminetetraacetic acid solution) for approximately 30 seconds followed by vigorous rinsing. First an Amnion/Chorion membrane with Trophoblast (ACMT)\* was applied to the root surface followed by the Acellular Dermal matrix (ADM)\*\* with the epithelial side against the ACMT. Suturing was accomplished using PTFE (Polytetrafluoroethylene) sutures after undermining the flap to allow suturing without tension. Postoperative instructions

were given in addition to ice pack together with a prescription of Amoxicillin 500mg three times a day for one week and Motrin 800mg for discomfort. The patient presented for follow up and suture removal visit after two weeks that demonstrated good healing with no complications and scheduled for additional follow up visits in four , six and eight weeks. The follow up visits showed uneventful healing with a gain in the keratinized tissue and root coverage.

**Results**

The healing was evaluated clinically that showed gain of the keratinized tissue in both dimensions vertically and horizontally in addition to root coverage as well.

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## Discussion

ACM ( Amnion Chorion membrane) has demonstrated expedited healing over augmented extraction socket as reported by the author [2] due to its abundance of growth factors. Additionally with the inclusion of the trophoblast layer in the membrane ACMT, the membrane succeeded in protecting the bone mass of the augmented extraction socket in addition to developing a noticeable keratinized tissue on top [3]. The ADM on the other had was extensively used over the years in periodontal root coverage with a

predictable outcome [4, 5] in a coronally positioned flap. The aim of this double grafted technique reported was to demonstrate the benefits of adding growth factors from the ACMT to the commonly used ADM for periodontal root coverage.

## Summary

The ADM plus ACMT used for root coverage demonstrated a viable procedure for periodontal root coverage in addition to enhancing the zone of keratinized tissue. Although role of the growth factors could not be demonstrated clinically a comparative split mouth or histological study will be needed to compare between ADM alone or ADM plus ACMT in achieving keratinized tissue in periodontal root coverage (Figures 1-7).



**Figure 1:** Shows the recession and lack of Keratinized tissue on the mandibular central and lateral incisors.



**Figure 2:** Shows the full thickness mucoperiosteal flap elevated showing further recession of the all the mandibular anterior teeth.



**Figure 3:** Shows how the ADM and ACMT.



**Figure 4:** Shows the ACMT applied to the root surface.



**Figure 5:** Shows the ADM applied on top of the ACMT.



**Figure 6:** shows sutures in place.



**Figure 7:** Shows eight weeks follow up with root coverage and Keratinized gain.

## Acknowledgement

None.

## Conflict of Interest

No conflict of interest.

## References

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