

The Connective Tissue Platform Technique in the Management of Peri-Implant Soft Tissue Deficiencies: A Case Report





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BACKGROUND

Peri-implant soft tissue deficiencies pose considerable challenges in implant dentistry. Achieving complete interproximal papillae fill in single implant restorations, particularly in the anterior esthetic zone, remains a significant difficulty. The Connective Tissue Platform Technique (CTPT) is the option for soft tissue augmentation in areas with insufficient gingival volume¹.

This case report aimed to demonstrate an application of the CTPT in restoring soft tissue deficiencies associated with the loss of peri-implant papillae and gingival recession on an adjacent tooth.





Patient Information

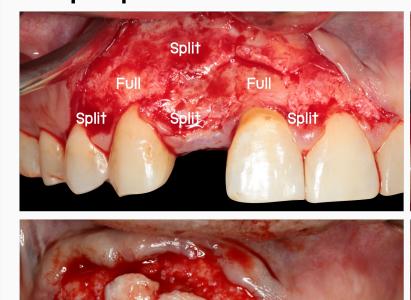
A 44-year-old female presented with a short clinical crown on the left central incisor, gingival recession at the right central incisor, and congenital absence of the right lateral incisor, leading to labial contour collapse and esthetic concerns.

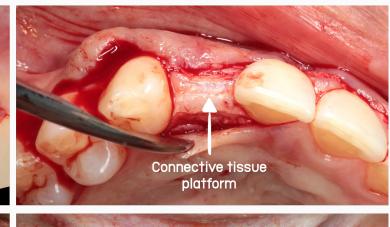
Diagnosis: 12 edentulous area with soft tissue deficiency, 11 gingival recession, and 21 short clinical crown

Tx plan: Implant placement at tooth 12 with soft tissue augmentation, Root coverage for tooth 11, and Gingivectomy for tooth 21

Surgical Phase

Four months after implant placement in the area of tooth 12, along with bone augmentation to correct a labial fenestration bone defect, soft tissue augmentation was performed. The CTPT utilized an envelope flap extending from tooth 14 to 22, with two parallel horizontal incisions along the buccal and palatal edges of the occlusal surface in the edentulous area, leaving a soft tissue platform intact. A buccal flap was elevated using a split-full-split thickness approach to allow for adequate coronal advancement. The occlusal surface of the soft tissue platform was de-epithelialized to prepare a connective tissue base.









A de-epithelialized connective tissue graft was harvested from the palate and divided into two pieces. The first graft was sutured to the buccal surface of the connective tissue platform to correct the horizontal soft tissue deficiency, and the second piece was placed on the buccal surface of tooth 11 to achieve root coverage for gingival recession. A gingivectomy was performed on tooth 21. The buccal flap was then coronally advanced to cover both grafts and secured with sling and interrupted sutures to ensure proper adaptation achieve and primary wound closure.

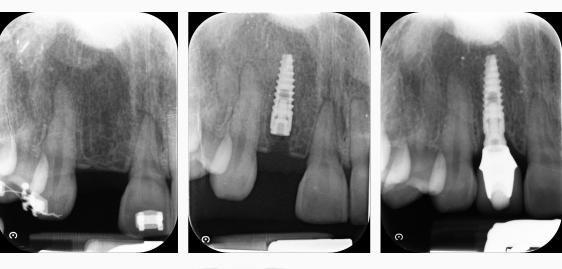
RESULTS

Two months after the soft tissue augmentation, the second-stage surgery was performed using a modified finger flap, and a provisional crown was placed on tooth 12. Ove the following 6 months, the interdental papillae developed to a shape and height comparable to the contralateral healthy teeth. The final prosthesis was then inserted.





Clinical outcomes demonstrated stable mucosal margin levels and complete papillae fill. The patient reported high satisfaction with the results. Six months post-operatively, there was a significant improvement in soft tissue volume and esthetics, with stable outcomes observed at 12 months, showing no signs of tissue recession or inflammation.



CONCLUSIONS

The CTPT proved to be an effective solution for addressing both horizontal and vertical soft tissue deficiencies, providing predictable and stable outcomes that achieve natural physiological contour with aesthetic results in soft tissue augmentation procedures.

Reference:

1. Zucchelli G, Mazzotti C, Bentivogli V, Mounssif I, Marzadori M, Monaco C. The connective tissue platform technique for soft tissue augmentation. Int J Periodontics Restorative Dent. 2012;32(6):665-75.

DISCLOSURE OF INTEREST

The authors declare no conflict of interest.

